Navy_CLEAN_PFAS_FOIA_request_covers.indd

NAVFAC
Naval Facilities Engineering Command

# Groundwater Sample Results, Combined Level 2 and Level 4 Laboratory Report, Electronic Data Deliverable, Data Validation Report, and the Sample Location Report, SDG 818419

*Naval Training Center Orlando*
*Orlando, Florida*

July 2019

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

N65928_003408
NTC ORLANDO, FL
SSIC 5000-33c

# LABORATORY DATA PACKAGE B818419 NTC ORLANDO FL

03/06/2018

MAXXAM ANALYTICAL LABORATORIES

Approved for public release: distribution unlimited.



Prepared for: Earth Toxics Inc

Project: JM11 NTC ORLANDO

# Analytical Data Package
## (Level IV)

Analysis: PFOS and PFOA in water (Method 537 mod.)

Maxxam Job #: B818419

Maxxam Analytics International
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com




# Table of Contents

Maxxam Analytics International
6740 Campobello Rd.
Mississauga, Ontario, Canada
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1-800-668-0639
www.maxxamanalytics.com

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I hereby certify that to the best of my knowledge all analytical data presented in this report:

- Has been checked for completeness.
- Is accurate, legible and error free.
- Has been conducted in accordance with approved SOP's and that all deviations are clearly listed in the Case Narrative.
- This report has been generated in .pdf format.

Review Performed By:




Stephanie Pollen 2018.03.06 11:25:36 -05'00'

Maxxam Analytics International
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Mississauga, Ontario, Canada
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# Glossary of Terms

- ***Detection Limit (DL)*** this can also be called ***Method Detection Limit (MDL***): The lowest concentration or amount of the target analyte that can be identified, measured, and reported with confidence that the analyte concentration is not a false positive value. (Clarification): The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence. At the DL, the false positive rate (Type I error) is 1%.

- ***Limit of Detection (LOD*)**: An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. (Clarification): The smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

- ***Limits of Quantitation (LOQ)*** this can also be called ***Reporting Detection Limit (RDL)***: The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. (Clarification): The lowest concentration that produces a quantitative result within specified limits of precision and bias. For DoD projects, the LOQ shall be set at or above the concentration of the lowest initial calibration standard.

- ***Acceptance Criteria*** are values used by the laboratory to determine that a process is in control.

- ***Accuracy*** is the degree of agreement of a measured value with the true or expected value.

- ***Calibration Standards*** are a set of solutions containing the analytes of interest at a specified concentration.

- ***Calibration Verification Standard*** consists of a calibration standard solution of intermediate concentration (mid-point initial calibration level) used to access whether the initial calibration is still valid

- ***Certified Reference Material*** is a stable homogenous material that is certified by repetitive analysis from a supplier who is certified to generate said materials.

- ***Internal Standard*** a deuterated or $^{13}C$-labelled analyte that is added to a sample extract prior to instrumental analysis to compensate for injection variability.

- ***Isomer*** is a member of a group of compounds that differ from each other only in the locations of a specific number of common substituent atoms or groups of atoms on the parent compound.

- ***Method Blank*** is a laboratory control sample using reagents that are known to be free of contamination.

- ***Precision*** is the degree of agreement between the data generated from repetitive measurements under specific conditions.

- ***Quality Assurance*** is a system of activities whose purpose is to provide the producer or user of a product with the assurance that the product meets a defined standard of quality.

- ***Quality Control*** is the overall system of activities whose purpose is to control the quality of a product so that it meets the needs of the end user.

- ***RSD*** is the relative standard deviation.

- ***Blank Spike*** is a laboratory control sample that has been fortified with native analytes of interest.

- ***Window Defining Mixture*** is a solution containing only the earliest and latest eluting congeners within each homologous group of target analytes on a specified GC column.

- ***RPD*** or Relative Percent Difference. A measure used to compare duplicate sample analysis.

- ***EMPC/NDR –*** Peak detected does not meet ratio criteria and has resulted in a higher detection limit.




# 1.0 Project Narrative

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**Maxxam Job: B818419**

Sample Analysis

Samples were initially analyzed on QC batches 5383466 (2018/02/06), 5386102 (2018/02/08) and 5389177 (2018/02/08-09).

The recoveries observed for Perfluorododecanoic acid (PFDoA), Perfluorotridecanoic acid (PFTrDA), Perfluorotetradecanoic acid (PFTeDA), Methylperfluorooctanesulfonamidoacetic acid (MeFOSAA) and Ethylperfluorooctanesulfonamidoacetic acid (EtFOSAA) were below acceptance criteria for the Spike (LCS) on QC batch 5383466 (2018/02/06). Samples were re-extracted and re-analyzed for these analytes on QC batch 5396699 (2018/02/15-16), past the method defined hole time. Because of their chemical structures, per- and polyfluorinated alkyl substances (PFAS) are chemically and biologically stable in the environment and resist typical environmental degradation processes. This would suggest the hold time exceedance would not have a significant impact on the data quality.

Revised Report

During assembly of the Level IV data package, it was observed that incorrect analytes had been reported for the re-analysis on QC batch 5396699 (2018/02/15-16). A revised report was issued with the correct re-analyzed compounds, Perfluorododecanoic acid (PFDoA), Perfluorotridecanoic acid (PFTrDA), Perfluorotetradecanoic acid (PFTeDA), Methylperfluorooctanesulfonamidoacetic acid (MeFOSAA) and Ethylperfluorooctanesulfonamidoacetic acid (EtFOSAA).

In addition, it was observed that incorrect extraction dates had been initially entered for samples on QC batch 5386102 (2018/02/08). The correct date (2018/02/06) was entered into the LIMS system for re-issue of the report.

Data Qualifiers

**U** – Analyte was not detected and is reported as less than the LOD or as defined by the customer. The LOD has been adjusted for any dilution or concentration of the sample.

**J** – The reported result is an estimated value (e.g., matrix interference was observed, or the analyte was detected at a concentration outside the calibration range).

**Sin Chii Chia, B.Sc.**
schia@maxxam.ca
Office 905 817 5700

**PROJECT NARRATIVE**

**Maxxam Analytics**
**Client Project #: JM11 NTC Orlando**

**Client: Earth Toxics Inc**
**Client Project: JM11 NTC Orlando**

**I. SAMPLE RECEIPT/ANALYSIS**

a) Sample Listing

| Maxxam ID | Client Sample ID | Date Sampled | Date Received | Date Prepped | Date Run | Initial Calibration |
|---|---|---|---|---|---|---|
| **PFOS and PFOA in water by SPE/LCMS** | | | | | | |
| FZA783 | OLD-002-51A-0118 | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA784 | OLD-002-51A-0118D | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA785 | OLD-002-11A-0118 | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA786 | OLD-002-03A-0118 | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA788 | EB-GW-012218-1 | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA789 | FB-OLD-012218-1 | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA790 | FB-OLD-012218-2 | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA791 | EB-WC-012218-1 | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA792 | EB-DPT-012218-1 | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA801 | FB-OLD-012318-3 | 2018/01/23 | 2018/01/25 | 2018/02/06 | 2018/02/08 | 2018/02/08 |
| FZA802 | EB-WC-012318-2 | 2018/01/23 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/08 |
| FZA803 | EB-GW-012318-2 | 2018/01/23 | 2018/01/25 | 2018/02/06 | 2018/02/08 | 2018/02/08 |
| FZA804 | FB-OLD-012318-4 | 2018/01/23 | 2018/01/25 | 2018/02/06 | 2018/02/08 | 2018/02/08 |
| FZA805 | EB-DPT-012318-2 | 2018/01/23 | 2018/01/25 | 2018/02/06 | 2018/02/08 | 2018/02/08 |
| FZA806 | OLD-02-09A-0118 | 2018/01/23 | 2018/01/25 | 2018/02/06 | 2018/02/08 | 2018/02/08 |
| FZA807 | EB-WC-012418-3 | 2018/01/24 | 2018/01/25 | 2018/02/07 | 2018/02/09 | 2018/02/08-09 |
| FZA808 | FB-OLD-012418-5 | 2018/01/24 | 2018/01/25 | 2018/02/07 | 2018/02/09 | 2018/02/08-09 |
| FZA809 | EB-DPT-012418-3 | 2018/01/24 | 2018/01/25 | 2018/02/07 | 2018/02/09 | 2018/02/08-09 |

Run Date is defined as the date of injection of the last calibration standard (12 hours or less) prior to the samples analyzed within that run sequence. Therefore the time of calibration injection that defines the run date is always within 12 hours of the time of sample injection.

b) Shipping Problems: none encountered

c) Documentation Problems: none encountered

**II. SAMPLE PREP:**

No problems encountered

**III. SAMPLE ANALYSIS:**

See also comments within the appropriate Certificate of Analysis

a) Hold Times: Due to rework requirements, the following samples were re-analyzed for PFTrDA, PFTeDA, and PFDoA past hold time: FZA783, FZA784, FZA785, FZA786, FZA788, FZA789, FZA790, FZA791, and FZA792.

b) Instrument Calibration: all within control limits

c) Quality Control: All applicable QC meets control criteria, except where otherwise noted.

d) All analytes requiring manual intergration(s) are noted on the sample chromatograms

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for other than the conditions detailed above.

In addition, I certify, that to the best of my knowledge and belief, the data as reported are true and accurate. Release of the data contained in this data package has been authorized by the cognizant laboratory official or his/her designee, as verified by this signature.

Project Manager- Site Assessment and Remediation/ Ultra Trace

2018/03/06
Date




# 2. Sample Management Records

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
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1-800-668-0639
www.maxxamanalytics.com




# 2.1 Sample Custody

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Maxxam Analytics

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6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel (905) 817-5700 Toll-free 800-563-6266 Fax (905) 817-5777 www.maxxam.ca

# CHAIN OF CUSTODY RECORD



**INVOICE TO:**
Company Name: #31688 Earth Toxics Inc
Attention: Accounts Payable
Address: PO Box 3382, Logan UT 84321
Tel: (781) 455-0653 x Fax:
Email: rcarr@earthtoxics.com

**REPORT TO:**
Company Name: Tetra Tech
Attention: Ron Kohn
Address: 661 Anderson Drive, Pittsburgh, PA 15220
Tel: 412-921-8291 Fax: 412-921-4040
Email: Ron.Kohn@tetratech.com

**PROJECT INFORMATION:**
Quotation #: B80382
P.O. #:
Project: JM11 NTC Orlando
Project Name:
Site #:
Sampled By: Gregersen/c, Anderson

**Laboratory Use Only:**
Maxxam Job #:
Bottle Order #: 647124
COC #: C#647124-01-01
Project Manager: Stephanie Pollen

**MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY**

Regulation 153 (2011): ☐ Table 1 ☐ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☐ Table ___
Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Other
Special Instructions:
Include Criteria on Certificate of Analysis (Y/N)?

ANALYSIS REQUESTED (PLEASE BE SPECIFIC):
Field Filtered (please circle): Metals / Hg / Cr VI

25-Jan-18 13:50
Stephanie Pollen
B818419
TSP ENV-832

Please provide advance notice for rush projects
Regular (Standard) TAT: (if not specified)
(working days for most tests)
Please note: for certain tests such as BOD and Dioxins/Furans are > 5 days; contact your Project Manager for details.
(if applies to entire submission)
Time Required: ___
For: ___ (call lab for #)
Comments:

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | PFOS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | OLD-OU2-51A-0118 | 01/22/18 | 1258 | GW | X | | | | | | | | | 2 | |
| 2 | | OLD-OU2-51A-01180 | 01/22/18 | 12:58 | GW | X | | | | | | | | | 2 | |
| 3 | | OLD-OU2-11A-0118 | 01/22/18 | 1410 | GW | X | | | | | | | | | 2 | |
| 4 | | OLD-OU2-03A-0118 | 01/22/18 | 1501 | GW | X | | | | | | | | | 2 | |
| 5 | | OLD-OU2-03A-0118-MS/MSD | 01/22/18 | 1501 | GW | X. | | | | | | | | | 4 | |
| 6 | | EB-GW-012218-1 | 01/22/18 | 1345 | GW | X | | | | | | | | | 2 | |
| 7 | | FB-OLD-012218-1 | 01/22/18 | 1350 | GW | X | | | | | | | | | 2 | |
| 8 | | FB-OLD-012218-2 | 01/22/18 | 1420 | W | X | | | | | | | | | 2 | |
| 9 | | EB-WC-012218-1 | 01/22/18 | 1430 | W | X | | | | | | | | | 2 | |
| 10 | | EB-DPT-012218-1 | 01/22/18 | 1435 | W | X | | | | | | | | | 2 | |

| * RELINQUISHED BY: (Signature/Print) | Date: (YY/MM/DD) | Time | RECEIVED BY: (Signature/Print) | Date: (YY/MM/DD) | Time | # jars used and not submitted |
|---|---|---|---|---|---|---|
| Scott Anderson | 01/24/18 | 1600 | Sample Simmer Tetra | 2018/01/25 | 13:50 | |

Laboratory Use Only
Time Sensitive
Temperature (°C) on Recei: 3.5 | 3.1 | 3.1
Custody Seal Present: Yes ✓ No
Intact: ✓

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO MAXXAM'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.MAXXAM.CA/TERMS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT HTTP://MAXXAM.CA/WP-CONTENT/UPLOADS/ONTARIO-COC.PDF.

SAMPLES MUST BE KEPT COOL ( < 10° C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxa Yellow: Client

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6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel: (905) 817-5700 Toll-free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

# CHAIN OF CUSTODY RECORD

Page 2 of 2

| INVOICE TO: | | REPORT TO: | | PROJECT INFORMATION: | | Laboratory Use Only: | |
|---|---|---|---|---|---|---|---|
| Company Name | #31688 Earth Toxics Inc | Company Name | Tetra Tech | Quotation # | B80382 | Maxxam Job #: | Bottle Order #: |
| Attention | Accounts Payable | Attention | Ron Kotun | P.O. # | | | 647124 |
| Address | PO Box 3382 | Address | 661 Anderson Drive | Project | JM11 NTC Orlando | COC #: | Project Manager: |
| | Logan UT 84321 | | Pittsburgh, PA 15220 | Project Name | | C#647124-02-01 | Stephanie Pollen |
| Tel | (781) 455-0653 x | Tel | 412-921-8241 Fax: 412-921-4040 | Site # | | | |
| Email | rcarr@earthtoxics.com | Email | Ron.Kotun@tetratech.com | Sampled By | Grzegorek, Andrew | | |

**MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY**

| Regulation 153 (2011) | Other Regulations | Special Instructions |
|---|---|---|
| ☐ Table 1 ☐ Res/Park ☐ Medium/Fine | ☐ CCME ☐ Sanitary Sewer Bylaw | |
| ☐ Table 2 ☐ Ind/Comm ☐ Coarse | ☐ Reg 558 ☐ Storm Sewer Bylaw | |
| ☐ Table 3 ☐ Agri/Other ☐ For RSC | ☐ MISA Municipality | |
| ☐ Table ___ | ☐ PWQO | |
| | ☐ Other | |

*Include Criteria on Certificate of Analysis (Y/N)?* ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC):

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

**Regular (Standard) TAT:**
*(will be applied if Rush TAT is not specified)*
*Standard TAT = 5-7 Working days for most tests.*
*Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.*

**Job Specific Rush TAT (if applies to entire submission)**
Date Required: ___ Time Required: ___
Rush Confirmation Number: ___ *(call lab for #)*

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Field Filtered (please circle): Metals / Hg / Cr VI | PFOS | | | | | | | | | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | FB-OLD-012318-3 | 01/23/18 | 1020 | W | | X | | | | | | | | | 2 | |
| 2 | | EB-WC-012318-2 | 01/23/18 | 1030 | W | | X | | | | | | | | | 2 | |
| 3 | | EB-GW-012318-2 | 01/23/18 | 1100 | W | | X | | | | | | | | | 2 | |
| 4 | | FB-OLD-012318-4 | 01/23/18 | 1105 | W | | X | | | | | | | | | 2 | |
| 5 | | EB-DPT-012318-2 | 01/23/18 | 1115 | W | | X | | | | | | | | | 2 | |
| 6 | | OLD-02-09A-0118 | 01/23/18 | 1139 | GW | | X | | | | | | | | | 2 | |
| 7 | | EB-WC-012418-3 | 1/24/18 | 955 | W | | X | | | | | | | | | 2 | |
| 8 | | FB-OLD-012418-5 | 1/24/18 | 1000 | W | | X | | | | | | | | | 2 | |
| 9 | | EB-DPT-012418-3 | 1/24/18 | 1030 | W | | X | | | | | | | | | 2 | |
| 10 | | | | | | | | | | | | | | | | | |

| RELINQUISHED BY: (Signature/Print) | Date: (YY/MM/DD) | Time | RECEIVED BY: (Signature/Print) | Date: (YY/MM/DD) | Time | # jars used and not submitted |
|---|---|---|---|---|---|---|
| Scott Andrew | 01/24/18 | 1600 | STUART KEE | 2018/01/25 | 13:50 | |

| Laboratory Use Only | | | | |
|---|---|---|---|---|
| Time Sensitive | Temperature (°C) on Rece: 3.5 / 3.1 / 3.1 | Custody Seal Present | Yes ✓ | No |
| | | Intact | ✓ | |

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO MAXXAM'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.MAXXAM.CA/TERMS.

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SAMPLES MUST BE KEPT COOL ( < 10° C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxa Yellow: Client



# 3. Analytical Results

Maxxam Analytics International
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www.maxxamanalytics.com




# 3.1 Summary Report

Maxxam Analytics International
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www.maxxamanalytics.com

Your Project #: JM11 NTC Orlando
Your C.O.C. #: 647124-01-01, 647124-02-01

**Attention: Rick Carr**

Earth Toxics Inc
PO Box 3382
Logan, UT
USA 84321

**Report Date: 2018/03/01**
Report #: R5026512
Version: 2 - Revision

# CERTIFICATE OF ANALYSIS – REVISED REPORT

**MAXXAM JOB #: B818419**
**Received: 2018/01/25, 13:50**

Sample Matrix: Water
# Samples Received: 18

| Analyses | Quantity | Date Extracted | Date Analyzed | Laboratory Method | Reference |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS (1) | 9 | 2018/02/03 | 2018/02/06 | CAM SOP-00894 | EPA 537 m |
| PFOS and PFOA in water by SPE/LCMS (1) | 5 | 2018/02/06 | 2018/02/08 | CAM SOP-00894 | EPA 537 m |
| PFOS and PFOA in water by SPE/LCMS (1) | 3 | 2018/02/07 | 2018/02/09 | CAM SOP-00894 | EPA 537 m |
| PFOS and PFOA in water by SPE/LCMS (1) | 1 | 2018/02/13 | 2018/02/15 | CAM SOP-00894 | EPA 537 m |

**Remarks:**

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Per- and polyfluoroalkyl substances (PFAS) identified as surrogates on the certificate of analysis represent the extracted internal standard.


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Your Project #: JM11 NTC Orlando
Your C.O.C. #: 647124-01-01, 647124-02-01

**Attention: Rick Carr**

Earth Toxics Inc
PO Box 3382
Logan, UT
USA 84321

**Report Date: 2018/03/01**
Report #: R5026512
Version: 2 - Revision

# CERTIFICATE OF ANALYSIS – REVISED REPORT

**MAXXAM JOB #: B818419**
**Received: 2018/01/25, 13:50**

Encryption Key

Please direct all questions regarding this Certific Project Manager.
Stephanie Pollen, Project Manager
Email: SPollen@maxxam.ca
Phone# (905) 817-5700

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | FZA783 | FZA784 | FZA785 | | | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2018/01/22 12:58 | 2018/01/22 12:58 | 2018/01/22 14:10 | | | | |
| COC Number | | 647124-01-01 | 647124-01-01 | 647124-01-01 | | | | |
| | UNITS | OLD-002-51A-0118 | OLD-002-51A-0118D | OLD-002-11A-0118 | DL | LOD | LOQ | QC Batch |
| **Miscellaneous Parameters** | | | | | | | | |
| EtFOSAA | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0033 | 0.010 | 0.020 | 5396699 |
| MeFOSAA | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0029 | 0.010 | 0.020 | 5396699 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0054 | 0.015 | 0.020 | 5383466 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0074 | 0.015 | 0.020 | 5383466 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 0.011 J | 0.010 U | 0.010 J | 0.0035 | 0.010 | 0.020 | 5383466 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 0.0089 J | 0.0087 J | 0.013 J | 0.0056 | 0.015 | 0.020 | 5383466 |
| Perfluorononanoic Acid (PFNA) | ug/L | 0.018 U | 0.018 U | 0.018 U | 0.0087 | 0.018 | 0.020 | 5383466 |
| Perfluorotetradecanoic Acid | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0027 | 0.010 | 0.020 | 5396699 |
| Perfluorotridecanoic Acid | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0038 | 0.010 | 0.020 | 5396699 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0025 | 0.010 | 0.020 | 5383466 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0061 | 0.015 | 0.020 | 5383466 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0050 | 0.010 | 0.020 | 5396699 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 0.010 U | 0.010 U | 0.012 J | 0.0033 | 0.010 | 0.020 | 5383466 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0060 | 0.015 | 0.020 | 5383466 |
| **Surrogate Recovery (%)** | | | | | | | | |
| 13C2-Perfluorodecanoic acid | % | 86 | 107 | 95 | | | | 5383466 |
| 13C2-Perfluorododecanoic acid | % | 106 | 91 | 94 | | | | 5396699 |
| 13C2-Perfluorohexanoic acid | % | 88 | 110 | 82 | | | | 5383466 |
| 13C2-perfluorotetradecanoic acid | % | 108 | 102 | 97 | | | | 5396699 |
| 13C2-Perfluoroundecanoic acid | % | 83 | 91 | 96 | | | | 5383466 |
| 13C4-Perfluoroheptanoic acid | % | 87 | 114 | 99 | | | | 5383466 |
| 13C4-Perfluorooctanesulfonate | % | 95 | 122 | 99 | | | | 5383466 |
| 13C4-Perfluorooctanoic acid | % | 90 | 111 | 98 | | | | 5383466 |
| 13C5-Perfluorononanoic acid | % | 91 | 119 | 101 | | | | 5383466 |
| 18O2-Perfluorohexanesulfonate | % | 88 | 114 | 97 | | | | 5383466 |
| D3-MeFOSAA | % | 112 | 104 | 108 | | | | 5396699 |
| D5-EtFOSAA | % | 112 | 103 | 104 | | | | 5396699 |

DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | FZA786 | FZA788 | FZA789 | | | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2018/01/22 15:01 | 2018/01/22 13:45 | 2018/01/22 13:50 | | | | |
| COC Number | | 647124-01-01 | 647124-01-01 | 647124-01-01 | | | | |
| | UNITS | OLD-002-03A-0118 | EB-GW-012218-1 | FB-OLD-012218-1 | DL | LOD | LOQ | QC Batch |
| **Miscellaneous Parameters** | | | | | | | | |
| EtFOSAA | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0033 | 0.010 | 0.020 | 5396699 |
| MeFOSAA | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0029 | 0.010 | 0.020 | 5396699 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 0.012 J | 0.015 U | 0.015 U | 0.0054 | 0.015 | 0.020 | 5383466 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 0.025 | 0.015 U | 0.015 U | 0.0074 | 0.015 | 0.020 | 5383466 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 0.035 | 0.010 U | 0.010 U | 0.0035 | 0.010 | 0.020 | 5383466 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 0.027 | 0.015 U | 0.015 U | 0.0056 | 0.015 | 0.020 | 5383466 |
| Perfluorononanoic Acid (PFNA) | ug/L | 0.018 U | 0.018 U | 0.018 U | 0.0087 | 0.018 | 0.020 | 5383466 |
| Perfluorotetradecanoic Acid | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0027 | 0.010 | 0.020 | 5396699 |
| Perfluorotridecanoic Acid | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0038 | 0.010 | 0.020 | 5396699 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0025 | 0.010 | 0.020 | 5383466 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0061 | 0.015 | 0.020 | 5383466 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0050 | 0.010 | 0.020 | 5396699 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 0.14 | 0.010 U | 0.010 U | 0.0033 | 0.010 | 0.020 | 5383466 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 0.084 | 0.015 U | 0.015 U | 0.0060 | 0.015 | 0.020 | 5383466 |
| **Surrogate Recovery (%)** | | | | | | | | |
| 13C2-Perfluorodecanoic acid | % | 93 | 98 | 94 | | | | 5383466 |
| 13C2-Perfluorododecanoic acid | % | 93 | 89 | 94 | | | | 5396699 |
| 13C2-Perfluorohexanoic acid | % | 96 | 109 | 109 | | | | 5383466 |
| 13C2-perfluorotetradecanoic acid | % | 91 | 99 | 90 | | | | 5396699 |
| 13C2-Perfluoroundecanoic acid | % | 92 | 96 | 91 | | | | 5383466 |
| 13C4-Perfluoroheptanoic acid | % | 101 | 116 | 113 | | | | 5383466 |
| 13C4-Perfluorooctanesulfonate | % | 112 | 110 | 114 | | | | 5383466 |
| 13C4-Perfluorooctanoic acid | % | 100 | 110 | 113 | | | | 5383466 |
| 13C5-Perfluorononanoic acid | % | 103 | 112 | 106 | | | | 5383466 |
| 18O2-Perfluorohexanesulfonate | % | 103 | 111 | 103 | | | | 5383466 |
| D3-MeFOSAA | % | 116 | 106 | 100 | | | | 5396699 |
| D5-EtFOSAA | % | 113 | 99 | 97 | | | | 5396699 |

DL = Detection Limit
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QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | FZA790 | FZA791 | FZA792 | | | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2018/01/22 14:20 | 2018/01/22 14:30 | 2018/01/22 14:35 | | | | |
| COC Number | | 647124-01-01 | 647124-01-01 | 647124-01-01 | | | | |
| | UNITS | FB-OLD-012218-2 | EB-WC-012218-1 | EB-DPT-012218-1 | DL | LOD | LOQ | QC Batch |
| **Miscellaneous Parameters** | | | | | | | | |
| EtFOSAA | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0033 | 0.010 | 0.020 | 5396699 |
| MeFOSAA | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0029 | 0.010 | 0.020 | 5396699 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0054 | 0.015 | 0.020 | 5383466 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0074 | 0.015 | 0.020 | 5383466 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0035 | 0.010 | 0.020 | 5383466 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0056 | 0.015 | 0.020 | 5383466 |
| Perfluorononanoic Acid (PFNA) | ug/L | 0.018 U | 0.018 U | 0.018 U | 0.0087 | 0.018 | 0.020 | 5383466 |
| Perfluorotetradecanoic Acid | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0027 | 0.010 | 0.020 | 5396699 |
| Perfluorotridecanoic Acid | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0038 | 0.010 | 0.020 | 5396699 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0025 | 0.010 | 0.020 | 5383466 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0061 | 0.015 | 0.020 | 5383466 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0050 | 0.010 | 0.020 | 5396699 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0033 | 0.010 | 0.020 | 5383466 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0060 | 0.015 | 0.020 | 5383466 |
| **Surrogate Recovery (%)** | | | | | | | | |
| 13C2-Perfluorodecanoic acid | % | 86 | 105 | 102 | | | | 5383466 |
| 13C2-Perfluorododecanoic acid | % | 111 | 106 | 100 | | | | 5396699 |
| 13C2-Perfluorohexanoic acid | % | 100 | 104 | 90 | | | | 5383466 |
| 13C2-perfluorotetradecanoic acid | % | 115 | 95 | 84 | | | | 5396699 |
| 13C2-Perfluoroundecanoic acid | % | 84 | 102 | 95 | | | | 5383466 |
| 13C4-Perfluoroheptanoic acid | % | 107 | 107 | 92 | | | | 5383466 |
| 13C4-Perfluorooctanesulfonate | % | 102 | 106 | 104 | | | | 5383466 |
| 13C4-Perfluorooctanoic acid | % | 100 | 109 | 101 | | | | 5383466 |
| 13C5-Perfluorononanoic acid | % | 103 | 109 | 93 | | | | 5383466 |
| 18O2-Perfluorohexanesulfonate | % | 101 | 95 | 96 | | | | 5383466 |
| D3-MeFOSAA | % | 123 | 117 | 76 | | | | 5396699 |
| D5-EtFOSAA | % | 122 | 117 | 72 | | | | 5396699 |

DL = Detection Limit
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QC Batch = Quality Control Batch
N/A = Not Applicable



Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca
Maxxam Analytics

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | FZA801 | | FZA802 | | | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2018/01/23 10:20 | | 2018/01/23 10:30 | | | | |
| COC Number | | 647124-02-01 | | 647124-02-01 | | | | |
| | UNITS | FB-OLD-012318-3 | QC Batch | EB-WC-012318-2 | DL | LOD | LOQ | QC Batch |
| **Miscellaneous Parameters** | | | | | | | | |
| EtFOSAA | ug/L | 0.010 U | 5386102 | 0.010 U | 0.0033 | 0.010 | 0.020 | 5396699 |
| MeFOSAA | ug/L | 0.010 U | 5386102 | 0.010 U | 0.0029 | 0.010 | 0.020 | 5396699 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 0.015 U | 5386102 | 0.015 U | 0.0054 | 0.015 | 0.020 | 5396699 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 0.015 U | 5386102 | 0.015 U | 0.0074 | 0.015 | 0.020 | 5396699 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 0.010 U | 5386102 | 0.010 U | 0.0035 | 0.010 | 0.020 | 5396699 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 0.015 U | 5386102 | 0.015 U | 0.0056 | 0.015 | 0.020 | 5396699 |
| Perfluorononanoic Acid (PFNA) | ug/L | 0.018 U | 5386102 | 0.018 U | 0.0087 | 0.018 | 0.020 | 5396699 |
| Perfluorotetradecanoic Acid | ug/L | 0.010 U | 5386102 | 0.010 U | 0.0027 | 0.010 | 0.020 | 5396699 |
| Perfluorotridecanoic Acid | ug/L | 0.010 U | 5386102 | 0.010 U | 0.0038 | 0.010 | 0.020 | 5396699 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 0.010 U | 5386102 | 0.010 U | 0.0025 | 0.010 | 0.020 | 5396699 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 0.015 U | 5386102 | 0.015 U | 0.0061 | 0.015 | 0.020 | 5396699 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 0.010 U | 5386102 | 0.010 U | 0.0050 | 0.010 | 0.020 | 5396699 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 0.010 U | 5386102 | 0.010 U | 0.0033 | 0.010 | 0.020 | 5396699 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 0.015 U | 5386102 | 0.015 U | 0.0060 | 0.015 | 0.020 | 5396699 |
| **Surrogate Recovery (%)** | | | | | | | | |
| 13C2-Perfluorodecanoic acid | % | 78 | 5386102 | 91 | | | | 5396699 |
| 13C2-Perfluorododecanoic acid | % | 72 | 5386102 | 91 | | | | 5396699 |
| 13C2-Perfluorohexanoic acid | % | 90 | 5386102 | 73 | | | | 5396699 |
| 13C2-perfluorotetradecanoic acid | % | 69 | 5386102 | 77 | | | | 5396699 |
| 13C2-Perfluoroundecanoic acid | % | 70 | 5386102 | 97 | | | | 5396699 |
| 13C4-Perfluoroheptanoic acid | % | 91 | 5386102 | 80 | | | | 5396699 |
| 13C4-Perfluorooctanesulfonate | % | 73 | 5386102 | 67 | | | | 5396699 |
| 13C4-Perfluorooctanoic acid | % | 85 | 5386102 | 56 | | | | 5396699 |
| 13C5-Perfluorononanoic acid | % | 84 | 5386102 | 74 | | | | 5396699 |
| 18O2-Perfluorohexanesulfonate | % | 85 | 5386102 | 79 | | | | 5396699 |
| D3-MeFOSAA | % | 75 | 5386102 | 91 | | | | 5396699 |
| D5-EtFOSAA | % | 70 | 5386102 | 88 | | | | 5396699 |

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QC Batch = Quality Control Batch
N/A = Not Applicable



Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca
Maxxam Analytics

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | FZA803 | FZA804 | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Date | | 2018/01/23 11:00 | 2018/01/23 11:05 | | | | |
| COC Number | | 647124-02-01 | 647124-02-01 | | | | |
| | UNITS | EB-GW-012318-2 | FB-OLD-012318-4 | DL | LOD | LOQ | QC Batch |
| **Miscellaneous Parameters** | | | | | | | |
| EtFOSAA | ug/L | 0.010 U | 0.010 U | 0.0033 | 0.010 | 0.020 | 5386102 |
| MeFOSAA | ug/L | 0.010 U | 0.010 U | 0.0029 | 0.010 | 0.020 | 5386102 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 0.015 U | 0.015 U | 0.0054 | 0.015 | 0.020 | 5386102 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 0.015 U | 0.015 U | 0.0074 | 0.015 | 0.020 | 5386102 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 0.010 U | 0.010 U | 0.0035 | 0.010 | 0.020 | 5386102 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 0.015 U | 0.015 U | 0.0056 | 0.015 | 0.020 | 5386102 |
| Perfluorononanoic Acid (PFNA) | ug/L | 0.018 U | 0.018 U | 0.0087 | 0.018 | 0.020 | 5386102 |
| Perfluorotetradecanoic Acid | ug/L | 0.010 U | 0.010 U | 0.0027 | 0.010 | 0.020 | 5386102 |
| Perfluorotridecanoic Acid | ug/L | 0.010 U | 0.010 U | 0.0038 | 0.010 | 0.020 | 5386102 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 0.010 U | 0.010 U | 0.0025 | 0.010 | 0.020 | 5386102 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 0.015 U | 0.015 U | 0.0061 | 0.015 | 0.020 | 5386102 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 0.010 U | 0.010 U | 0.0050 | 0.010 | 0.020 | 5386102 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 0.010 U | 0.010 U | 0.0033 | 0.010 | 0.020 | 5386102 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 0.015 U | 0.015 U | 0.0060 | 0.015 | 0.020 | 5386102 |
| **Surrogate Recovery (%)** | | | | | | | |
| 13C2-Perfluorodecanoic acid | % | 73 | 72 | | | | 5386102 |
| 13C2-Perfluorododecanoic acid | % | 69 | 68 | | | | 5386102 |
| 13C2-Perfluorohexanoic acid | % | 76 | 75 | | | | 5386102 |
| 13C2-perfluorotetradecanoic acid | % | 62 | 65 | | | | 5386102 |
| 13C2-Perfluoroundecanoic acid | % | 77 | 67 | | | | 5386102 |
| 13C4-Perfluoroheptanoic acid | % | 71 | 72 | | | | 5386102 |
| 13C4-Perfluorooctanesulfonate | % | 73 | 74 | | | | 5386102 |
| 13C4-Perfluorooctanoic acid | % | 80 | 70 | | | | 5386102 |
| 13C5-Perfluorononanoic acid | % | 75 | 71 | | | | 5386102 |
| 18O2-Perfluorohexanesulfonate | % | 76 | 81 | | | | 5386102 |
| D3-MeFOSAA | % | 69 | 63 | | | | 5386102 |
| D5-EtFOSAA | % | 64 | 63 | | | | 5386102 |

DL = Detection Limit
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LOQ = Limit of Quantitation
QC Batch = Quality Control Batch
N/A = Not Applicable



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Maxxam Analytics

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | FZA805 | | | | FZA806 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2018/01/23 11:15 | | | | 2018/01/23 11:39 | | | | |
| COC Number | | 647124-02-01 | | | | 647124-02-01 | | | | |
| | UNITS | EB-DPT-012318-2 | DL | LOD | LOQ | OLD-02-09A-0118 | DL | LOD | LOQ | QC Batch |
| **Miscellaneous Parameters** | | | | | | | | | | |
| EtFOSAA | ug/L | 0.011 U | 0.0035 | 0.011 | 0.021 | 0.010 U | 0.0033 | 0.010 | 0.020 | 5386102 |
| MeFOSAA | ug/L | 0.011 U | 0.0030 | 0.011 | 0.021 | 0.010 U | 0.0029 | 0.010 | 0.020 | 5386102 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 0.016 U | 0.0057 | 0.016 | 0.021 | 0.015 U | 0.0054 | 0.015 | 0.020 | 5386102 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 0.016 U | 0.0078 | 0.016 | 0.021 | 0.015 U | 0.0074 | 0.015 | 0.020 | 5386102 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 0.011 U | 0.0037 | 0.011 | 0.021 | 0.010 U | 0.0035 | 0.010 | 0.020 | 5386102 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 0.016 U | 0.0059 | 0.016 | 0.021 | 0.015 U | 0.0056 | 0.015 | 0.020 | 5386102 |
| Perfluorononanoic Acid (PFNA) | ug/L | 0.019 U | 0.0091 | 0.019 | 0.021 | 0.018 U | 0.0087 | 0.018 | 0.020 | 5386102 |
| Perfluorotetradecanoic Acid | ug/L | 0.011 U | 0.0028 | 0.011 | 0.021 | 0.010 U | 0.0027 | 0.010 | 0.020 | 5386102 |
| Perfluorotridecanoic Acid | ug/L | 0.011 U | 0.0040 | 0.011 | 0.021 | 0.010 U | 0.0038 | 0.010 | 0.020 | 5386102 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 0.011 U | 0.0026 | 0.011 | 0.021 | 0.010 U | 0.0025 | 0.010 | 0.020 | 5386102 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 0.016 U | 0.0064 | 0.016 | 0.021 | 0.015 U | 0.0061 | 0.015 | 0.020 | 5386102 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 0.011 U | 0.0053 | 0.011 | 0.021 | 0.010 U | 0.0050 | 0.010 | 0.020 | 5386102 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 0.011 U | 0.0035 | 0.011 | 0.021 | 0.010 U | 0.0033 | 0.010 | 0.020 | 5386102 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 0.016 U | 0.0063 | 0.016 | 0.021 | 0.015 U | 0.0060 | 0.015 | 0.020 | 5386102 |
| **Surrogate Recovery (%)** | | | | | | | | | | |
| 13C2-Perfluorodecanoic acid | % | 75 | | | | 64 | | | | 5386102 |
| 13C2-Perfluorododecanoic acid | % | 72 | | | | 62 | | | | 5386102 |
| 13C2-Perfluorohexanoic acid | % | 79 | | | | 79 | | | | 5386102 |
| 13C2-perfluorotetradecanoic acid | % | 64 | | | | 63 | | | | 5386102 |
| 13C2-Perfluoroundecanoic acid | % | 74 | | | | 68 | | | | 5386102 |
| 13C4-Perfluoroheptanoic acid | % | 83 | | | | 72 | | | | 5386102 |
| 13C4-Perfluorooctanesulfonate | % | 80 | | | | 86 | | | | 5386102 |
| 13C4-Perfluorooctanoic acid | % | 81 | | | | 69 | | | | 5386102 |
| 13C5-Perfluorononanoic acid | % | 79 | | | | 78 | | | | 5386102 |
| 18O2-Perfluorohexanesulfonate | % | 85 | | | | 85 | | | | 5386102 |
| D3-MeFOSAA | % | 80 | | | | 73 | | | | 5386102 |
| D5-EtFOSAA | % | 78 | | | | 72 | | | | 5386102 |

DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | FZA807 | FZA808 | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Date | | 2018/01/24 09:55 | 2018/01/24 10:00 | | | | |
| COC Number | | 647124-02-01 | 647124-02-01 | | | | |
| | UNITS | EB-WC-012418-3 | FB-OLD-012418-5 | DL | LOD | LOQ | QC Batch |
| **Miscellaneous Parameters** | | | | | | | |
| EtFOSAA | ug/L | 0.011 U | 0.011 U | 0.0036 | 0.011 | 0.022 | 5389177 |
| MeFOSAA | ug/L | 0.011 U | 0.011 U | 0.0032 | 0.011 | 0.022 | 5389177 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 0.017 U | 0.017 U | 0.0059 | 0.017 | 0.022 | 5389177 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 0.017 U | 0.017 U | 0.0081 | 0.017 | 0.022 | 5389177 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 0.011 U | 0.011 U | 0.0039 | 0.011 | 0.022 | 5389177 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 0.017 U | 0.017 U | 0.0062 | 0.017 | 0.022 | 5389177 |
| Perfluorononanoic Acid (PFNA) | ug/L | 0.020 U | 0.020 U | 0.0096 | 0.020 | 0.022 | 5389177 |
| Perfluorotetradecanoic Acid | ug/L | 0.011 U | 0.011 U | 0.0030 | 0.011 | 0.022 | 5389177 |
| Perfluorotridecanoic Acid | ug/L | 0.011 U | 0.011 U | 0.0042 | 0.011 | 0.022 | 5389177 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 0.011 U | 0.011 U | 0.0028 | 0.011 | 0.022 | 5389177 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 0.017 U | 0.017 U | 0.0067 | 0.017 | 0.022 | 5389177 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 0.011 U | 0.011 U | 0.0055 | 0.011 | 0.022 | 5389177 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 0.011 U | 0.011 U | 0.0036 | 0.011 | 0.022 | 5389177 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 0.017 U | 0.017 U | 0.0066 | 0.017 | 0.022 | 5389177 |
| **Surrogate Recovery (%)** | | | | | | | |
| 13C2-Perfluorodecanoic acid | % | 87 | 90 | | | | 5389177 |
| 13C2-Perfluorododecanoic acid | % | 88 | 78 | | | | 5389177 |
| 13C2-Perfluorohexanoic acid | % | 93 | 96 | | | | 5389177 |
| 13C2-perfluorotetradecanoic acid | % | 79 | 71 | | | | 5389177 |
| 13C2-Perfluoroundecanoic acid | % | 93 | 81 | | | | 5389177 |
| 13C4-Perfluoroheptanoic acid | % | 99 | 96 | | | | 5389177 |
| 13C4-Perfluorooctanesulfonate | % | 92 | 90 | | | | 5389177 |
| 13C4-Perfluorooctanoic acid | % | 92 | 90 | | | | 5389177 |
| 13C5-Perfluorononanoic acid | % | 92 | 94 | | | | 5389177 |
| 18O2-Perfluorohexanesulfonate | % | 90 | 93 | | | | 5389177 |
| D3-MeFOSAA | % | 79 | 76 | | | | 5389177 |
| D5-EtFOSAA | % | 78 | 75 | | | | 5389177 |

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Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | FZA809 | | | | |
|---|---|---|---|---|---|---|
| Sampling Date | | 2018/01/24 10:30 | | | | |
| COC Number | | 647124-02-01 | | | | |
| | UNITS | EB-DPT-012418-3 | DL | LOD | LOQ | QC Batch |
| **Miscellaneous Parameters** | | | | | | |
| EtFOSAA | ug/L | 0.010 U | 0.0033 | 0.010 | 0.020 | 5389177 |
| MeFOSAA | ug/L | 0.010 U | 0.0029 | 0.010 | 0.020 | 5389177 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 0.015 U | 0.0054 | 0.015 | 0.020 | 5389177 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 0.015 U | 0.0074 | 0.015 | 0.020 | 5389177 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 0.010 U | 0.0035 | 0.010 | 0.020 | 5389177 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 0.015 U | 0.0056 | 0.015 | 0.020 | 5389177 |
| Perfluorononanoic Acid (PFNA) | ug/L | 0.018 U | 0.0087 | 0.018 | 0.020 | 5389177 |
| Perfluorotetradecanoic Acid | ug/L | 0.010 U | 0.0027 | 0.010 | 0.020 | 5389177 |
| Perfluorotridecanoic Acid | ug/L | 0.010 U | 0.0038 | 0.010 | 0.020 | 5389177 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 0.010 U | 0.0025 | 0.010 | 0.020 | 5389177 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 0.015 U | 0.0061 | 0.015 | 0.020 | 5389177 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 0.010 U | 0.0050 | 0.010 | 0.020 | 5389177 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 0.010 U | 0.0033 | 0.010 | 0.020 | 5389177 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 0.015 U | 0.0060 | 0.015 | 0.020 | 5389177 |
| **Surrogate Recovery (%)** | | | | | | |
| 13C2-Perfluorodecanoic acid | % | 101 | | | | 5389177 |
| 13C2-Perfluorododecanoic acid | % | 91 | | | | 5389177 |
| 13C2-Perfluorohexanoic acid | % | 101 | | | | 5389177 |
| 13C2-perfluorotetradecanoic acid | % | 83 | | | | 5389177 |
| 13C2-Perfluoroundecanoic acid | % | 94 | | | | 5389177 |
| 13C4-Perfluoroheptanoic acid | % | 100 | | | | 5389177 |
| 13C4-Perfluorooctanesulfonate | % | 105 | | | | 5389177 |
| 13C4-Perfluorooctanoic acid | % | 96 | | | | 5389177 |
| 13C5-Perfluorononanoic acid | % | 97 | | | | 5389177 |
| 18O2-Perfluorohexanesulfonate | % | 97 | | | | 5389177 |
| D3-MeFOSAA | % | 87 | | | | 5389177 |
| D5-EtFOSAA | % | 83 | | | | 5389177 |

DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
QC Batch = Quality Control Batch
N/A = Not Applicable



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Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## TEST SUMMARY

**Maxxam ID:** FZA783 **Collected:** 2018/01/22
**Sample ID:** OLD-002-51A-0118 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5396699 | 2018/02/13 | 2018/02/15 | Anjan Desai |

**Maxxam ID:** FZA784 **Collected:** 2018/01/22
**Sample ID:** OLD-002-51A-0118D **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5396699 | 2018/02/13 | 2018/02/15 | Anjan Desai |

**Maxxam ID:** FZA785 **Collected:** 2018/01/22
**Sample ID:** OLD-002-11A-0118 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5396699 | 2018/02/13 | 2018/02/15 | Anjan Desai |

**Maxxam ID:** FZA786 **Collected:** 2018/01/22
**Sample ID:** OLD-002-03A-0118 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5396699 | 2018/02/13 | 2018/02/15 | Anjan Desai |

**Maxxam ID:** FZA788 **Collected:** 2018/01/22
**Sample ID:** EB-GW-012218-1 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5396699 | 2018/02/13 | 2018/02/15 | Anjan Desai |

**Maxxam ID:** FZA789 **Collected:** 2018/01/22
**Sample ID:** FB-OLD-012218-1 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5396699 | 2018/02/13 | 2018/02/15 | Anjan Desai |

**Maxxam ID:** FZA790 **Collected:** 2018/01/22
**Sample ID:** FB-OLD-012218-2 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5396699 | 2018/02/13 | 2018/02/15 | Anjan Desai |

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## TEST SUMMARY

**Maxxam ID:** FZA791 **Collected:** 2018/01/22
**Sample ID:** EB-WC-012218-1 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5396699 | 2018/02/13 | 2018/02/15 | Anjan Desai |

**Maxxam ID:** FZA792 **Collected:** 2018/01/22
**Sample ID:** EB-DPT-012218-1 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5396699 | 2018/02/13 | 2018/02/15 | Anjan Desai |

**Maxxam ID:** FZA801 **Collected:** 2018/01/23
**Sample ID:** FB-OLD-012318-3 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5386102 | 2018/02/06 | 2018/02/08 | Marian Godax |

**Maxxam ID:** FZA802 **Collected:** 2018/01/23
**Sample ID:** EB-WC-012318-2 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5396699 | 2018/02/13 | 2018/02/15 | Anjan Desai |

**Maxxam ID:** FZA803 **Collected:** 2018/01/23
**Sample ID:** EB-GW-012318-2 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5386102 | 2018/02/06 | 2018/02/08 | Marian Godax |

**Maxxam ID:** FZA804 **Collected:** 2018/01/23
**Sample ID:** FB-OLD-012318-4 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5386102 | 2018/02/06 | 2018/02/08 | Marian Godax |

**Maxxam ID:** FZA805 **Collected:** 2018/01/23
**Sample ID:** EB-DPT-012318-2 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5386102 | 2018/02/06 | 2018/02/08 | Marian Godax |

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## TEST SUMMARY

**Maxxam ID:** FZA806 **Collected:** 2018/01/23
**Sample ID:** OLD-02-09A-0118 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5386102 | 2018/02/06 | 2018/02/08 | Marian Godax |

**Maxxam ID:** FZA807 **Collected:** 2018/01/24
**Sample ID:** EB-WC-012418-3 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5389177 | 2018/02/07 | 2018/02/09 | Marian Godax |

**Maxxam ID:** FZA808 **Collected:** 2018/01/24
**Sample ID:** FB-OLD-012418-5 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5389177 | 2018/02/07 | 2018/02/09 | Marian Godax |

**Maxxam ID:** FZA809 **Collected:** 2018/01/24
**Sample ID:** EB-DPT-012418-3 **Shipped:**
**Matrix:** Water **Received:** 2018/01/25

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| PFOS and PFOA in water by SPE/LCMS | LCMS | 5389177 | 2018/02/07 | 2018/02/09 | Marian Godax |

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

| | |
|---|---|
| Package 1 | 3.2°C |

Revised Report (2018/03/01): Correction to report results for FZA783, FZA784, FZA785, FZA786, FZA788, FZA789, FZA790, FZA791, FZA792 (PFuNA, PFDoA, PFTrDA) from the correct analytical batch. Extraction date corrected for batch 5386102.

Sample FZA783, PFOS and PFOA in water by SPE/LCMS: Test repeated.
Sample FZA784, PFOS and PFOA in water by SPE/LCMS: Test repeated.
Sample FZA785, PFOS and PFOA in water by SPE/LCMS: Test repeated.
Sample FZA786, PFOS and PFOA in water by SPE/LCMS: Test repeated.
Sample FZA788, PFOS and PFOA in water by SPE/LCMS: Test repeated.
Sample FZA789, PFOS and PFOA in water by SPE/LCMS: Test repeated.
Sample FZA790, PFOS and PFOA in water by SPE/LCMS: Test repeated.
Sample FZA791, PFOS and PFOA in water by SPE/LCMS: Test repeated.
Sample FZA792, PFOS and PFOA in water by SPE/LCMS: Test repeated.

**Results relate only to the items tested.**



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## QUALITY ASSURANCE REPORT

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 5383466 | M_G | Matrix Spike(FZA786) | 13C2-Perfluorodecanoic acid | 2018/02/06 | | 85 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/06 | | 92 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/06 | | 87 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/06 | | 102 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/06 | | 101 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/06 | | 97 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/06 | | 100 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/06 | | 104 | % | 50 - 150 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/06 | | 83 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/06 | | 87 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/06 | | 92 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/06 | | 88 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/06 | | 93 | % | 72 - 131 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/06 | | 96 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/06 | | 102 | % | 71 - 133 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/06 | | 96 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/06 | | 95 | % | 72 - 131 |
| 5383466 | M_G | Matrix Spike DUP(FZA786) | 13C2-Perfluorodecanoic acid | 2018/02/06 | | 104 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/06 | | 97 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/06 | | 97 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/06 | | 103 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/06 | | 99 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/06 | | 105 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/06 | | 101 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/06 | | 102 | % | 50 - 150 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/06 | | 96 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/06 | | 94 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/06 | | 93 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/06 | | 96 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/06 | | 97 | % | 72 - 131 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/06 | | 102 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/06 | | 95 | % | 71 - 133 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/06 | | 94 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/06 | | 109 | % | 72 - 131 |
| 5383466 | M_G | MS/MSD RPD | Perfluorobutane Sulfonate (PFBS) | 2018/02/06 | 14 | | % | 30 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/06 | 8.1 | | % | 30 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/06 | 0.89 | | % | 30 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/06 | 8.8 | | % | 30 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/06 | 3.5 | | % | 30 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/06 | 5.8 | | % | 30 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/06 | 7.3 | | % | 30 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/06 | 2.1 | | % | 30 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/06 | 13 | | % | 30 |
| 5383466 | M_G | Spiked Blank | 13C2-Perfluorodecanoic acid | 2018/02/06 | | 103 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/06 | | 90 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/06 | | 122 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/06 | | 92 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/06 | | 88 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/06 | | 90 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/06 | | 97 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/06 | | 89 | % | 50 - 150 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/06 | | 100 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/06 | | 94 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/06 | | 89 | % | 74 - 129 |


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## QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/06 | | 97 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/06 | | 93 | % | 72 - 131 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/06 | | 72 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/06 | | 83 | % | 71 - 133 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/06 | | 97 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/06 | | 101 | % | 72 - 131 |
| 5383466 | M_G | Method Blank | 13C2-Perfluorodecanoic acid | 2018/02/06 | | 85 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/06 | | 106 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/06 | | 55 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/06 | | 109 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/06 | | 104 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/06 | | 107 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/06 | | 104 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/06 | | 104 | % | 50 - 150 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/06 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/06 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/06 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/06 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/06 | 0.018 U, LOD=0.018 | | ug/L | |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/06 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/06 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/06 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/06 | 0.015 U, LOD=0.015 | | ug/L | |
| 5386102 | M_G | Matrix Spike | 13C2-Perfluorodecanoic acid | 2018/02/08 | | 80 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/08 | | 70 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/08 | | 84 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/08 | | 43 (1) | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/08 | | 74 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/08 | | 82 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/08 | | 86 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/08 | | 85 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/08 | | 86 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/08 | | 85 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/08 | | 78 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/08 | | 82 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/08 | | 95 | % | 73 - 128 |
| | | | MeFOSAA | 2018/02/08 | | 102 | % | 77 - 127 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/08 | | 112 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/08 | | 98 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/08 | | 96 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/08 | | 104 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/08 | | 95 | % | 72 - 131 |
| | | | Perfluorotetradecanoic Acid | 2018/02/08 | | 155 (2) | % | 70 - 134 |
| | | | Perfluorotridecanoic Acid | 2018/02/08 | | 158 (2) | % | 67 - 143 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/08 | | 98 | % | 71 - 133 |


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## QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/08 | | 98 | % | 71 - 133 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/08 | | 106 | % | 71 - 131 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/08 | | 92 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/08 | | 91 | % | 72 - 131 |
| 5386102 | M_G | Matrix Spike DUP | 13C2-Perfluorodecanoic acid | 2018/02/08 | | 77 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/08 | | 75 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/08 | | 84 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/08 | | 66 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/08 | | 75 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/08 | | 84 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/08 | | 91 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/08 | | 81 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/08 | | 75 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/08 | | 103 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/08 | | 76 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/08 | | 75 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/08 | | 104 | % | 73 - 128 |
| | | | MeFOSAA | 2018/02/08 | | 100 | % | 77 - 127 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/08 | | 101 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/08 | | 98 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/08 | | 99 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/08 | | 91 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/08 | | 104 | % | 72 - 131 |
| | | | Perfluorotetradecanoic Acid | 2018/02/08 | | 105 | % | 70 - 134 |
| | | | Perfluorotridecanoic Acid | 2018/02/08 | | 112 | % | 67 - 143 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/08 | | 101 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/08 | | 100 | % | 71 - 133 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/08 | | 93 | % | 71 - 131 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/08 | | 96 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/08 | | 87 | % | 72 - 131 |
| 5386102 | M_G | MS/MSD RPD | EtFOSAA | 2018/02/08 | 9.1 | | % | 30 |
| | | | MeFOSAA | 2018/02/08 | 1.8 | | % | 30 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/08 | 11 | | % | 30 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/08 | 0.038 | | % | 30 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/08 | 3.0 | | % | 30 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/08 | 13 | | % | 30 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/08 | 9.4 | | % | 30 |
| | | | Perfluorotetradecanoic Acid | 2018/02/08 | 38 (3) | | % | 30 |
| | | | Perfluorotridecanoic Acid | 2018/02/08 | 34 (3) | | % | 30 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/08 | 3.2 | | % | 30 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/08 | 2.3 | | % | 30 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/08 | 13 | | % | 30 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/08 | 4.0 | | % | 30 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/08 | 4.7 | | % | 30 |
| 5386102 | M_G | Spiked Blank | 13C2-Perfluorodecanoic acid | 2018/02/08 | | 64 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/08 | | 59 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/08 | | 77 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/08 | | 63 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/08 | | 66 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/08 | | 76 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/08 | | 71 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/08 | | 71 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/08 | | 72 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/08 | | 73 | % | 50 - 150 |


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## QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| | | | D3-MeFOSAA | 2018/02/08 | | 68 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/08 | | 69 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/08 | | 98 | % | 73 - 128 |
| | | | MeFOSAA | 2018/02/08 | | 98 | % | 77 - 127 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/08 | | 117 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/08 | | 98 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/08 | | 97 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/08 | | 110 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/08 | | 106 | % | 72 - 131 |
| | | | Perfluorotetradecanoic Acid | 2018/02/08 | | 102 | % | 70 - 134 |
| | | | Perfluorotridecanoic Acid | 2018/02/08 | | 104 | % | 67 - 143 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/08 | | 97 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/08 | | 111 | % | 71 - 133 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/08 | | 113 | % | 71 - 131 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/08 | | 105 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/08 | | 103 | % | 72 - 131 |
| 5386102 | M_G | Method Blank | 13C2-Perfluorodecanoic acid | 2018/02/08 | | 58 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/08 | | 58 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/08 | | 71 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/08 | | 54 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/08 | | 62 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/08 | | 67 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/08 | | 74 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/08 | | 65 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/08 | | 63 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/08 | | 72 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/08 | | 61 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/08 | | 59 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/08 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | MeFOSAA | 2018/02/08 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/08 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/08 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/08 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/08 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/08 | 0.018 U, LOD=0.018 | | ug/L | |
| | | | Perfluorotetradecanoic Acid | 2018/02/08 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorotridecanoic Acid | 2018/02/08 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/08 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/08 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/08 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/08 | 0.010 U, LOD=0.010 | | ug/L | |


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## QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/08 | 0.015 U, LOD=0.015 | | ug/L | |
| 5389177 | M_G | Spiked Blank | 13C2-Perfluorodecanoic acid | 2018/02/09 | | 86 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/09 | | 80 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/09 | | 87 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/09 | | 78 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/09 | | 92 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/09 | | 87 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/09 | | 82 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/09 | | 84 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/09 | | 86 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/09 | | 84 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/09 | | 81 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/09 | | 76 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/09 | | 100 | % | 73 - 128 |
| | | | MeFOSAA | 2018/02/09 | | 92 | % | 77 - 127 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/09 | | 101 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/09 | | 94 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/09 | | 95 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/09 | | 98 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/09 | | 97 | % | 72 - 131 |
| | | | Perfluorotetradecanoic Acid | 2018/02/09 | | 100 | % | 70 - 134 |
| | | | Perfluorotridecanoic Acid | 2018/02/09 | | 103 | % | 67 - 143 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/09 | | 98 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/09 | | 100 | % | 71 - 133 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/09 | | 98 | % | 71 - 131 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/09 | | 101 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/09 | | 96 | % | 72 - 131 |
| 5389177 | M_G | Spiked Blank DUP | 13C2-Perfluorodecanoic acid | 2018/02/09 | | 91 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/09 | | 80 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/09 | | 98 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/09 | | 76 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/09 | | 91 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/09 | | 94 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/09 | | 89 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/09 | | 94 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/09 | | 90 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/09 | | 91 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/09 | | 82 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/09 | | 77 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/09 | | 101 | % | 73 - 128 |
| | | | MeFOSAA | 2018/02/09 | | 91 | % | 77 - 127 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/09 | | 102 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/09 | | 95 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/09 | | 94 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/09 | | 96 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/09 | | 102 | % | 72 - 131 |
| | | | Perfluorotetradecanoic Acid | 2018/02/09 | | 103 | % | 70 - 134 |
| | | | Perfluorotridecanoic Acid | 2018/02/09 | | 102 | % | 67 - 143 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/09 | | 98 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/09 | | 97 | % | 71 - 133 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/09 | | 96 | % | 71 - 131 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/09 | | 98 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/09 | | 93 | % | 72 - 131 |


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## QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 5389177 | M_G | RPD | EtFOSAA | 2018/02/09 | 1.6 | | % | 30 |
| | | | MeFOSAA | 2018/02/09 | 1.6 | | % | 30 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/09 | 0.84 | | % | 30 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/09 | 0.67 | | % | 30 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/09 | 1.8 | | % | 30 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/09 | 2.1 | | % | 30 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/09 | 5.8 | | % | 30 |
| | | | Perfluorotetradecanoic Acid | 2018/02/09 | 2.6 | | % | 30 |
| | | | Perfluorotridecanoic Acid | 2018/02/09 | 0.74 | | % | 30 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/09 | 0.62 | | % | 30 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/09 | 3.0 | | % | 30 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/09 | 2.0 | | % | 30 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/09 | 2.7 | | % | 30 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/09 | 2.8 | | % | 30 |
| 5389177 | M_G | Method Blank | 13C2-Perfluorodecanoic acid | 2018/02/09 | | 79 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/09 | | 76 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/09 | | 92 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/09 | | 80 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/09 | | 78 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/09 | | 93 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/09 | | 86 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/09 | | 96 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/09 | | 87 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/09 | | 93 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/09 | | 76 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/09 | | 72 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/09 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | MeFOSAA | 2018/02/09 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/09 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/09 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/09 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/09 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/09 | 0.018 U, LOD=0.018 | | ug/L | |
| | | | Perfluorotetradecanoic Acid | 2018/02/09 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorotridecanoic Acid | 2018/02/09 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/09 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/09 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/09 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/09 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/09 | 0.015 U, LOD=0.015 | | ug/L | |




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## QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 5396699 | AD9 | Matrix Spike(FZA786) | 13C2-Perfluorodecanoic acid | 2018/02/15 | | 118 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/15 | | 109 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/15 | | 120 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/15 | | 103 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/15 | | 120 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/15 | | 129 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/15 | | 130 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/15 | | 132 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/15 | | 128 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/15 | | 128 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/15 | | 119 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/15 | | 118 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/15 | | 82 | % | 73 - 128 |
| | | | MeFOSAA | 2018/02/15 | | 84 | % | 77 - 127 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/15 | | 78 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/15 | | 79 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/15 | | 81 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/15 | | 77 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/15 | | 81 | % | 72 - 131 |
| | | | Perfluorotetradecanoic Acid | 2018/02/15 | | 86 | % | 70 - 134 |
| | | | Perfluorotridecanoic Acid | 2018/02/15 | | 93 | % | 67 - 143 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/15 | | 81 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/15 | | 86 | % | 71 - 133 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/15 | | 88 | % | 71 - 131 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/15 | | 78 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/15 | | 79 | % | 72 - 131 |
| 5396699 | AD9 | Matrix Spike DUP(FZA786) | 13C2-Perfluorodecanoic acid | 2018/02/15 | | 103 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/15 | | 101 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/15 | | 113 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/15 | | 90 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/15 | | 103 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/15 | | 112 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/15 | | 114 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/15 | | 126 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/15 | | 115 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/15 | | 126 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/15 | | 115 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/15 | | 111 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/15 | | 87 | % | 73 - 128 |
| | | | MeFOSAA | 2018/02/15 | | 86 | % | 77 - 127 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/15 | | 77 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/15 | | 89 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/15 | | 84 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/15 | | 80 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/15 | | 90 | % | 72 - 131 |
| | | | Perfluorotetradecanoic Acid | 2018/02/15 | | 95 | % | 70 - 134 |
| | | | Perfluorotridecanoic Acid | 2018/02/15 | | 101 | % | 67 - 143 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/15 | | 93 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/15 | | 91 | % | 71 - 133 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/15 | | 89 | % | 71 - 131 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/15 | | 80 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/15 | | 92 | % | 72 - 131 |
| 5396699 | AD9 | MS/MSD RPD | EtFOSAA | 2018/02/15 | 5.5 | | % | 30 |
| | | | MeFOSAA | 2018/02/15 | 3.2 | | % | 30 |


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## QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/15 | 1.1 | | % | 30 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/15 | 11 | | % | 30 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/15 | 3.2 | | % | 30 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/15 | 4.7 | | % | 30 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/15 | 11 | | % | 30 |
| | | | Perfluorotetradecanoic Acid | 2018/02/15 | 9.7 | | % | 30 |
| | | | Perfluorotridecanoic Acid | 2018/02/15 | 7.8 | | % | 30 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/15 | 14 | | % | 30 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/15 | 5.5 | | % | 30 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/15 | 1.3 | | % | 30 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/15 | 2.8 | | % | 30 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/15 | 16 | | % | 30 |
| 5396699 | AD9 | Spiked Blank | 13C2-Perfluorodecanoic acid | 2018/02/15 | | 108 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/15 | | 95 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/15 | | 110 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/15 | | 100 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/15 | | 105 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/15 | | 117 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/15 | | 104 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/15 | | 105 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/15 | | 109 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/15 | | 104 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/15 | | 97 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/15 | | 92 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/15 | | 81 | % | 73 - 128 |
| | | | MeFOSAA | 2018/02/15 | | 82 | % | 77 - 127 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/15 | | 79 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/15 | | 78 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/15 | | 82 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/15 | | 84 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/15 | | 84 | % | 72 - 131 |
| | | | Perfluorotetradecanoic Acid | 2018/02/15 | | 75 | % | 70 - 134 |
| | | | Perfluorotridecanoic Acid | 2018/02/15 | | 86 | % | 67 - 143 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/15 | | 88 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/15 | | 86 | % | 71 - 133 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/15 | | 89 | % | 71 - 131 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/15 | | 92 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/15 | | 88 | % | 72 - 131 |
| 5396699 | AD9 | Method Blank | 13C2-Perfluorodecanoic acid | 2018/02/15 | | 94 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/15 | | 69 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/15 | | 86 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/15 | | 73 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/15 | | 78 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/15 | | 105 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/15 | | 78 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/15 | | 114 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/15 | | 103 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/15 | | 54 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/15 | | 60 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/15 | | 58 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/15 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | MeFOSAA | 2018/02/15 | 0.010 U, LOD=0.010 | | ug/L | |


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## QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/15 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/15 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/15 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/15 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/15 | 0.018 U, LOD=0.018 | | ug/L | |
| | | | Perfluorotetradecanoic Acid | 2018/02/15 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorotridecanoic Acid | 2018/02/15 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/15 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/15 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/15 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/15 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/15 | 0.015 U, LOD=0.015 | | ug/L | |

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

(1) Extracted internal standard analyte recovery was below the defined lower control limit (LCL). Laboratory spiked water resulted in satisfactory recovery of the extracted internal standard analyte. When considered together, these QC data suggest that matrix interferences may be biasing the data low. Because quantitation is performed using isotope dilution techniques, any losses of the native compound that may occur during any of the sample preparation, extraction, cleanup or determinative steps will be mirrored by a similar loss of the labeled standard, and as such can be accounted for and corrected. Therefore, the quantification of these target compounds is not affected by the low extracted internal standard analyte recovery.

(2) Recovery of the matrix spike was above the upper control limit. Laboratory spiked water resulted in satisfactory recovery of the compound of interest. When considered together, these QC data suggest that matrix interferences may be biasing the data high. For results that were not detected (ND), this potential bias has no impact.

(3) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.


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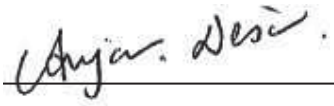
Maxxam Job #: B818419
Report Date: 2018/03/01

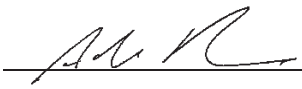
Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## VALIDATION SIGNATURE PAGE

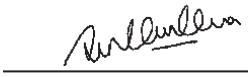
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Anjan Desai, Senior Analyst, Liquid Chromatography



Adam Robinson, Supervisor, LC/MS/MS



Sin Chii Chia, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



# METHOD 537 Modified

## DETERMINATION OF SELECTED PERFLUORINATED ALKYL ACIDS IN DRINKING WATER BY SOLID PHASE EXTRACTION AND LIQUID CHROMATOGRAPHY/TANDEM MASS SPECTROMETRY (LC/MS/MS)

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com




# 3.2 Sample Chromatograms

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

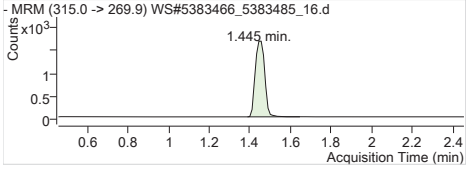
# Quantitation Results

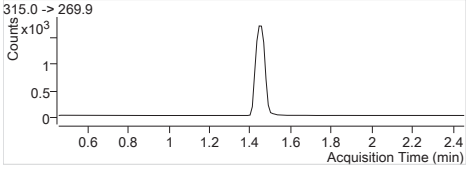
Agilent Technologies

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics | | |
| **Sample Name** | **5383466:FZA783-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_16.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B5 |
| **Acq. Date** | 2018/02/06 7:21:00 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

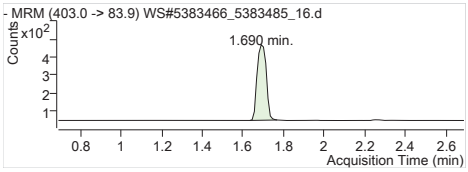
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5405 | 1.44 | 1 µg/L | | |
| MPFHxS | 1319 | 1.69 | 1 µg/L | | |
| MPFHpA | 6576 | 1.71 | 1 µg/L | | |
| MPFOA | 7307 | 1.89 | 1 µg/L | | |
| MPFOS | 1701 | 1.99 | 1 µg/L | | |
| MPFNA | 7362 | 2.04 | 1 µg/L | | |
| MPFDA | 6076 | 2.15 | 1 µg/L | | |
| MPFUnA | 6954 | 2.25 | 1 µg/L | | |
| MPFDoA | 9035 | 2.33 | 1 µg/L | | |
| MPFTeDA | 9516 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 25882 | 1.44 | 1 µg/L | | |
| 13C9-PFDA IS | 34758 | 2.15 | 1 µg/L | | |

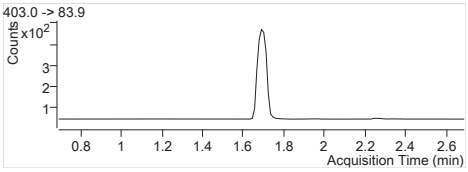
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | 255 | 1.46 | - | 0.01 µg/L | - |
| PFHxS 1 | 70 | 1.69 | - | 0.01 µg/L | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 5405 | 1.44 | - | 88.14 µg/L | - |
| 18O2-PFHxS | 1319 | 1.69 | - | 87.70 µg/L | - |
| 13C4-PFHpA | 6576 | 1.71 | - | 86.97 µg/L | - |
| 13C4-PFOA | 7307 | 1.89 | - | 89.94 µg/L | - |
| 13C4-PFOS | 1701 | 1.99 | - | 95.22 µg/L | - |
| 13C5-PFNA | 7312 | 2.04 | - | 91.34 µg/L | - |
| 13C2-PFDA | 5991 | 2.15 | - | 85.90 µg/L | - |
| 13C2-PFUnA | 6954 | 2.25 | - | 82.71 µg/L | - |
| 13C2-PFDoA | 9035 | 2.33 | - | 80.75 µg/L | - |
| 13C2-PFTeDA | 9741 | 2.48 | - | 76.41 µg/L | - |
| 13C6-PFHxA | 25882 | 1.44 | - | 2.18 µg/L | - |
| 13C9-PFDA | 34758 | 2.15 | - | 2.33 µg/L | - |



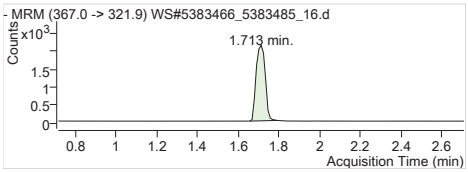



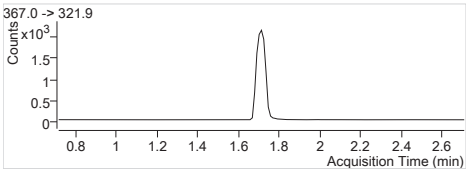

**MPFHxA** Internal Standard
RT (Exp. RT): 1.445 (1.456)
Concentration: 1 µg/L
Sample type: Sample



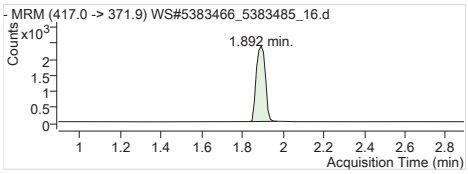



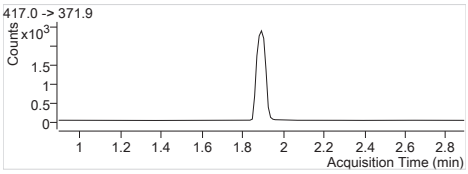

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



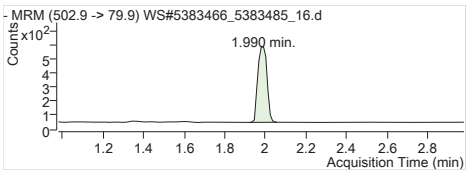



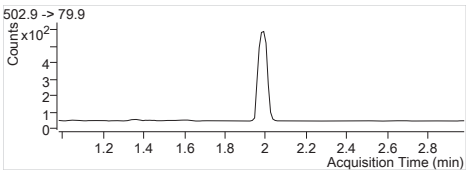

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Sample



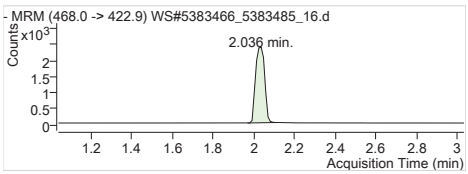



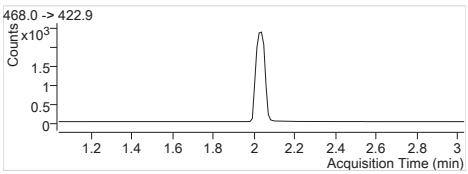

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Sample



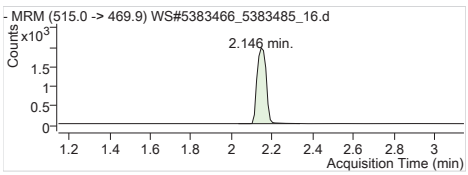



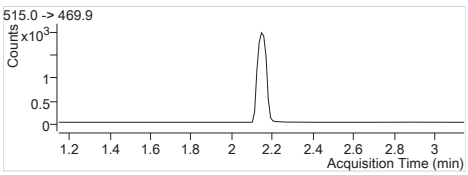

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Sample



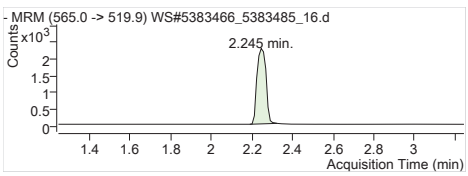



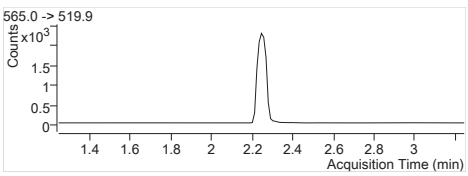

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Sample



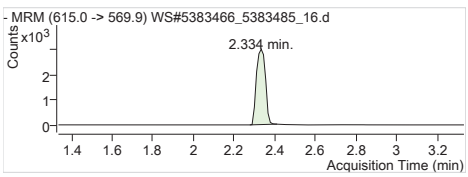



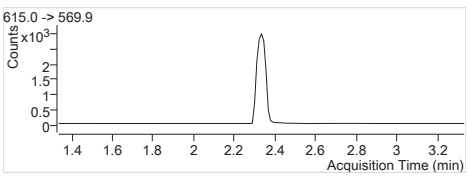

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



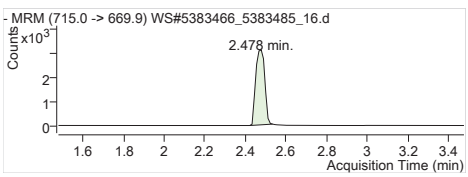



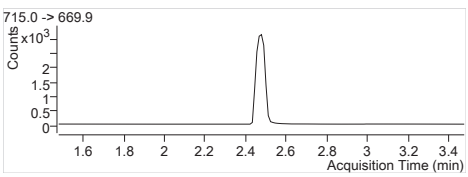

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



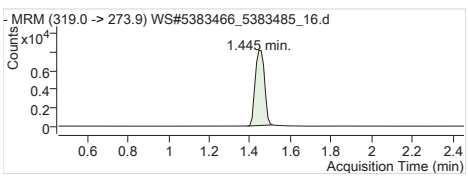



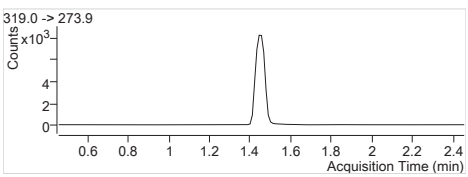

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Sample



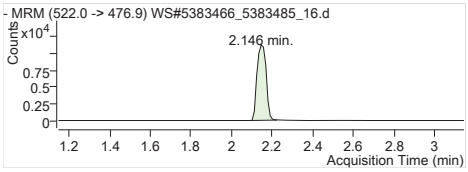



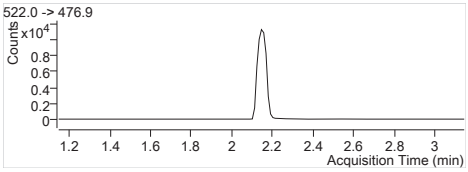

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Sample



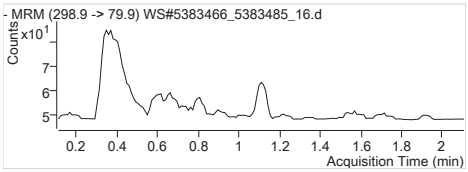



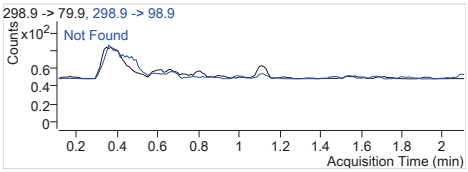

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.445 (1.456)
Concentration: 1 µg/L
Sample type: Sample



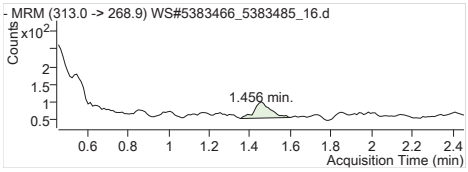



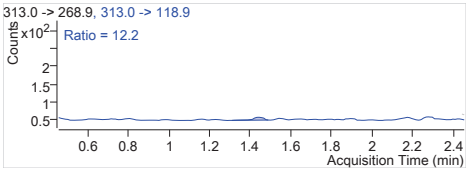

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



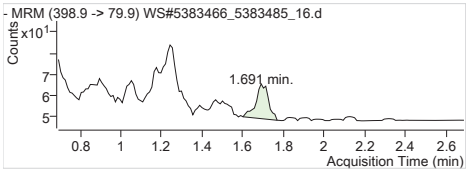



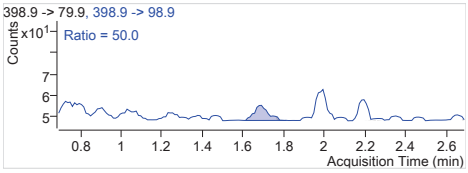

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.109)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



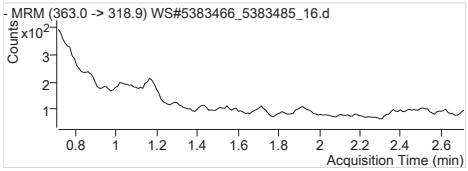



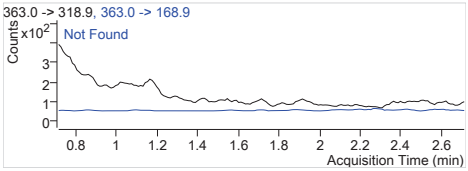

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 0.01 µg/L
Area ratio: 0.04718
Sample type: Sample



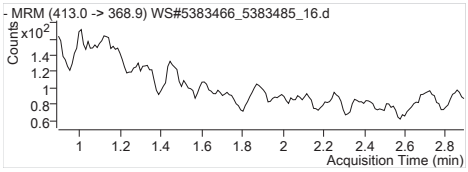



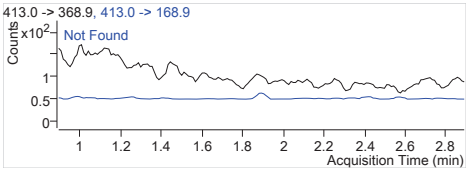

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.01 µg/L
Area ratio: 0.05307
Sample type: Sample



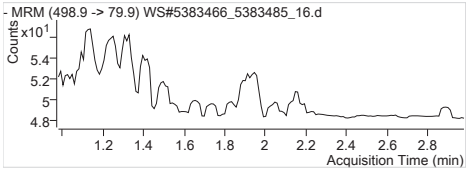



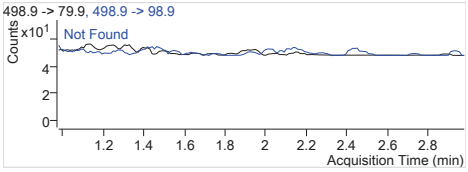

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.713)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



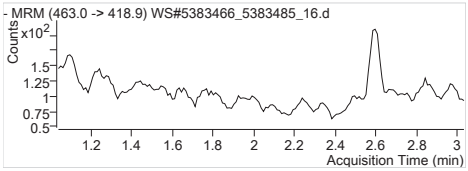



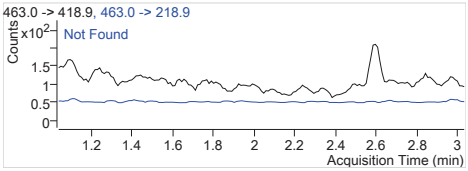

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.892)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



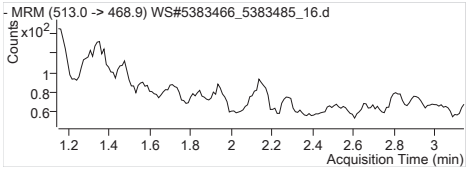



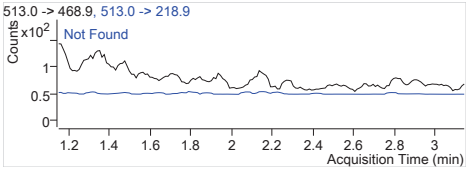

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



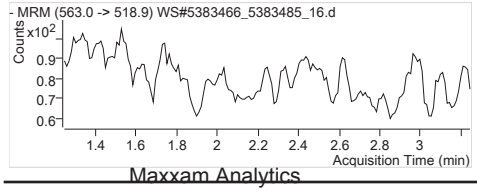



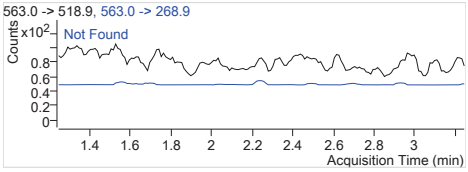

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.036)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



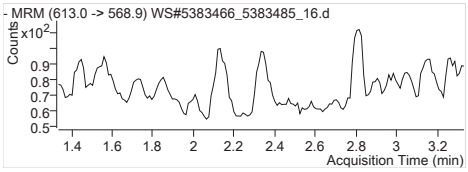



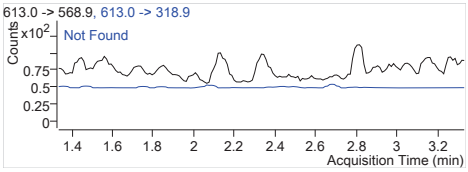

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.147)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



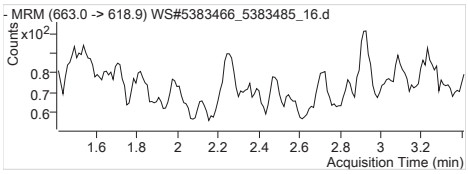



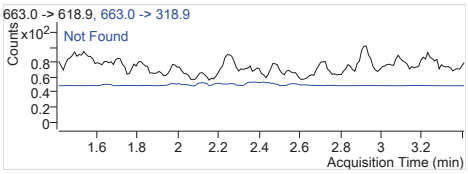

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



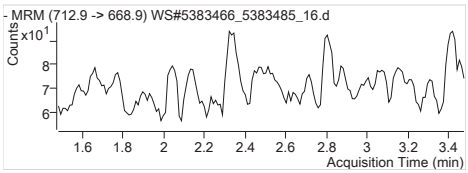



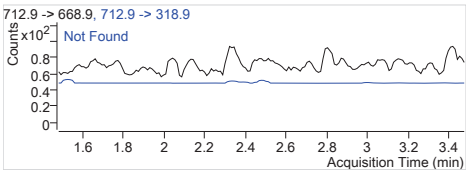

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.334) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



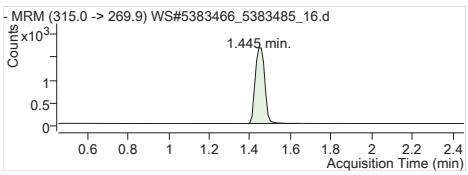



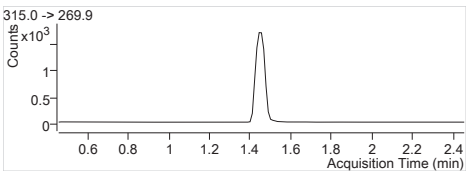

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.411) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



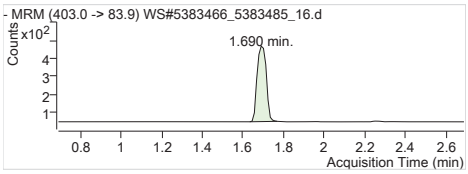



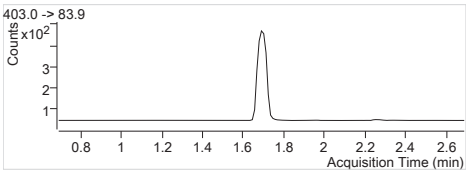

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.478) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



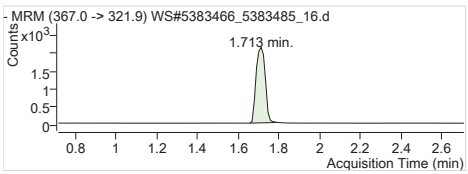



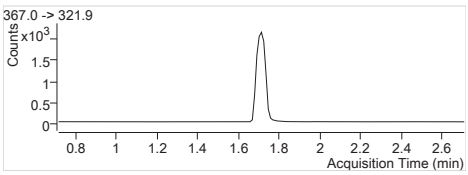

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.445 (1.456) |
| Calc. conc. | 88.14 µg/L |
| Area ratio: | 0.20883 |
| Sample type: | Sample |



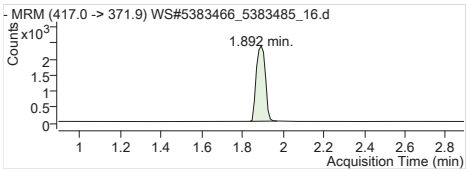



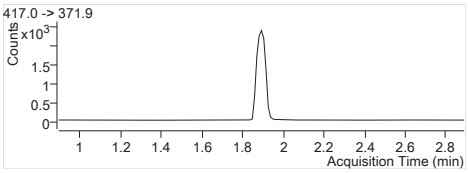

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 87.70 µg/L |
| Area ratio: | 0.05096 |
| Sample type: | Sample |



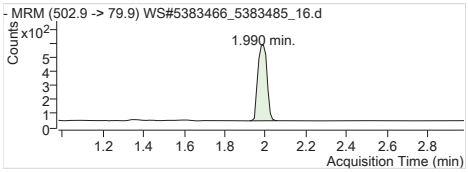



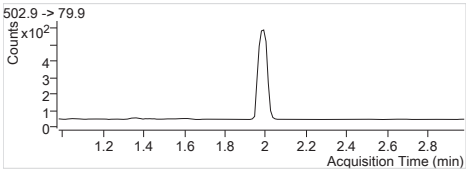

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.713 (1.713) |
| Calc. conc. | 86.97 µg/L |
| Area ratio: | 0.25408 |
| Sample type: | Sample |



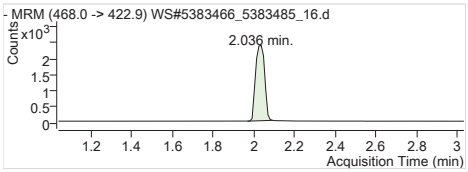



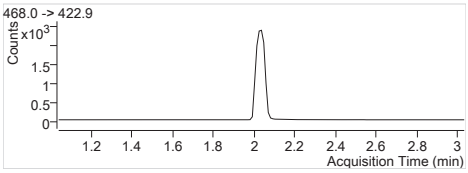

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.892 (1.892) |
| Calc. conc. | 89.94 µg/L |
| Area ratio: | 0.28232 |
| Sample type: | Sample |



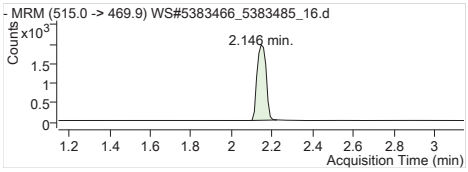



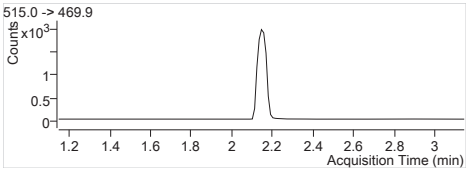

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.990 (1.979) |
| Calc. conc. | 95.22 µg/L |
| Area ratio: | 0.06572 |
| Sample type: | Sample |



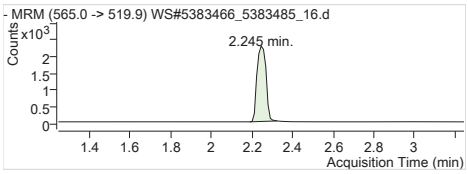



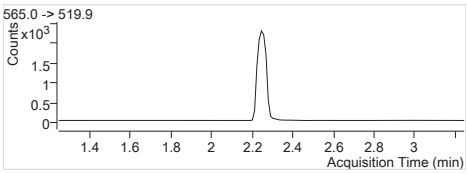

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.036 (2.036) |
| Calc. conc. | 91.34 µg/L |
| Area ratio: | 0.28251 |
| Sample type: | Sample |



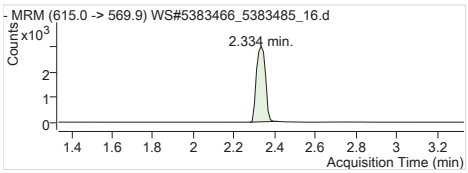



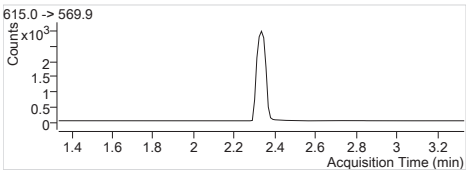

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 85.90 µg/L
Area ratio: 0.17236
Sample type: Sample



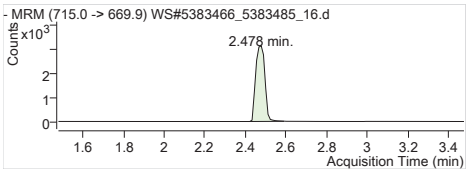



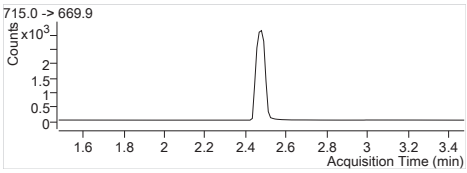

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 82.71 µg/L
Area ratio: 0.20007
Sample type: Sample



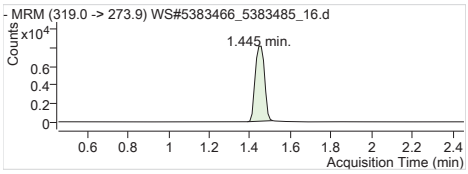



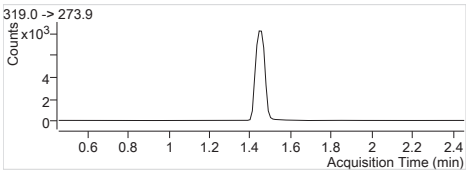

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 80.75 µg/L
Area ratio: 0.25994
Sample type: Sample



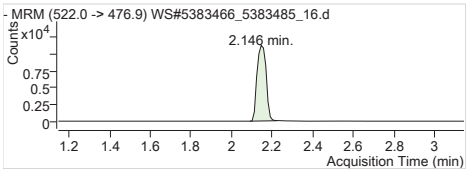



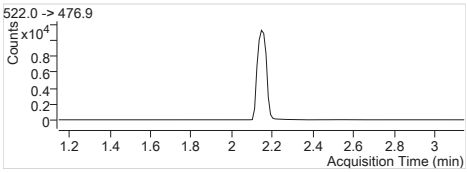

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 76.41 µg/L
Area ratio: 0.28025
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.445 (1.456)
Calc. conc. 2.18 µg/L
Area ratio: 0
Sample type: Sample



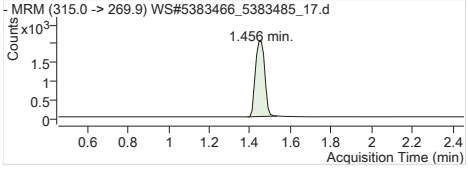

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.33 µg/L
Area ratio: 0
Sample type: Sample

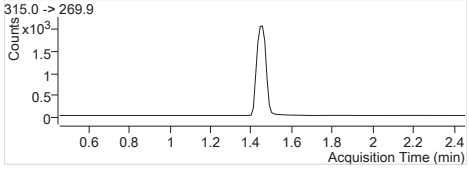
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA784-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_17.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B6 |
| **Acq. Date** | 2018/02/06 7:25:56 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

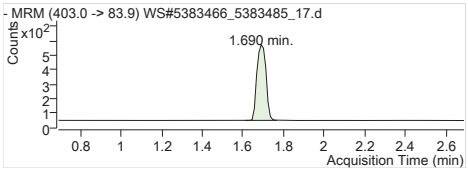
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6430 | 1.46 | 1 µg/L | | |
| MPFHxS | 1641 | 1.69 | 1 µg/L | | |
| MPFHpA | 8225 | 1.71 | 1 µg/L | | |
| MPFOA | 8609 | 1.89 | 1 µg/L | | |
| MPFOS | 2079 | 1.99 | 1 µg/L | | |
| MPFNA | 9065 | 2.04 | 1 µg/L | | |
| MPFDA | 7431 | 2.15 | 1 µg/L | | |
| MPFUnA | 7490 | 2.25 | 1 µg/L | | |
| MPFDoA | 10794 | 2.33 | 1 µg/L | | |
| MPFTeDA | 10438 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 24676 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 33994 | 2.15 | 1 µg/L | | |

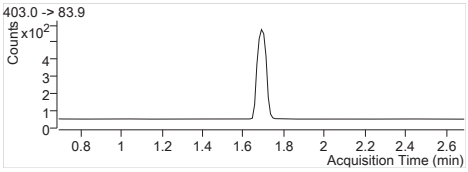
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 50 | 1.11 | - | 0.01 µg/L | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | 82 | 1.67 | - | 0.01 µg/L | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6430 | 1.46 | - | 109.98 µg/L | - |
| 18O2-PFHxS | 1641 | 1.69 | - | 114.44 µg/L | - |
| 13C4-PFHpA | 8225 | 1.71 | - | 114.09 µg/L | - |
| 13C4-PFOA | 8609 | 1.89 | - | 111.15 µg/L | - |
| 13C4-PFOS | 2079 | 1.99 | - | 122.06 µg/L | - |
| 13C5-PFNA | 9066 | 2.04 | - | 118.79 µg/L | - |
| 13C2-PFDA | 7311 | 2.15 | - | 107.18 µg/L | - |
| 13C2-PFUnA | 7490 | 2.25 | - | 91.09 µg/L | - |
| 13C2-PFDoA | 10794 | 2.33 | - | 98.64 µg/L | - |
| 13C2-PFTeDA | 10659 | 2.48 | - | 85.49 µg/L | - |
| 13C6-PFHxA | 24676 | 1.46 | - | 2.08 µg/L | - |
| 13C9-PFDA | 33994 | 2.15 | - | 2.28 µg/L | - |



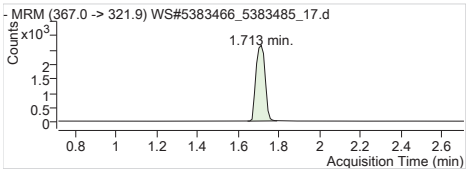



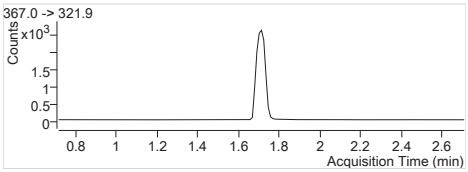

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



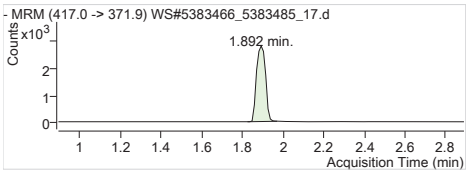



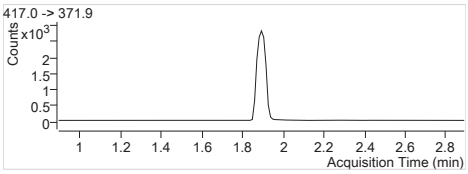

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



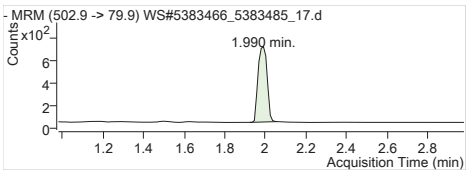



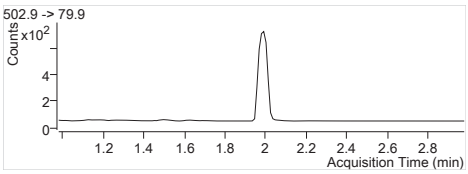

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Sample



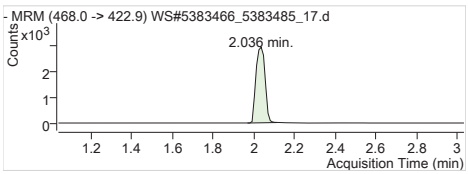



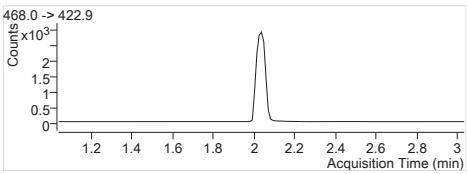

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Sample



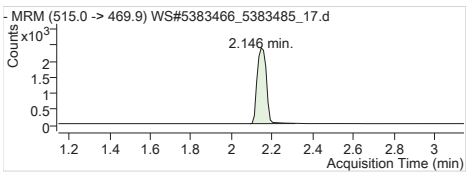



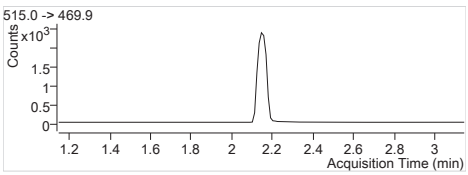

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Sample



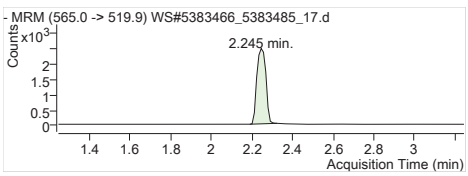



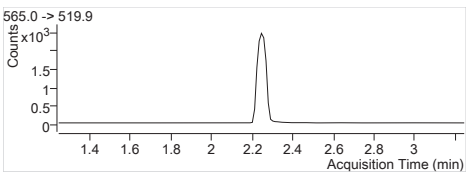

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Sample



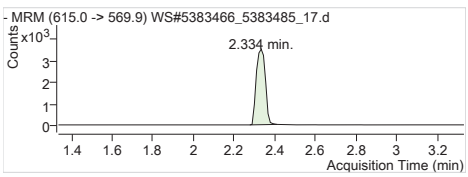



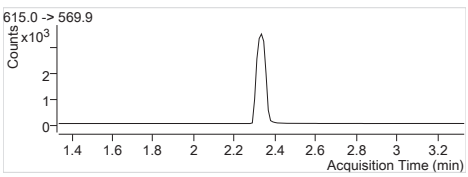

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



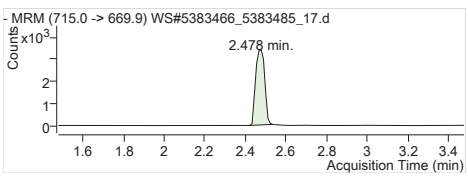



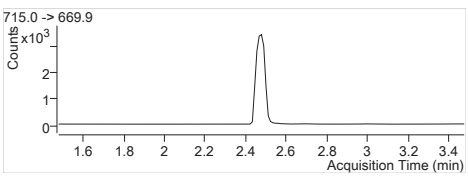

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



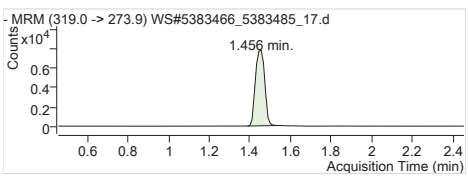



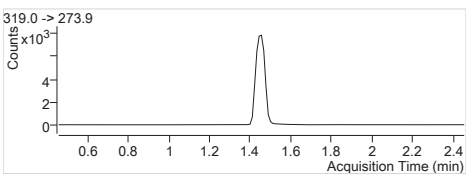

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Sample



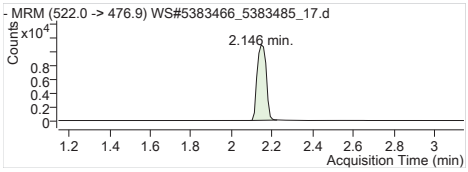



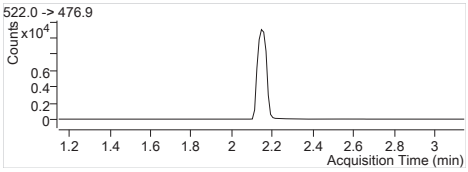

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Sample



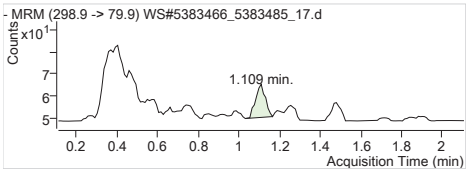



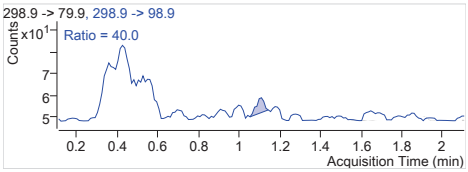

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: Sample



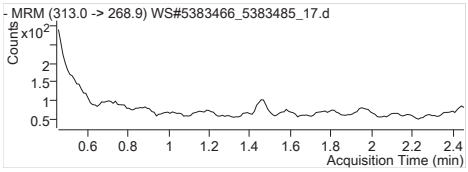



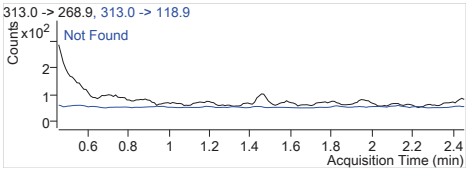

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



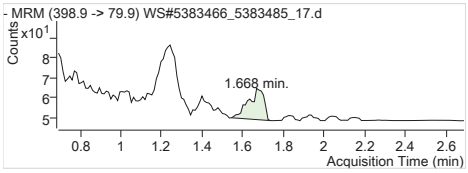



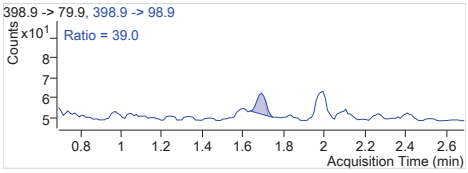

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 0.01 µg/L
Area ratio: 0.03047
Sample type: Sample



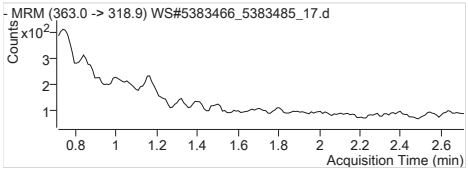



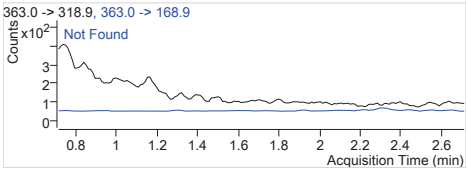

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.456)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



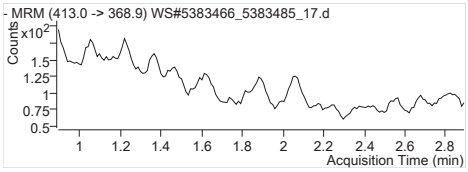



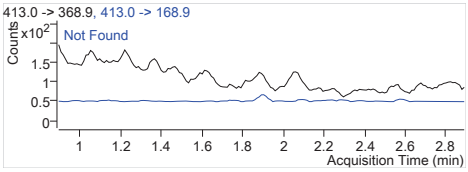

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.668 (1.691)
Calc. conc. 0.01 µg/L
Area ratio: 0.04997
Sample type: Sample



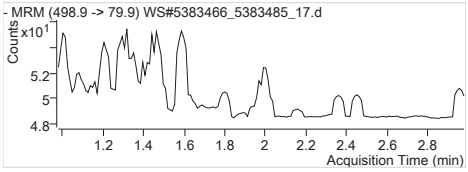



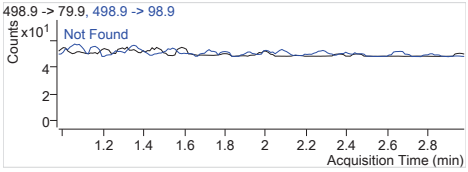

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.713)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



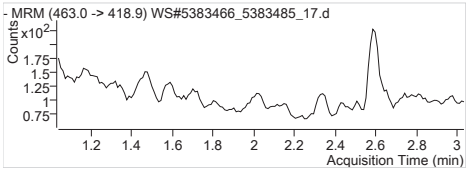



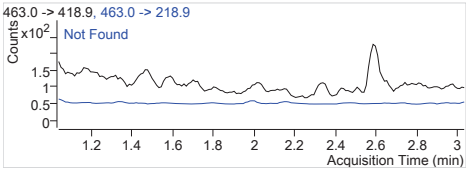

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.892)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



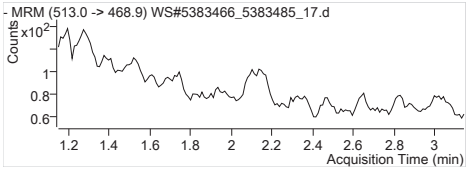



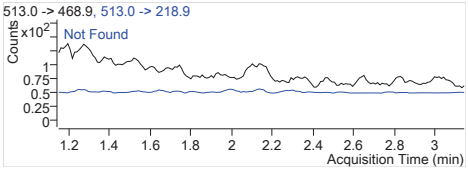

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



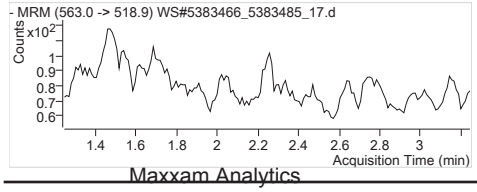



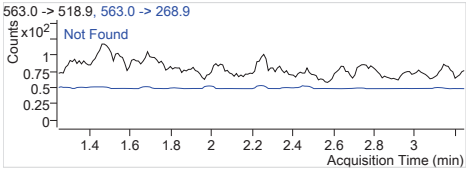

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.036)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



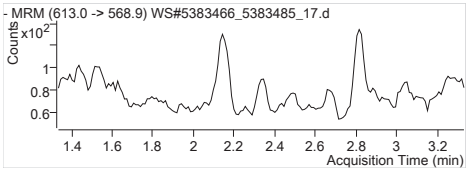



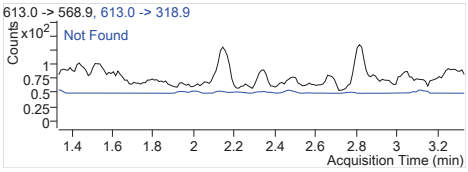

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.147)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



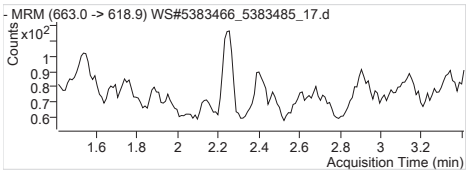



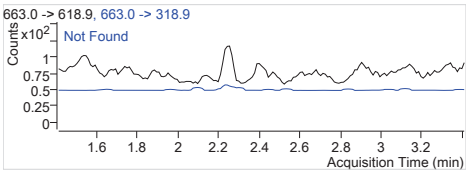

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



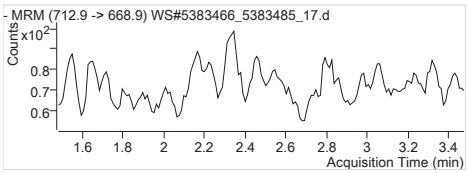



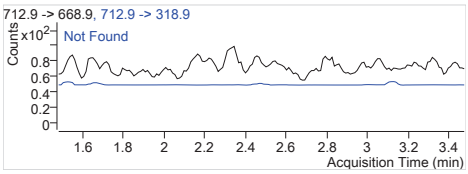

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.334)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



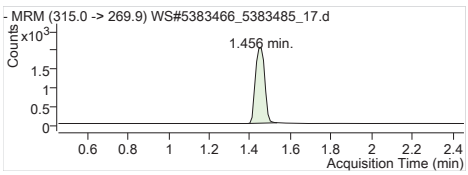



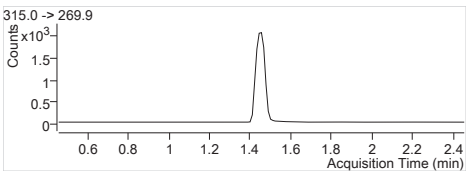

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.411)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



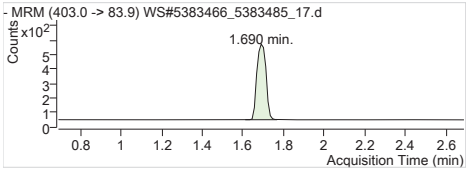



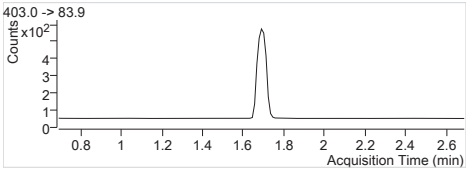

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.478)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



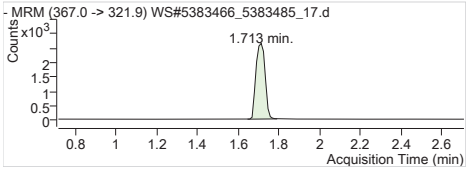



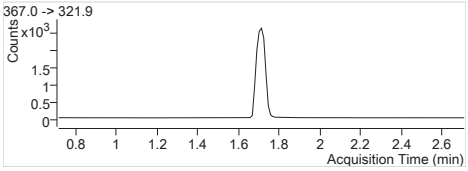

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 109.98 µg/L
Area ratio: 0.26058
Sample type: Sample



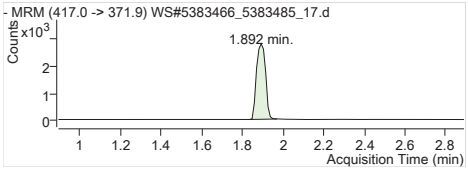



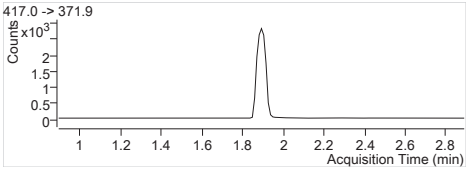

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 114.44 µg/L
Area ratio: 0.06650
Sample type: Sample



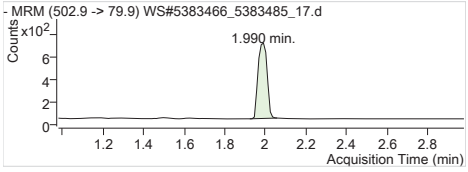



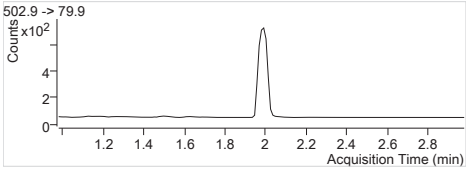

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 114.09 µg/L
Area ratio: 0.33332
Sample type: Sample



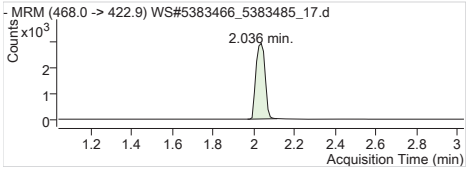



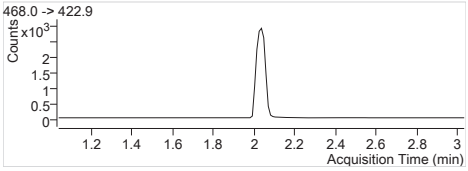

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 111.15 µg/L
Area ratio: 0.34888
Sample type: Sample



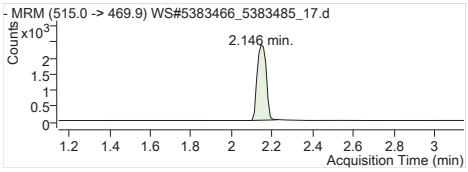



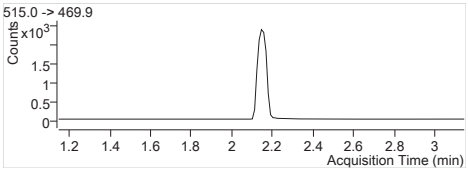

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.990 (1.979)
Calc. conc. 122.06 µg/L
Area ratio: 0.08425
Sample type: Sample



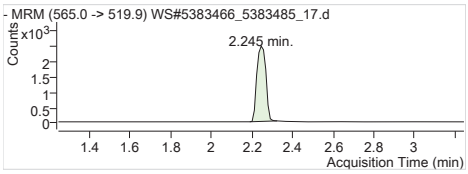



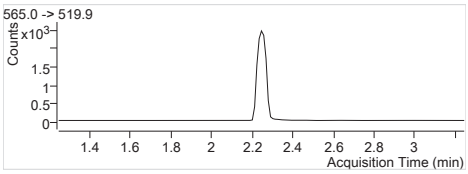

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 118.79 µg/L
Area ratio: 0.36740
Sample type: Sample



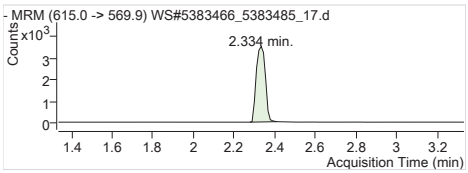



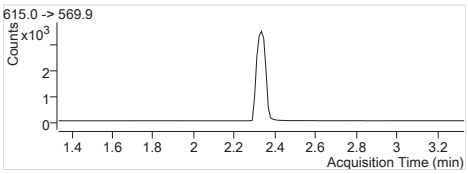

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 107.18 µg/L
Area ratio: 0.21507
Sample type: Sample



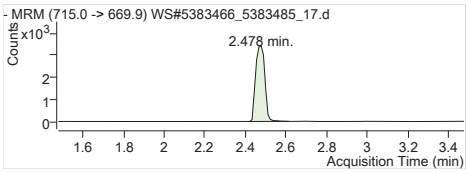



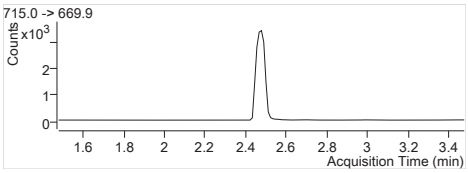

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 91.09 µg/L
Area ratio: 0.22033
Sample type: Sample



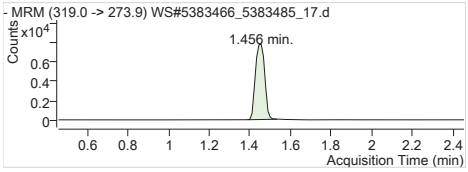



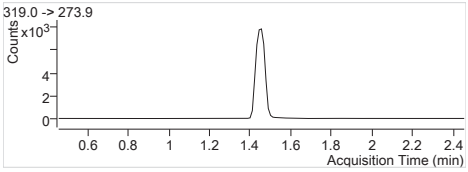

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 98.64 µg/L
Area ratio: 0.31753
Sample type: Sample



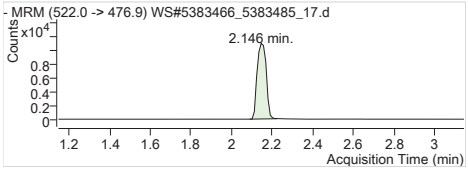



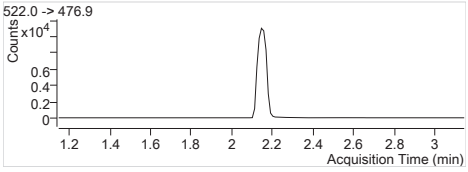

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 85.49 µg/L
Area ratio: 0.31356
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 2.08 µg/L
Area ratio: 0
Sample type: Sample



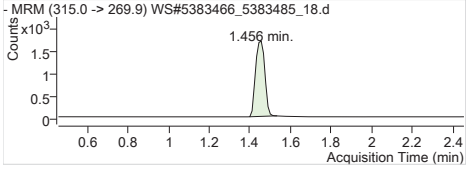

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.28 µg/L
Area ratio: 0
Sample type: Sample

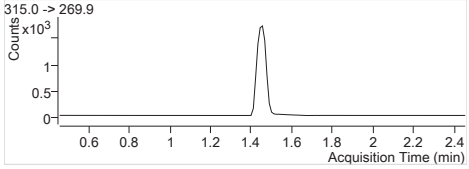
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA785-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_18.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B7 |
| **Acq. Date** | 2018/02/06 7:30:52 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

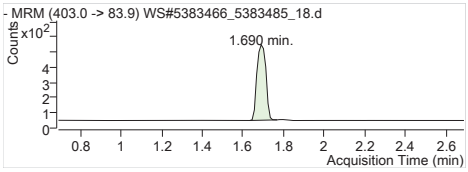
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5310 | 1.46 | 1 µg/L | | |
| MPFHxS | 1532 | 1.69 | 1 µg/L | | |
| MPFHpA | 7875 | 1.71 | 1 µg/L | | |
| MPFOA | 8406 | 1.89 | 1 µg/L | | |
| MPFOS | 1863 | 1.99 | 1 µg/L | | |
| MPFNA | 8585 | 2.04 | 1 µg/L | | |
| MPFDA | 6648 | 2.15 | 1 µg/L | | |
| MPFUnA | 8148 | 2.25 | 1 µg/L | | |
| MPFDoA | 9649 | 2.33 | 1 µg/L | | |
| MPFTeDA | 10614 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 27247 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 34955 | 2.15 | 1 µg/L | | |

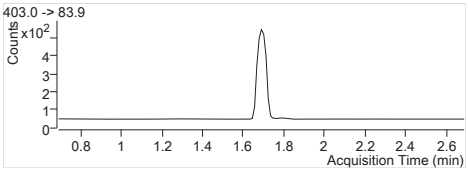
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | 214 | 1.45 | - | 0.01 µg/L | - |
| PFHxS 1 | 197 | 1.69 | - | 0.01 µg/L | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | 1211 | 1.89 | - | 0.01 µg/L | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 5310 | 1.46 | - | 82.25 µg/L | - |
| 18O2-PFHxS | 1532 | 1.69 | - | 96.76 µg/L | - |
| 13C4-PFHpA | 7875 | 1.71 | - | 98.93 µg/L | - |
| 13C4-PFOA | 8406 | 1.89 | - | 98.28 µg/L | - |
| 13C4-PFOS | 1863 | 1.99 | - | 99.06 µg/L | - |
| 13C5-PFNA | 8530 | 2.04 | - | 101.22 µg/L | - |
| 13C2-PFDA | 6647 | 2.15 | - | 94.76 µg/L | - |
| 13C2-PFUnA | 8148 | 2.25 | - | 96.37 µg/L | - |
| 13C2-PFDoA | 9649 | 2.33 | - | 85.75 µg/L | - |
| 13C2-PFTeDA | 10951 | 2.48 | - | 85.41 µg/L | - |
| 13C6-PFHxA | 27247 | 1.46 | - | 2.30 µg/L | - |
| 13C9-PFDA | 34955 | 2.15 | - | 2.35 µg/L | - |



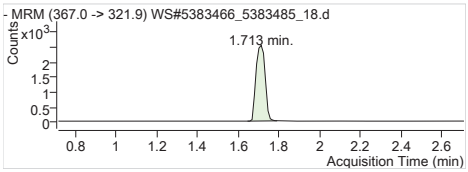



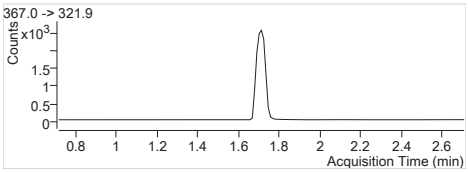

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



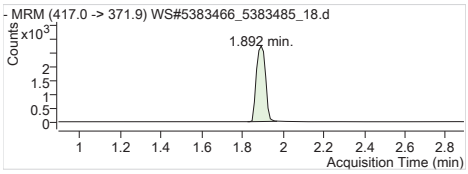



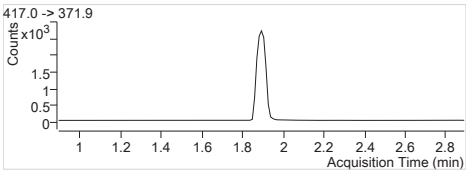

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



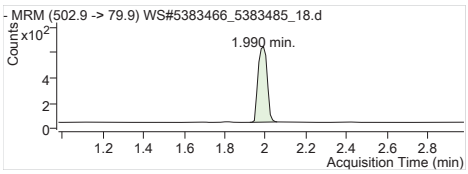



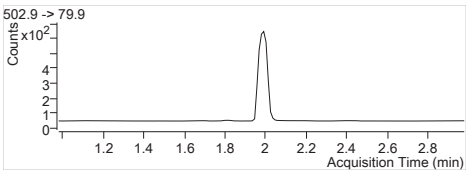

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Sample



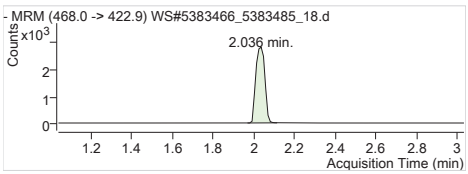



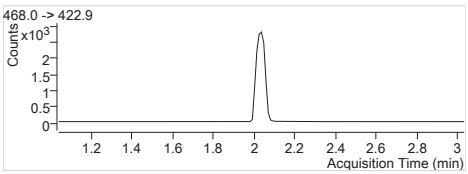

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Sample



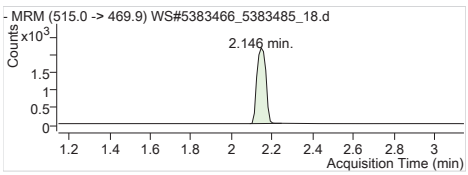



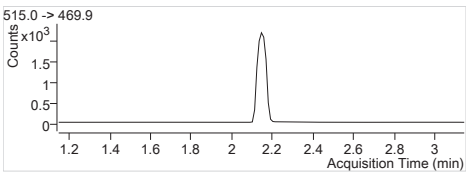

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Sample



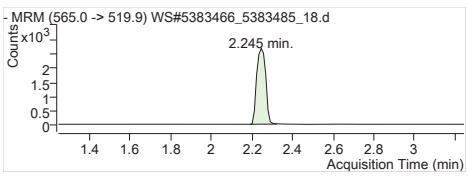



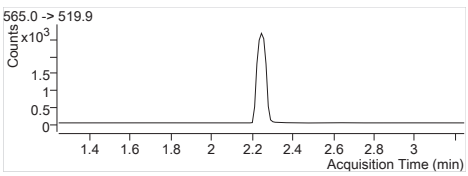

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Sample



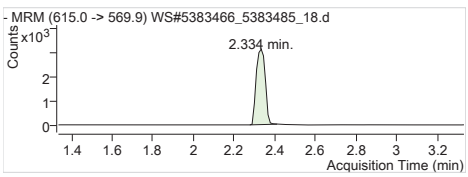



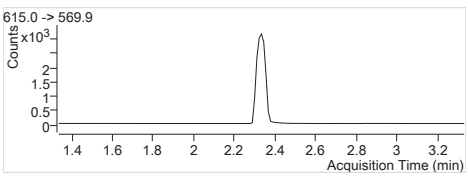

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



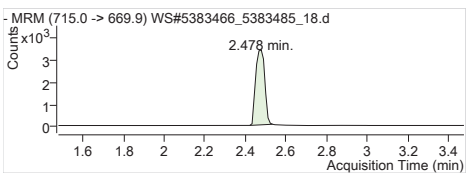



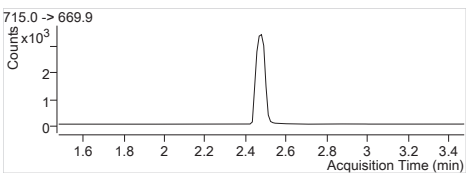

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



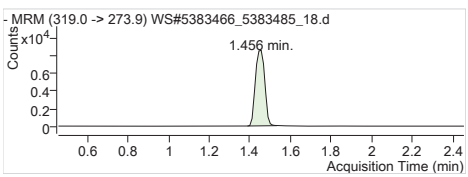



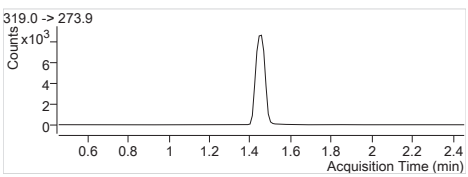

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Sample



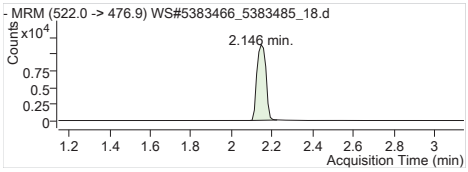



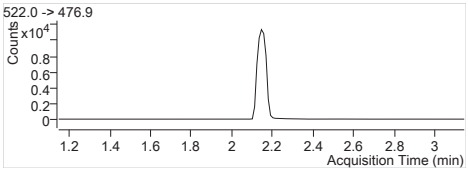

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Sample



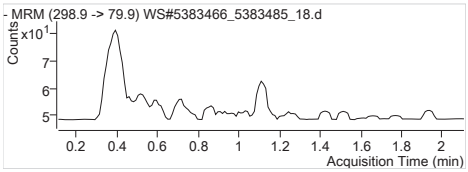



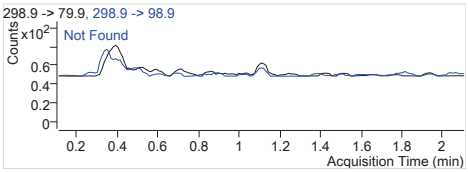

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: Sample



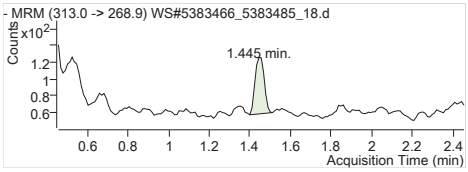



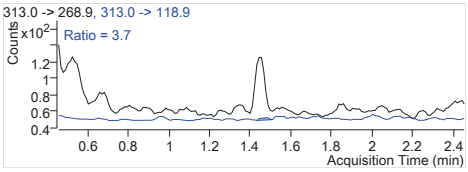

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



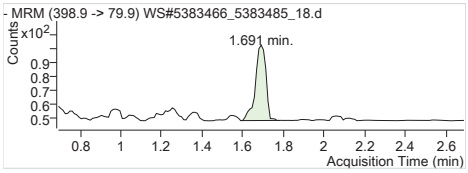



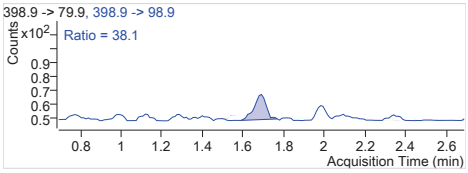

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.109)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



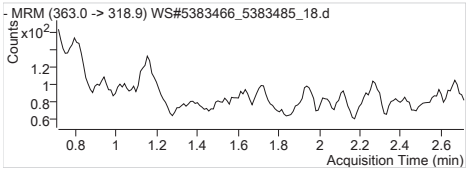



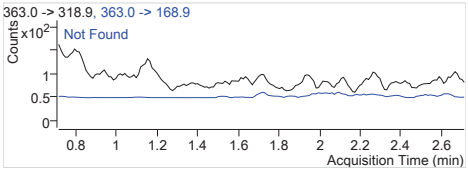

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.445 (1.456)
Calc. conc. 0.01 µg/L
Area ratio: 0.04030
Sample type: Sample



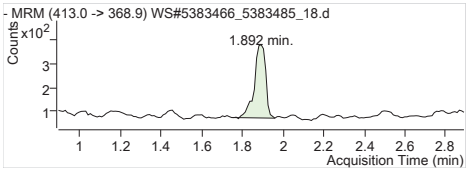



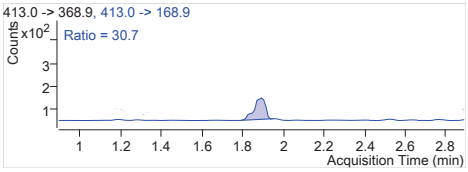

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.01 µg/L
Area ratio: 0.12859
Sample type: Sample



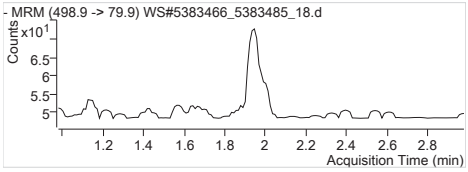



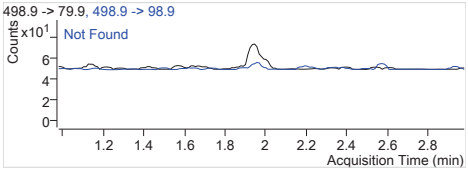

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.713)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



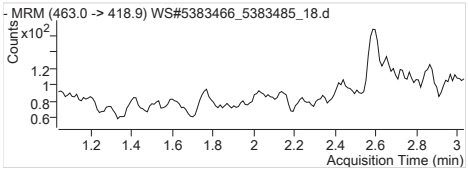



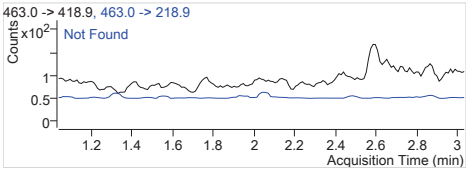

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 0.01 µg/L
Area ratio: 0.14406
Sample type: Sample



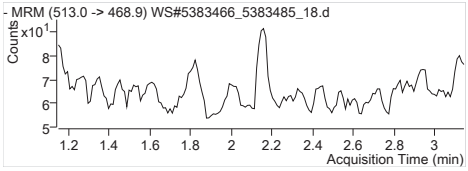



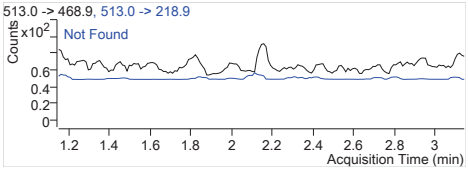

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



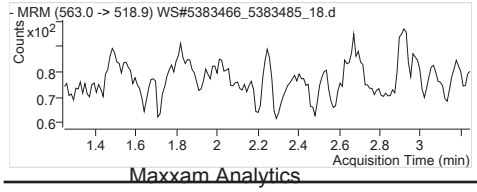



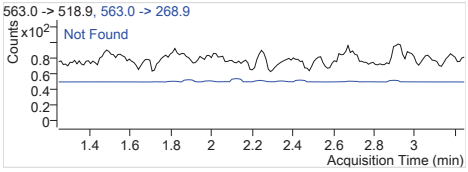

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.036)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



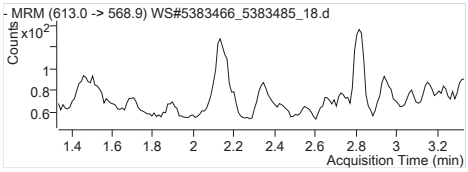



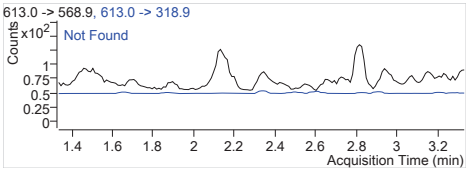

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.147)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



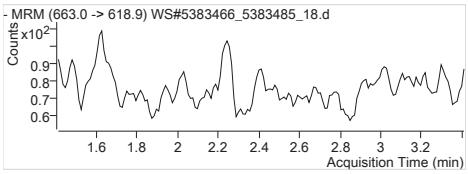



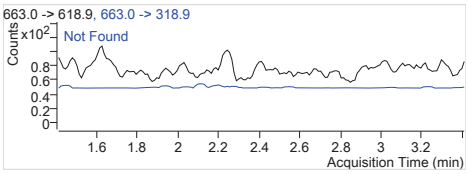

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



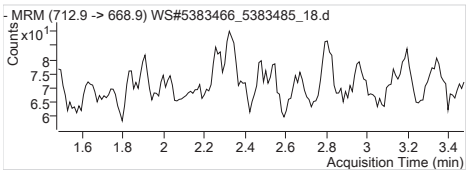



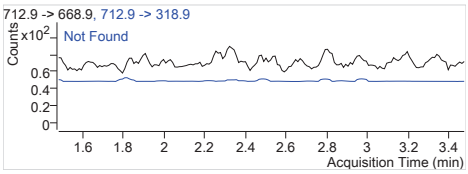

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.334) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



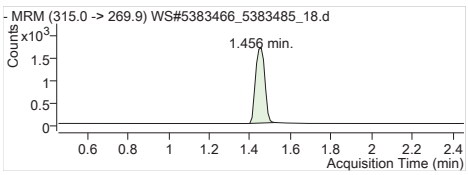



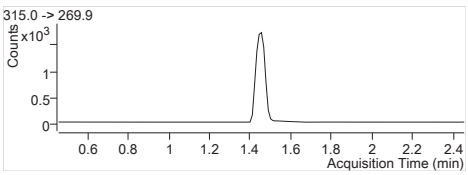

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.411) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



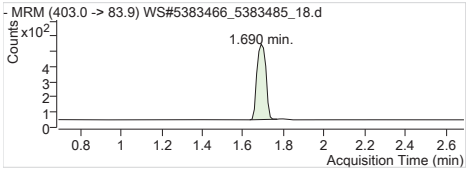



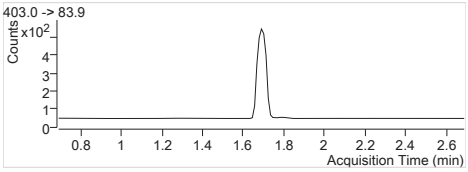

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.478) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



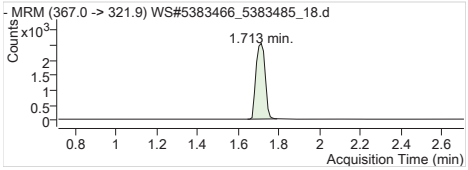



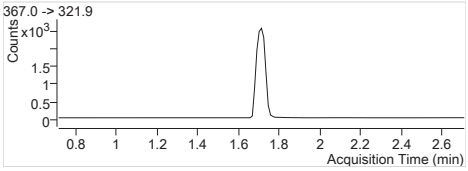

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.456 (1.456) |
| Calc. conc. | 82.25 µg/L |
| Area ratio: | 0.19488 |
| Sample type: | Sample |



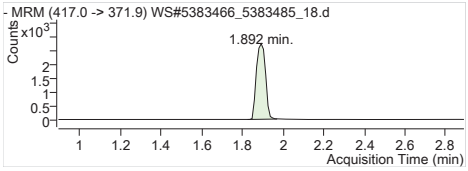



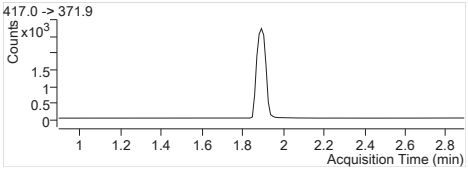

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 96.76 µg/L |
| Area ratio: | 0.05623 |
| Sample type: | Sample |



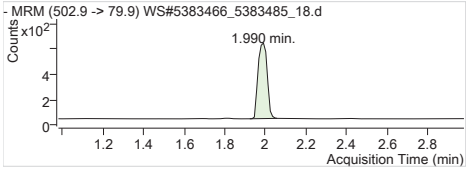



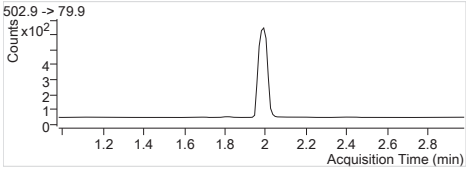

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.713 (1.713) |
| Calc. conc. | 98.93 µg/L |
| Area ratio: | 0.28902 |
| Sample type: | Sample |



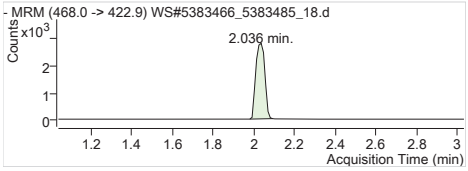



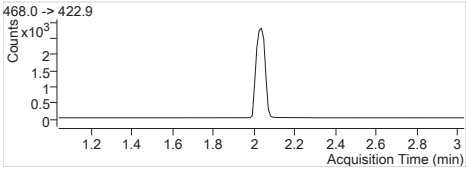

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.892 (1.892) |
| Calc. conc. | 98.28 µg/L |
| Area ratio: | 0.30851 |
| Sample type: | Sample |



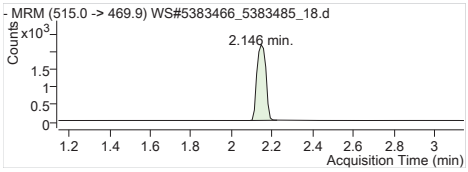



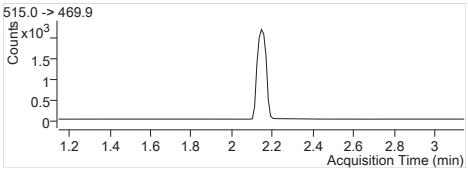

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.990 (1.979) |
| Calc. conc. | 99.06 µg/L |
| Area ratio: | 0.06837 |
| Sample type: | Sample |



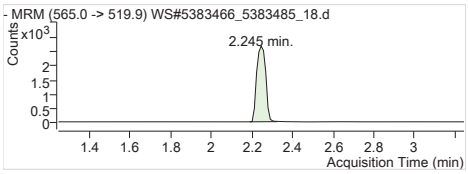



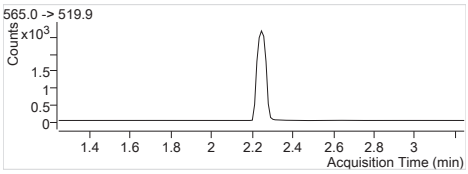

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.036 (2.036) |
| Calc. conc. | 101.22 µg/L |
| Area ratio: | 0.31306 |
| Sample type: | Sample |



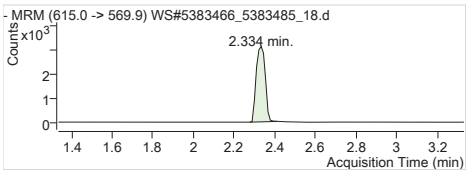



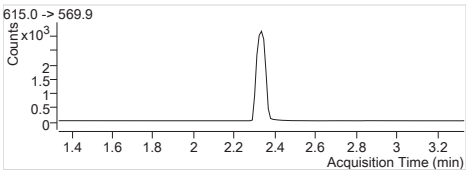

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 94.76 µg/L
Area ratio: 0.19016
Sample type: Sample



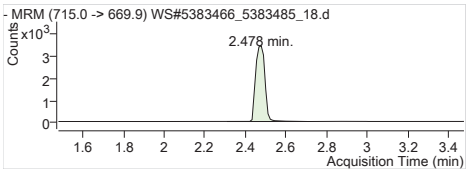



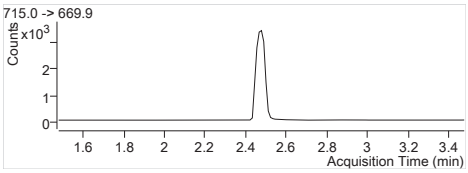

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 96.37 µg/L
Area ratio: 0.23310
Sample type: Sample



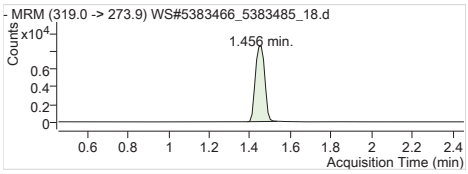



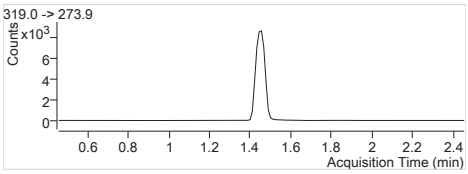

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 85.75 µg/L
Area ratio: 0.27604
Sample type: Sample



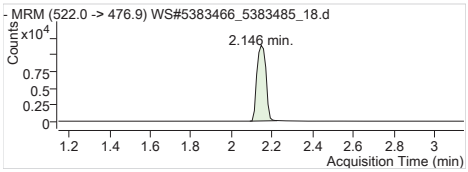



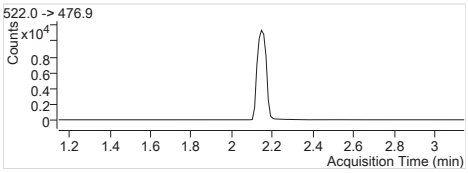

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 85.41 µg/L
Area ratio: 0.31329
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 2.30 µg/L
Area ratio: 0
Sample type: Sample



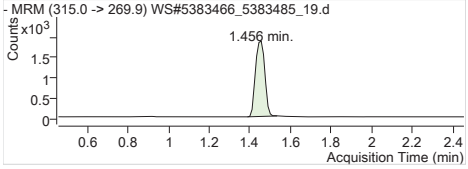

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.35 µg/L
Area ratio: 0
Sample type: Sample

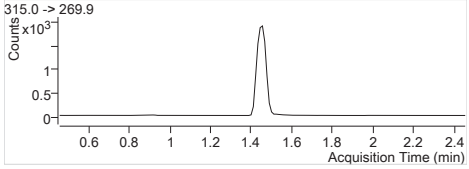
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA786-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_19.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B8 |
| **Acq. Date** | 2018/02/06 7:35:48 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

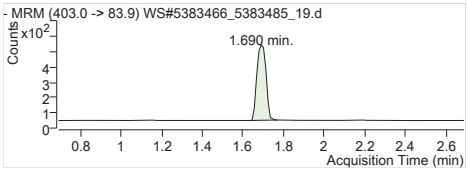
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5923 | 1.46 | 1 µg/L | | |
| MPFHxS | 1552 | 1.69 | 1 µg/L | | |
| MPFHpA | 7687 | 1.71 | 1 µg/L | | |
| MPFOA | 8147 | 1.89 | 1 µg/L | | |
| MPFOS | 2002 | 1.99 | 1 µg/L | | |
| MPFNA | 8385 | 2.04 | 1 µg/L | | |
| MPFDA | 6666 | 2.15 | 1 µg/L | | |
| MPFUnA | 7813 | 2.25 | 1 µg/L | | |
| MPFDoA | 10192 | 2.33 | 1 µg/L | | |
| MPFTeDA | 11185 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 26008 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 35273 | 2.15 | 1 µg/L | | |

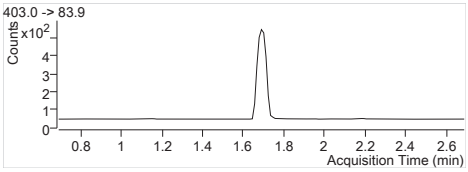
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 240 | 1.11 | - | 0.01 µg/L | - |
| PFHxA 1 | 2689 | 1.46 | - | 0.03 µg/L | - |
| PFHxS 1 | 601 | 1.69 | - | 0.03 µg/L | - |
| PFHpA 1 | 2721 | 1.71 | - | 0.02 µg/L | - |
| PFOA 1 | 19515 | 1.89 | - | 0.14 µg/L | - |
| PFOS 1 | 2369 | 1.97 | - | 0.08 µg/L | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 5923 | 1.46 | - | 96.12 µg/L | - |
| 18O2-PFHxS | 1552 | 1.69 | - | 102.69 µg/L | - |
| 13C4-PFHpA | 7687 | 1.71 | - | 101.17 µg/L | - |
| 13C4-PFOA | 8147 | 1.89 | - | 99.79 µg/L | - |
| 13C4-PFOS | 2002 | 1.99 | - | 111.52 µg/L | - |
| 13C5-PFNA | 8308 | 2.04 | - | 103.28 µg/L | - |
| 13C2-PFDA | 6578 | 2.15 | - | 92.93 µg/L | - |
| 13C2-PFUnA | 7813 | 2.25 | - | 91.58 µg/L | - |
| 13C2-PFDoA | 10192 | 2.33 | - | 89.76 µg/L | - |
| 13C2-PFTeDA | 11391 | 2.48 | - | 88.05 µg/L | - |
| 13C6-PFHxA | 26008 | 1.46 | - | 2.20 µg/L | - |
| 13C9-PFDA | 35273 | 2.15 | - | 2.37 µg/L | - |



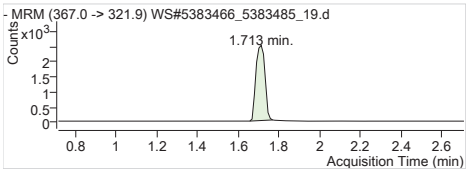



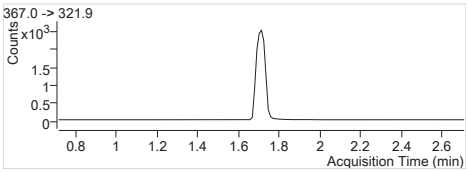

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



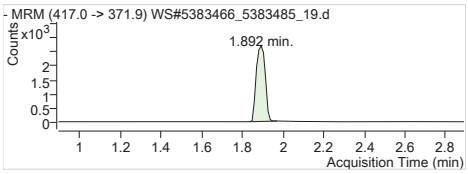



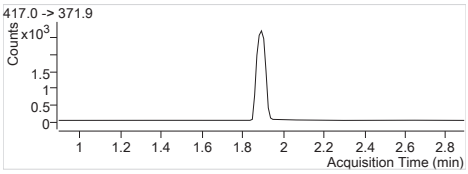

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



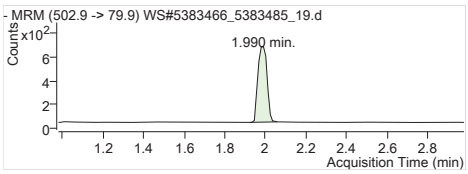



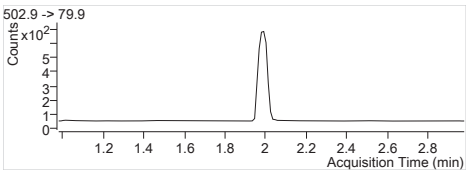

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Sample



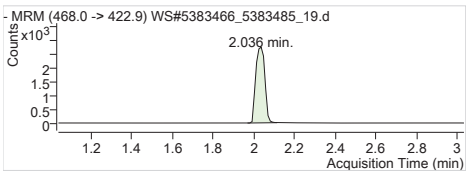



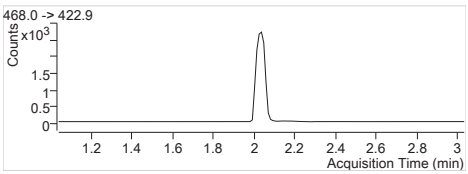

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Sample



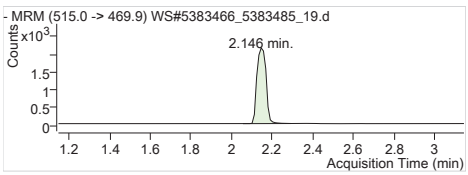



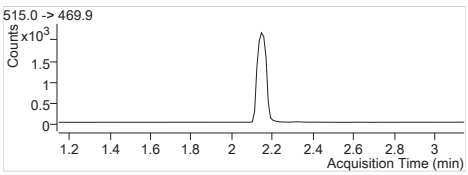

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Sample



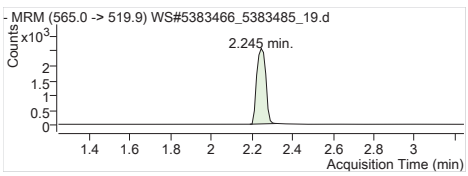



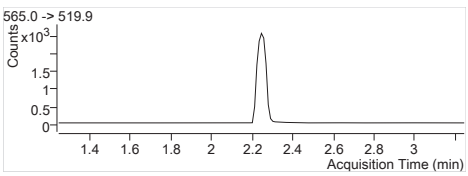

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Sample



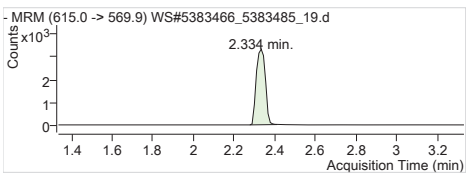



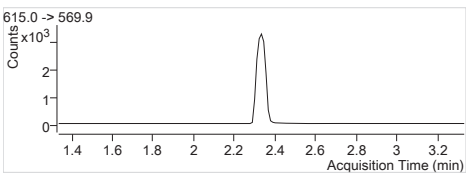

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



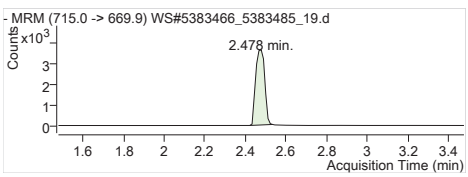



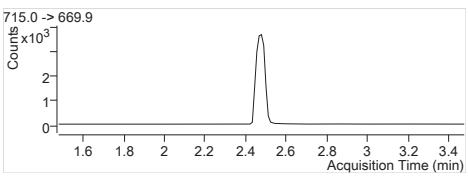

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



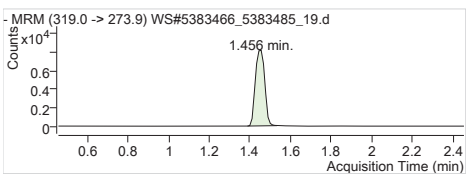



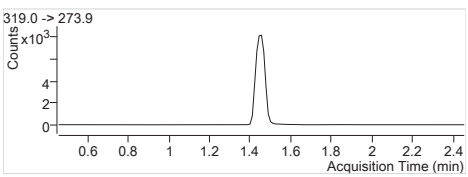

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Sample



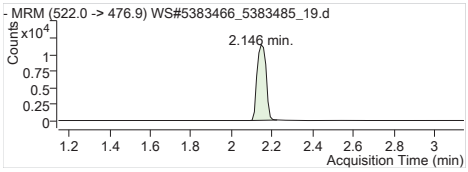



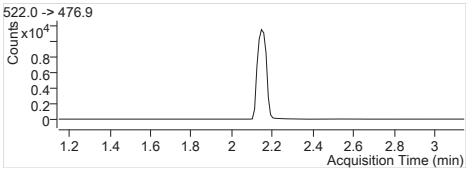

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Sample



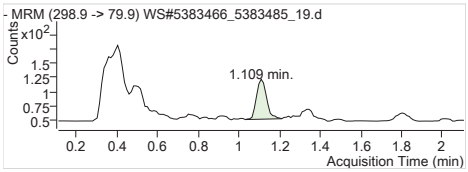



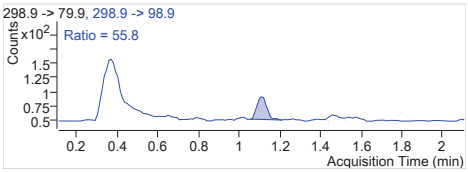

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: Sample



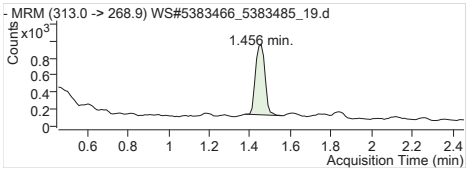



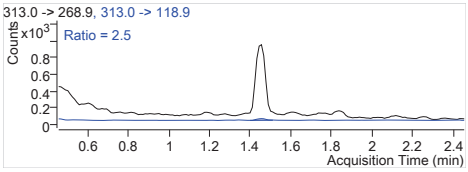

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



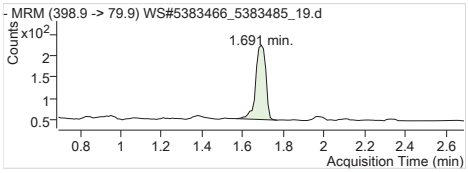



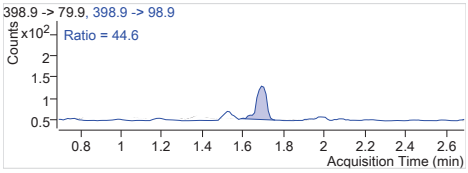

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 0.01 µg/L
Area ratio: 0.15464
Sample type: Sample



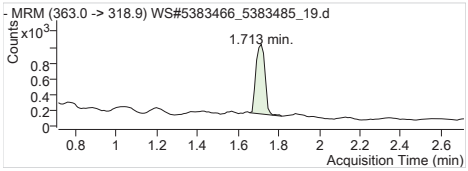



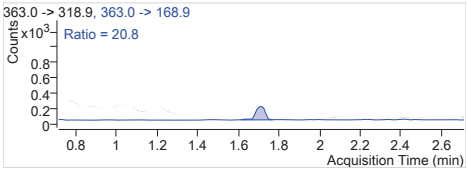

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 0.03 µg/L
Area ratio: 0.45399
Sample type: Sample



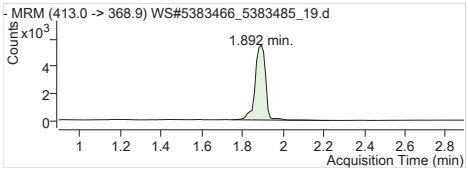



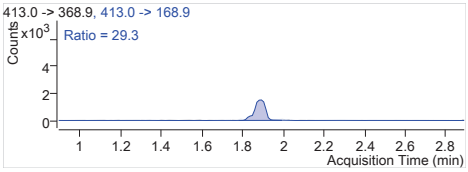

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.03 µg/L
Area ratio: 0.38724
Sample type: Sample



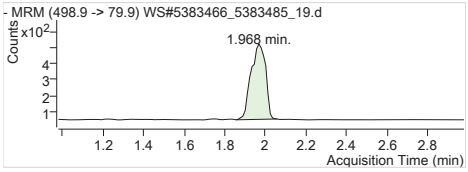



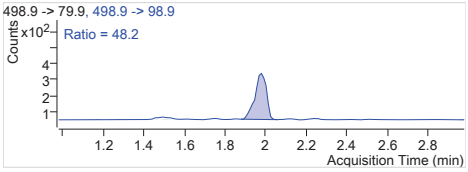

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 0.02 µg/L
Area ratio: 0.35397
Sample type: Sample



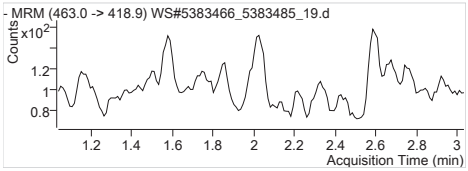



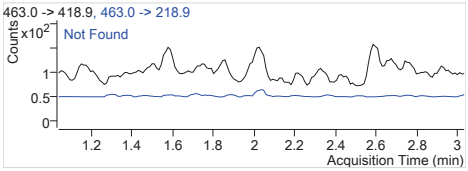

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 0.14 µg/L
Area ratio: 2.39536
Sample type: Sample



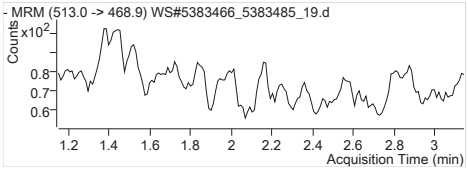



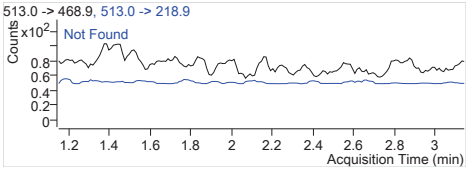

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.979)
Calc. conc. 0.08 µg/L
Area ratio: 1.18332
Sample type: Sample



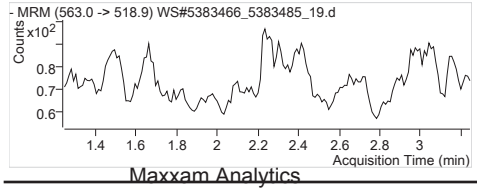



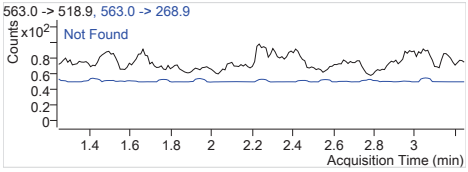

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.036)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



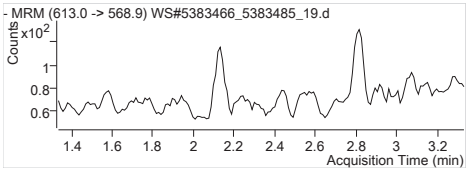



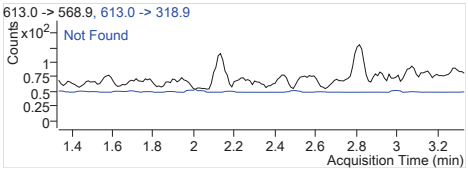

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.147)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



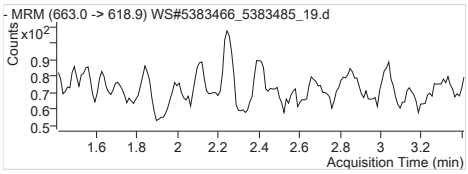



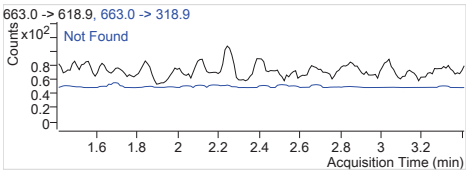

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



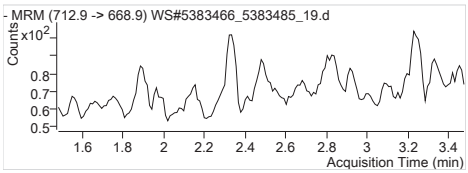



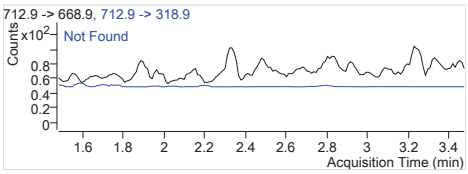

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.334) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



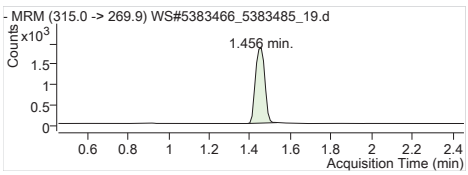



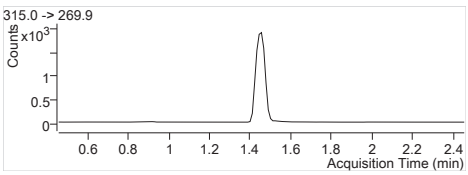

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.411) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



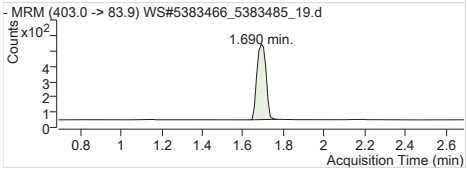



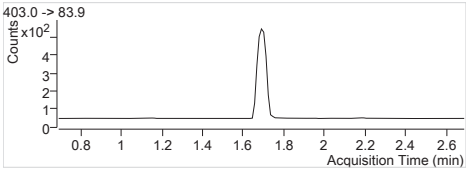

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.478) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



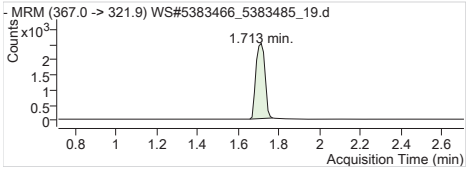



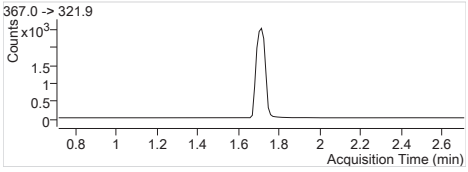

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.456 (1.456) |
| Calc. conc. | 96.12 µg/L |
| Area ratio: | 0.22774 |
| Sample type: | Sample |



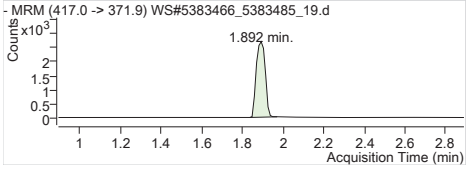



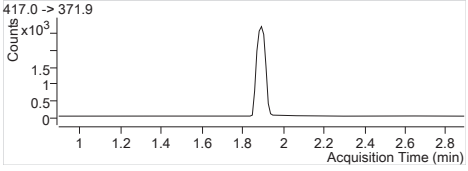

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 102.69 µg/L |
| Area ratio: | 0.05967 |
| Sample type: | Sample |



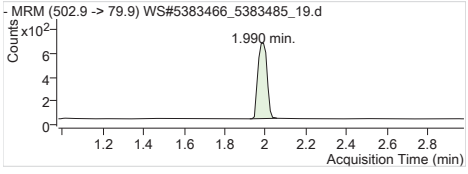



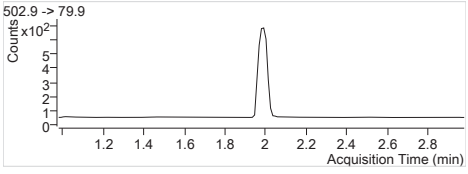

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.713 (1.713) |
| Calc. conc. | 101.17 µg/L |
| Area ratio: | 0.29556 |
| Sample type: | Sample |



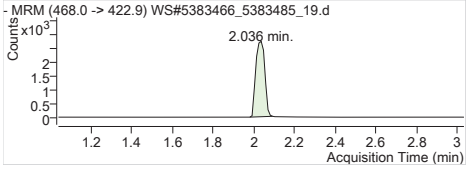



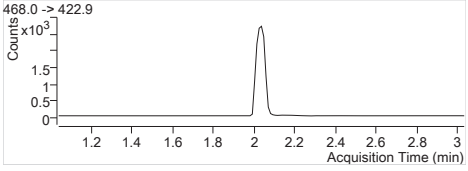

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.892 (1.892) |
| Calc. conc. | 99.79 µg/L |
| Area ratio: | 0.31325 |
| Sample type: | Sample |



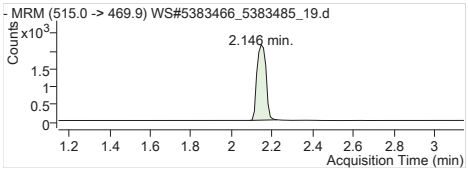



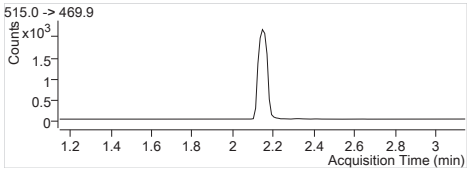

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.990 (1.979) |
| Calc. conc. | 111.52 µg/L |
| Area ratio: | 0.07698 |
| Sample type: | Sample |



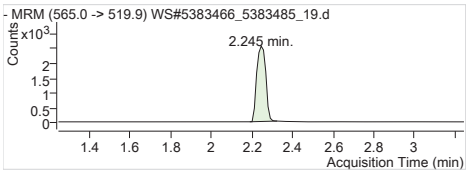



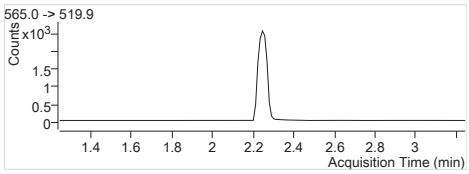

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.036 (2.036) |
| Calc. conc. | 103.28 µg/L |
| Area ratio: | 0.31944 |
| Sample type: | Sample |



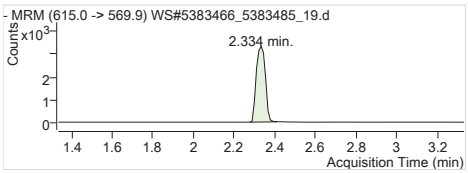



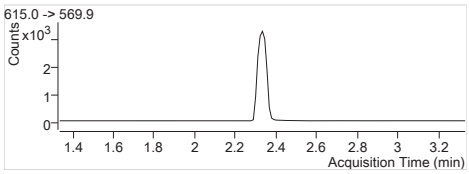

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 92.93 µg/L
Area ratio: 0.18649
Sample type: Sample



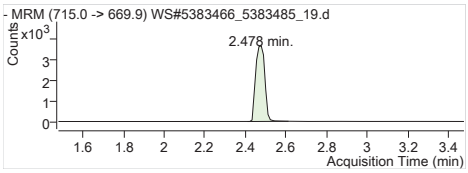



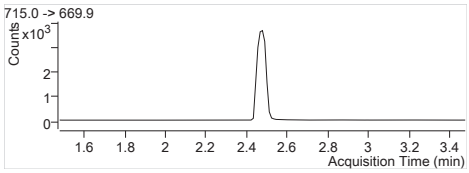

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 91.58 µg/L
Area ratio: 0.22150
Sample type: Sample



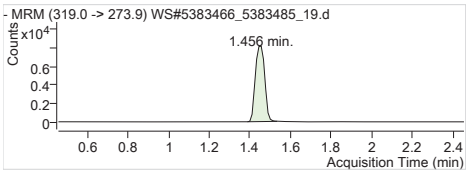



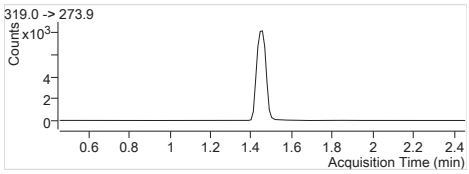

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 89.76 µg/L
Area ratio: 0.28895
Sample type: Sample



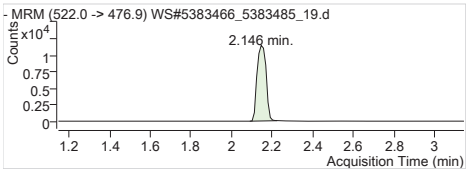



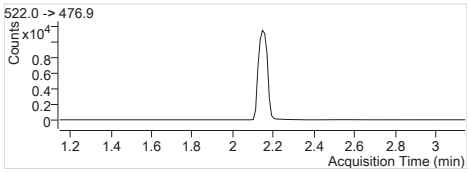

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 88.05 µg/L
Area ratio: 0.32294
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 2.20 µg/L
Area ratio: 0
Sample type: Sample



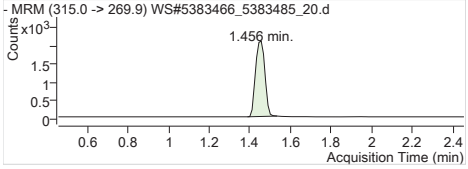

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.37 µg/L
Area ratio: 0
Sample type: Sample

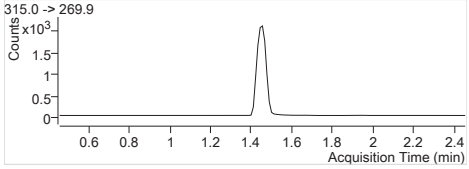
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA788-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_20.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B9 |
| **Acq. Date** | 2018/02/06 7:40:44 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

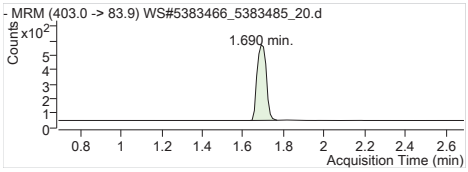
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6631 | 1.46 | 1 µg/L | | |
| MPFHxS | 1665 | 1.69 | 1 µg/L | | |
| MPFHpA | 8733 | 1.71 | 1 µg/L | | |
| MPFOA | 8858 | 1.89 | 1 µg/L | | |
| MPFOS | 1946 | 1.99 | 1 µg/L | | |
| MPFNA | 8975 | 2.04 | 1 µg/L | | |
| MPFDA | 6720 | 2.15 | 1 µg/L | | |
| MPFUnA | 7887 | 2.25 | 1 µg/L | | |
| MPFDoA | 9414 | 2.33 | 1 µg/L | | |
| MPFTeDA | 10962 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 25728 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 33925 | 2.15 | 1 µg/L | | |

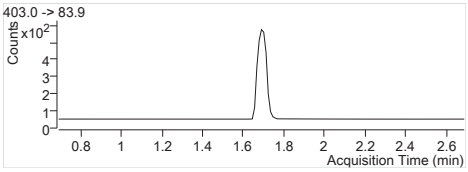
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6631 | 1.46 | - | 108.78 µg/L | - |
| 18O2-PFHxS | 1665 | 1.69 | - | 111.37 µg/L | - |
| 13C4-PFHpA | 8733 | 1.71 | - | 116.19 µg/L | - |
| 13C4-PFOA | 8858 | 1.89 | - | 109.68 µg/L | - |
| 13C4-PFOS | 1946 | 1.99 | - | 109.58 µg/L | - |
| 13C5-PFNA | 8907 | 2.04 | - | 111.93 µg/L | - |
| 13C2-PFDA | 6686 | 2.15 | - | 98.21 µg/L | - |
| 13C2-PFUnA | 7887 | 2.25 | - | 96.12 µg/L | - |
| 13C2-PFDoA | 9414 | 2.33 | - | 86.20 µg/L | - |
| 13C2-PFTeDA | 11243 | 2.48 | - | 90.35 µg/L | - |
| 13C6-PFHxA | 25728 | 1.46 | - | 2.17 µg/L | - |
| 13C9-PFDA | 33925 | 2.15 | - | 2.28 µg/L | - |



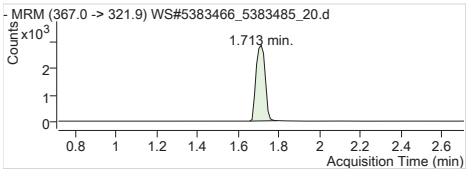



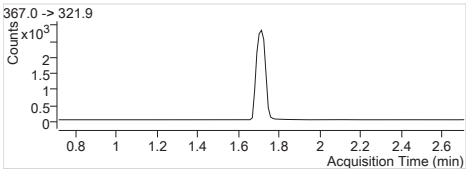

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



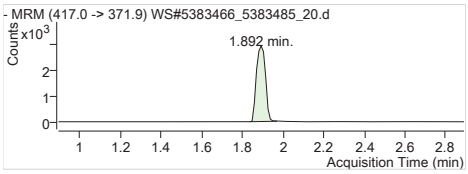



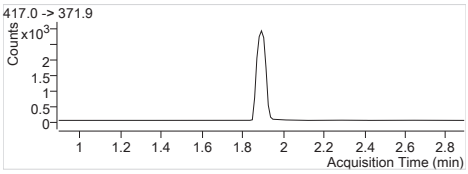

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



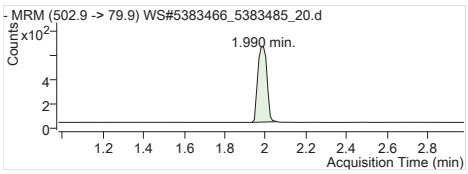



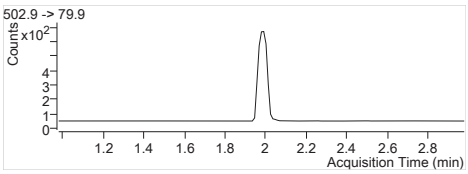

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Sample



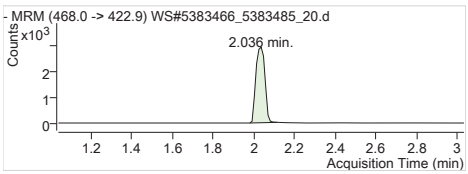



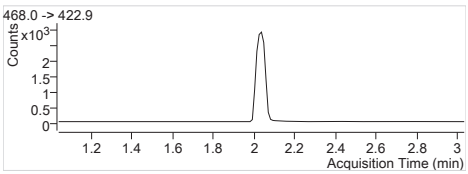

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Sample



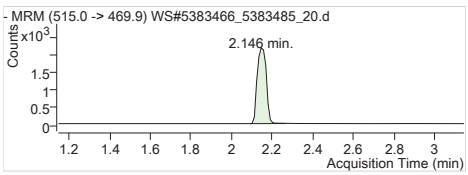



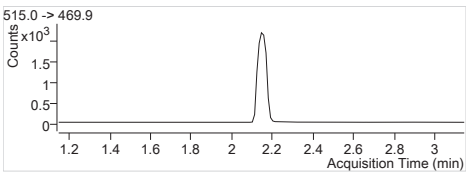

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Sample



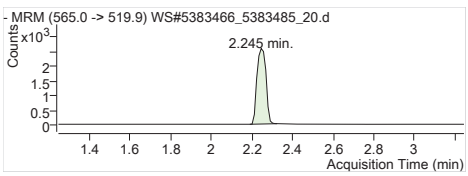



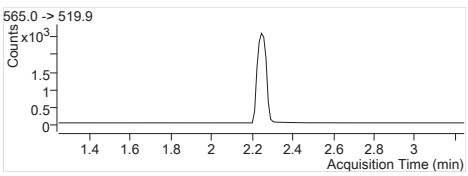

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Sample



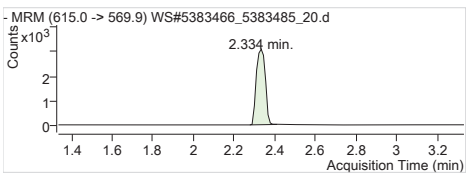



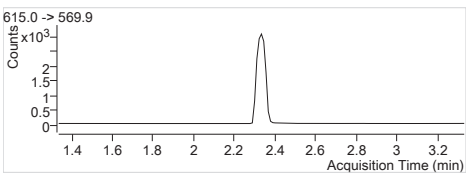

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



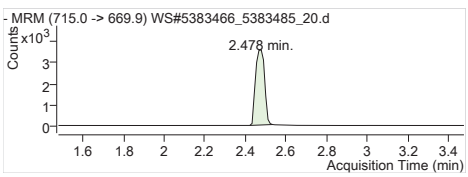



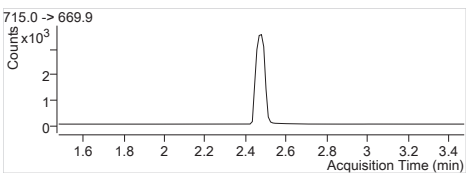

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



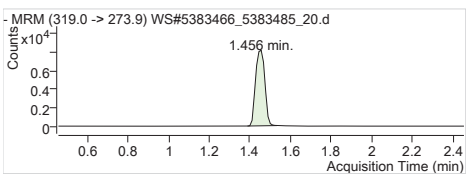



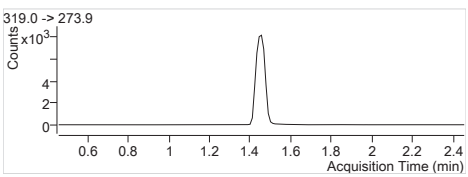

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Sample



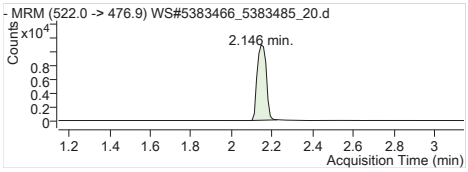



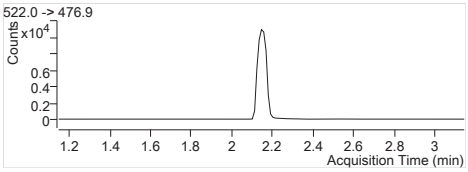

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Sample



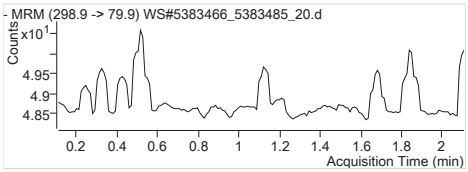



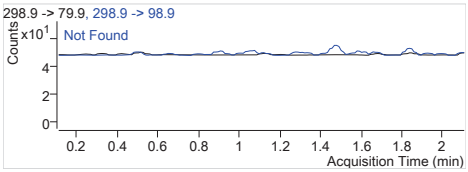

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: Sample



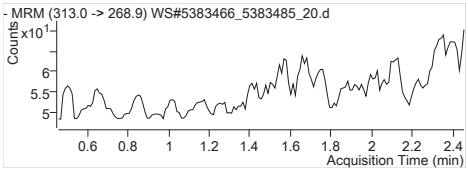



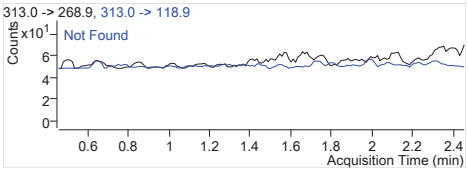

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



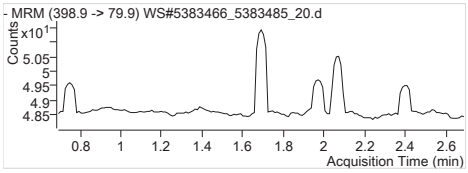



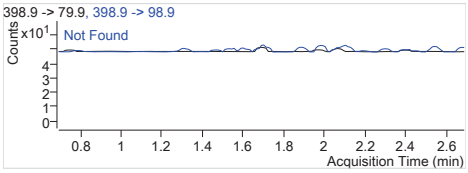

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.109)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



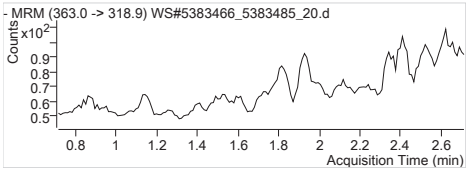



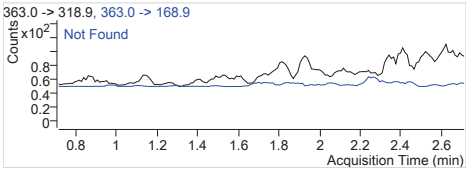

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.456)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



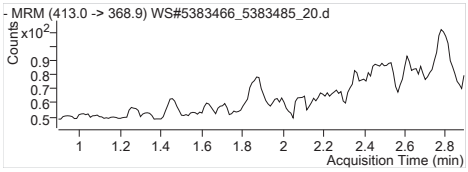



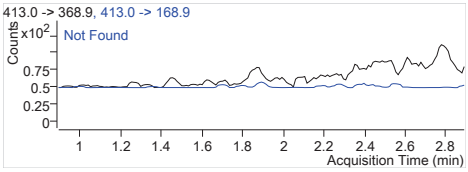

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



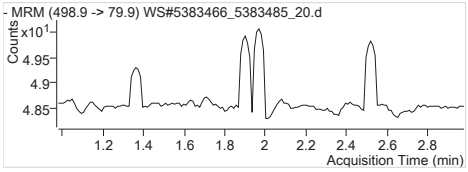



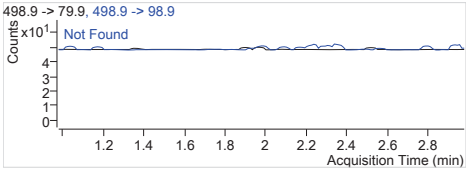

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.713)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



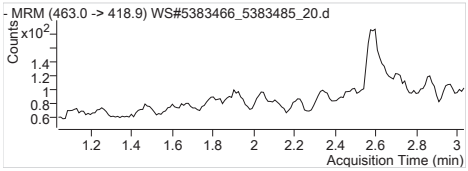



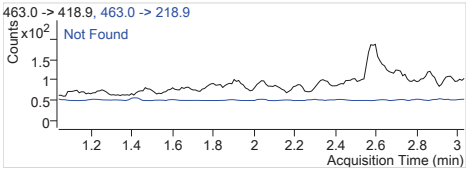

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.892)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



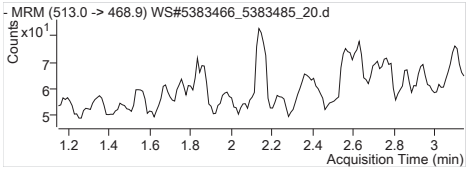



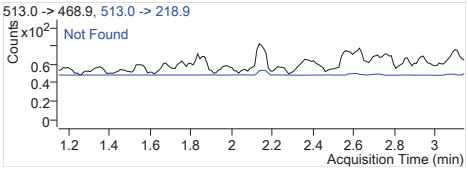

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



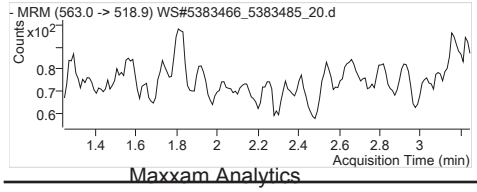



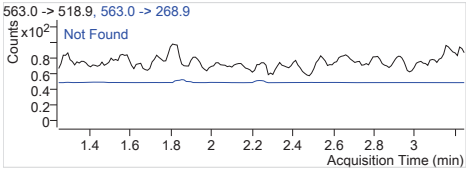

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.036)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



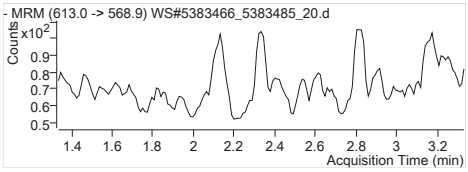



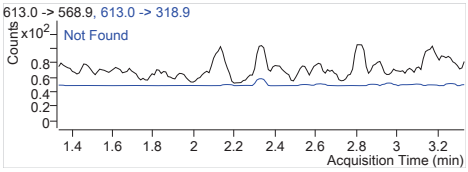

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.147)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



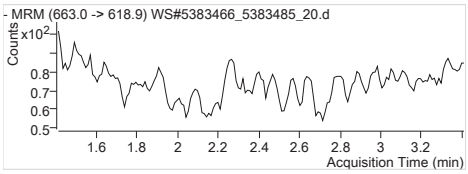



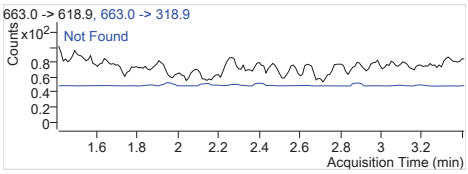

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



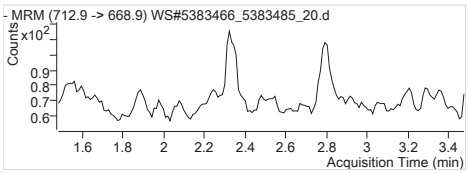



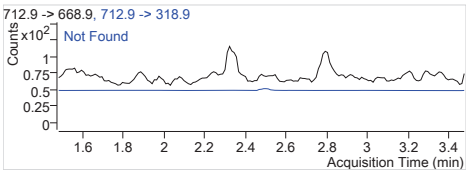

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.334) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



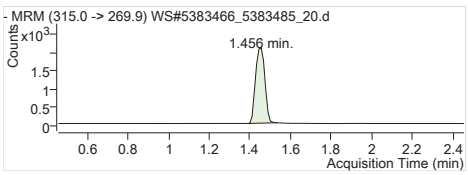



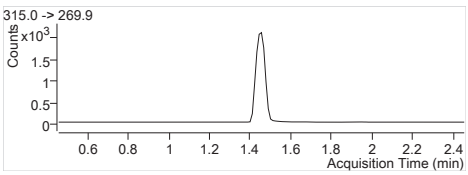

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.411) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



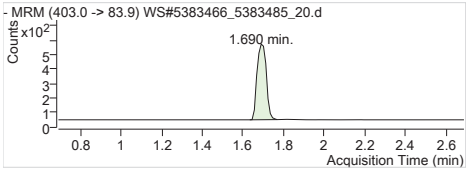



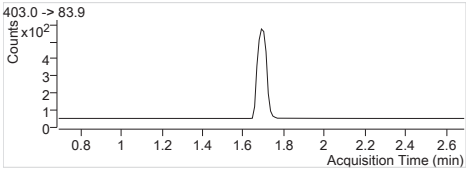

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.478) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



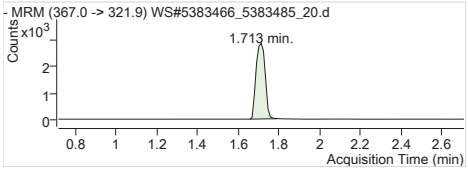



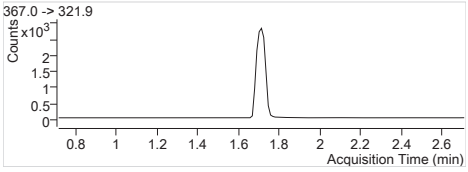

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.456 (1.456) |
| Calc. conc. | 108.78 µg/L |
| Area ratio: | 0.25773 |
| Sample type: | Sample |



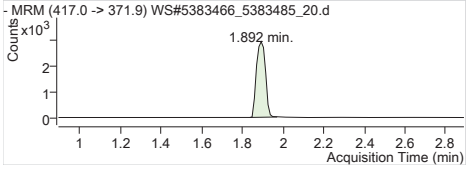



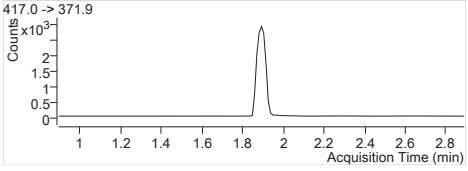

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 111.37 µg/L |
| Area ratio: | 0.06472 |
| Sample type: | Sample |



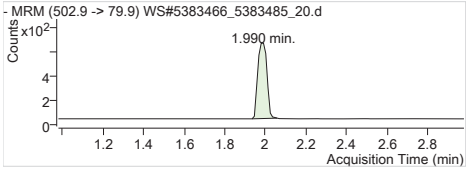



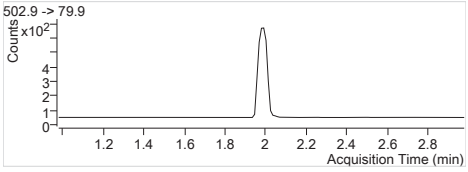

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.713 (1.713) |
| Calc. conc. | 116.19 µg/L |
| Area ratio: | 0.33944 |
| Sample type: | Sample |



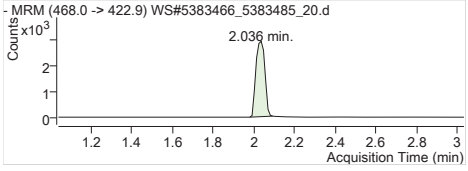



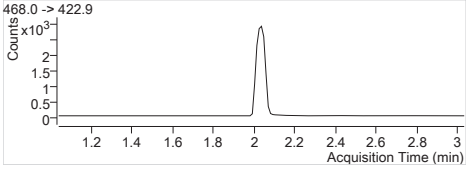

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.892 (1.892) |
| Calc. conc. | 109.68 µg/L |
| Area ratio: | 0.34429 |
| Sample type: | Sample |



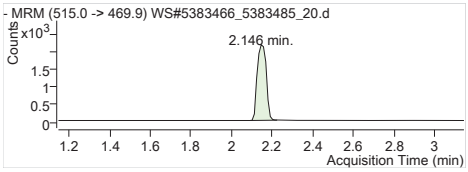



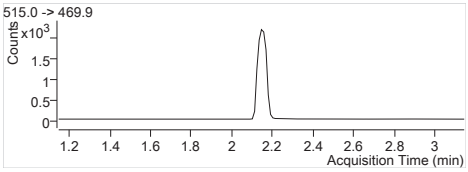

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.990 (1.979) |
| Calc. conc. | 109.58 µg/L |
| Area ratio: | 0.07564 |
| Sample type: | Sample |



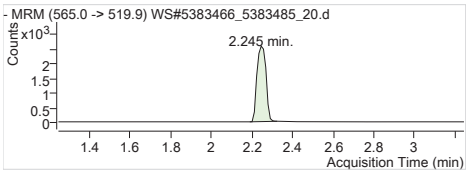



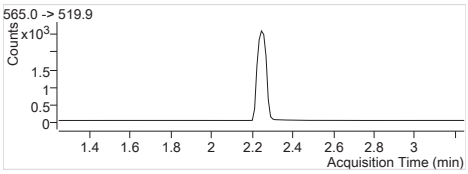

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.036 (2.036) |
| Calc. conc. | 111.93 µg/L |
| Area ratio: | 0.34620 |
| Sample type: | Sample |



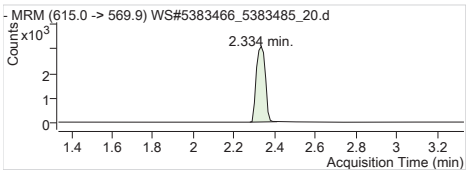



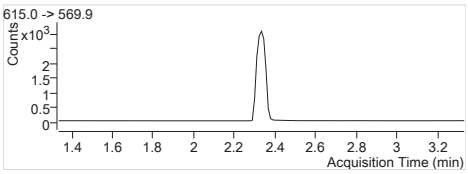

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 98.21 µg/L
Area ratio: 0.19708
Sample type: Sample



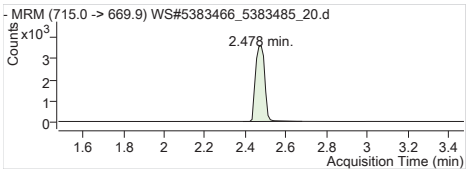



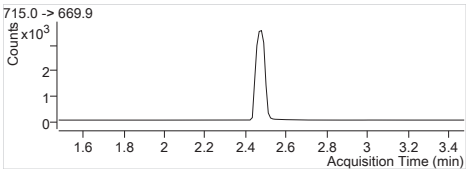

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 96.12 µg/L
Area ratio: 0.23248
Sample type: Sample



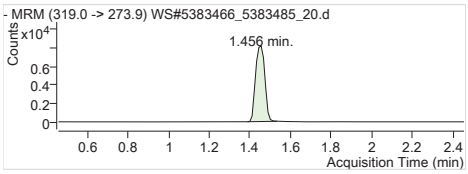



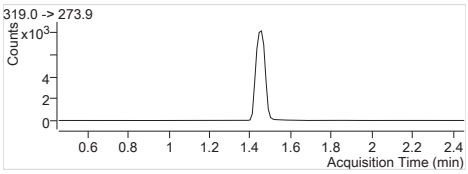

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 86.20 µg/L
Area ratio: 0.27749
Sample type: Sample



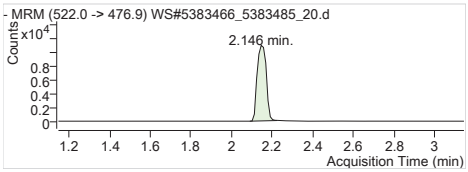



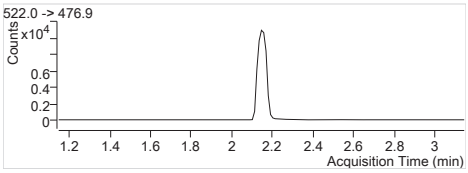

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 90.35 µg/L
Area ratio: 0.33141
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 2.17 µg/L
Area ratio: 0
Sample type: Sample



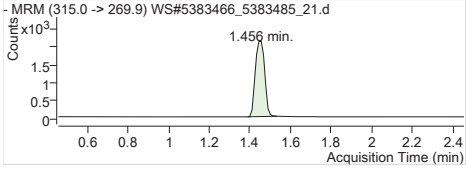

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.28 µg/L
Area ratio: 0
Sample type: Sample

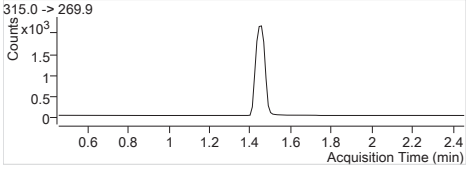
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA789-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_21.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-C1 |
| **Acq. Date** | 2018/02/06 7:45:39 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

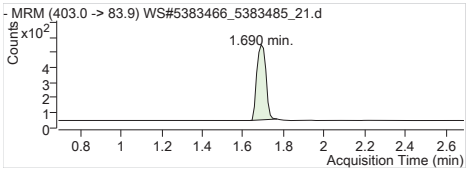
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6774 | 1.46 | 1 µg/L | | |
| MPFHxS | 1562 | 1.69 | 1 µg/L | | |
| MPFHpA | 8642 | 1.71 | 1 µg/L | | |
| MPFOA | 9305 | 1.89 | 1 µg/L | | |
| MPFOS | 2068 | 1.99 | 1 µg/L | | |
| MPFNA | 8621 | 2.04 | 1 µg/L | | |
| MPFDA | 6957 | 2.15 | 1 µg/L | | |
| MPFUnA | 8085 | 2.25 | 1 µg/L | | |
| MPFDoA | 10613 | 2.33 | 1 µg/L | | |
| MPFTeDA | 11021 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 26172 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 36609 | 2.15 | 1 µg/L | | |

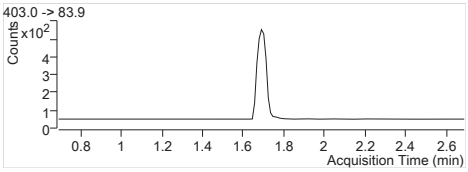
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6774 | 1.46 | - | 109.24 µg/L | - |
| 18O2-PFHxS | 1562 | 1.69 | - | 102.71 µg/L | - |
| 13C4-PFHpA | 8642 | 1.71 | - | 113.02 µg/L | - |
| 13C4-PFOA | 9305 | 1.89 | - | 113.26 µg/L | - |
| 13C4-PFOS | 2068 | 1.99 | - | 114.48 µg/L | - |
| 13C5-PFNA | 8585 | 2.04 | - | 106.06 µg/L | - |
| 13C2-PFDA | 6873 | 2.15 | - | 93.56 µg/L | - |
| 13C2-PFUnA | 8085 | 2.25 | - | 91.31 µg/L | - |
| 13C2-PFDoA | 10613 | 2.33 | - | 90.06 µg/L | - |
| 13C2-PFTeDA | 11113 | 2.48 | - | 82.76 µg/L | - |
| 13C6-PFHxA | 26172 | 1.46 | - | 2.21 µg/L | - |
| 13C9-PFDA | 36609 | 2.15 | - | 2.46 µg/L | - |



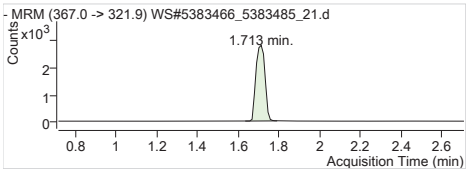



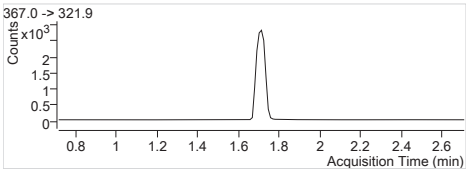

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



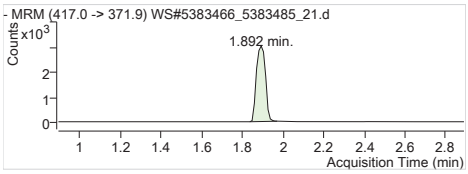



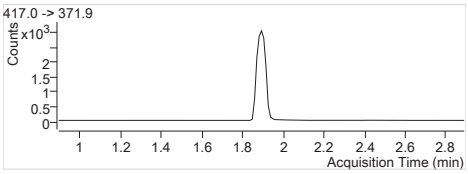

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



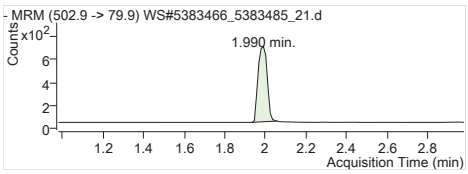



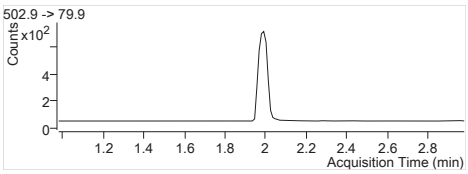

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Sample



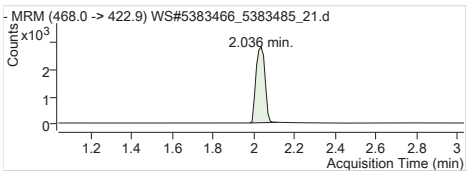



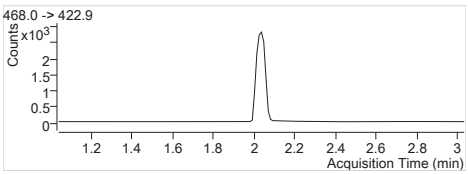

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Sample



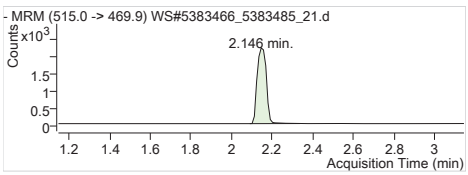



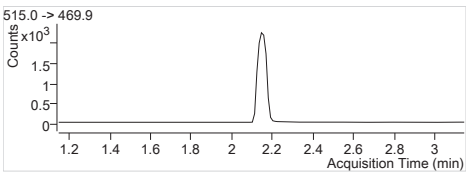

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Sample



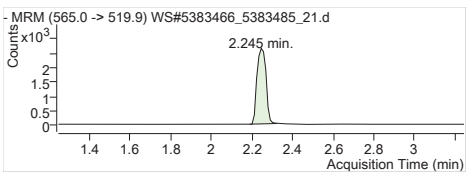



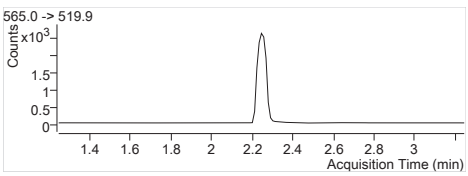

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Sample



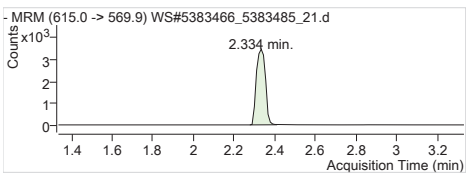



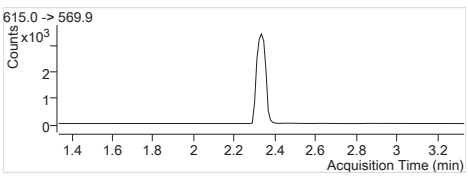

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



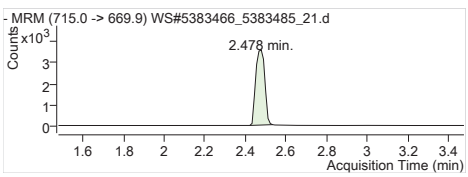



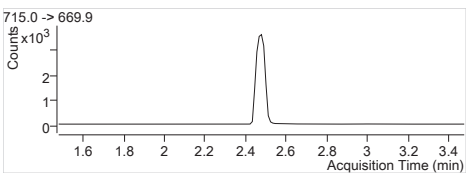

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



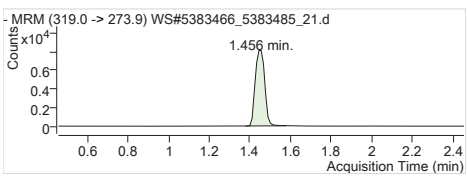



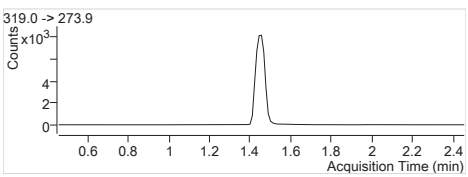

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Sample



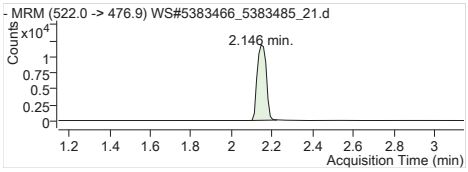



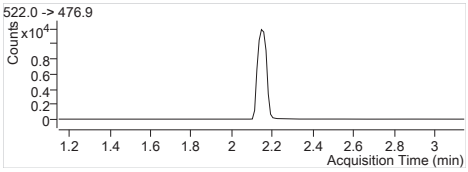

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Sample



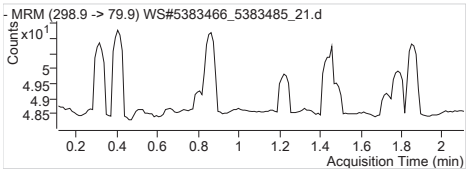



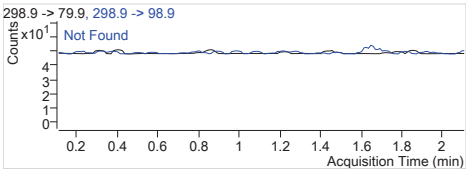

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: Sample



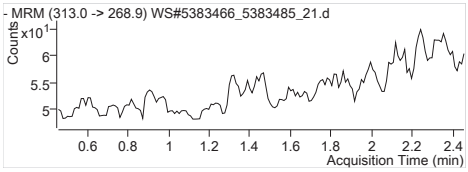



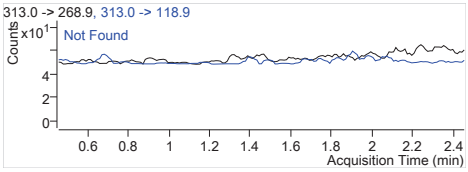

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



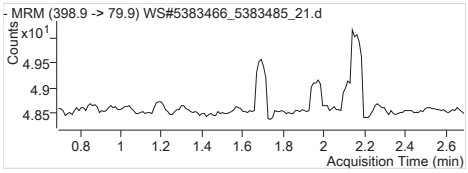



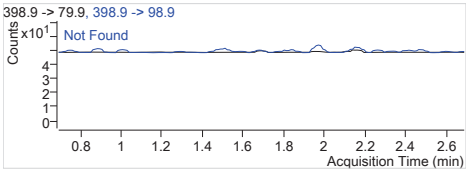

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.109)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



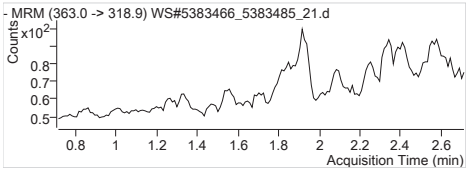



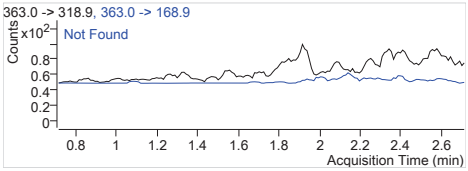

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.456)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



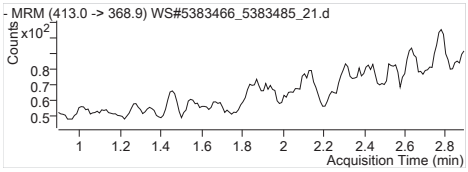



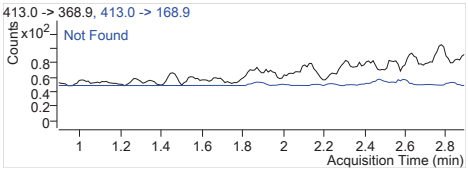

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



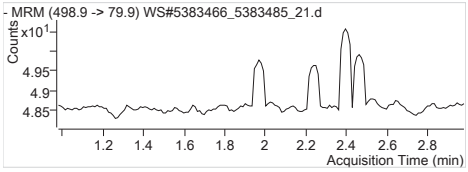



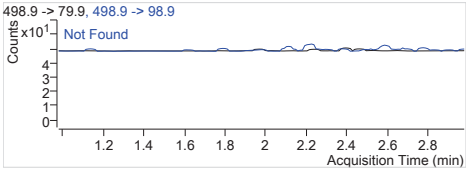

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.713)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



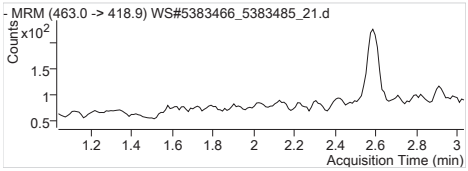



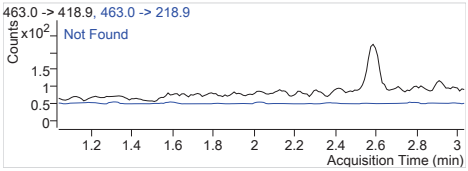

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.892)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



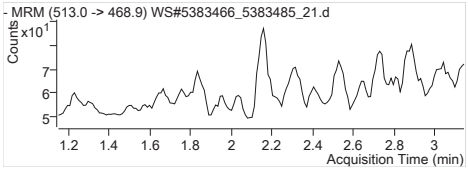



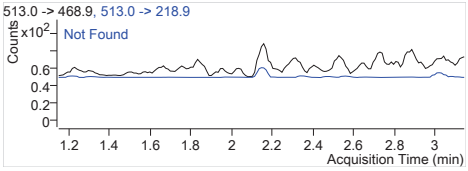

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



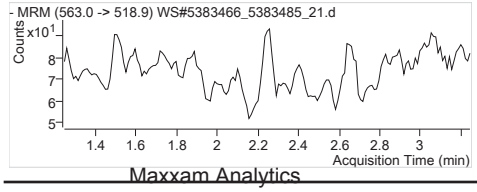



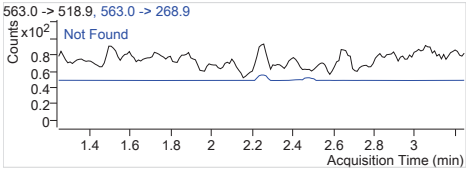

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.036)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



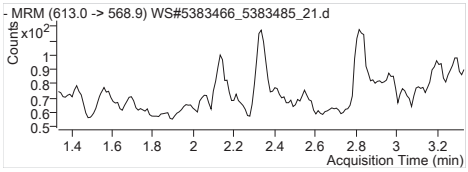



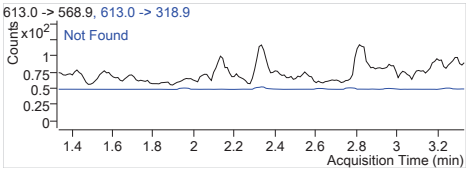

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.147)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



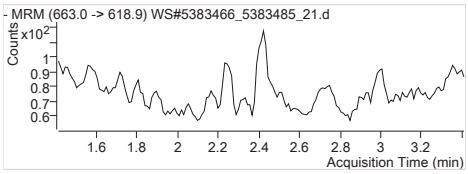



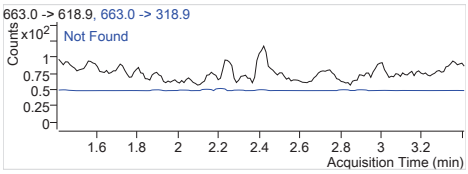

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



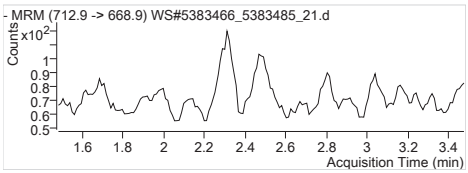



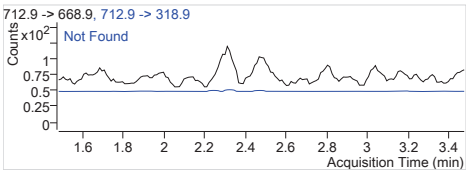

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.334) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



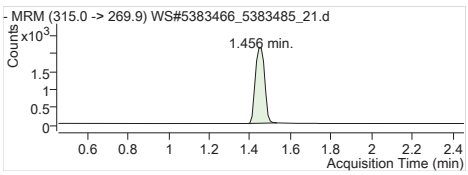



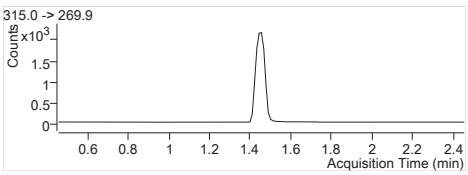

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.411) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



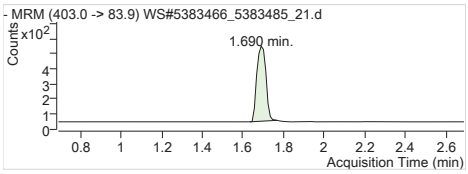



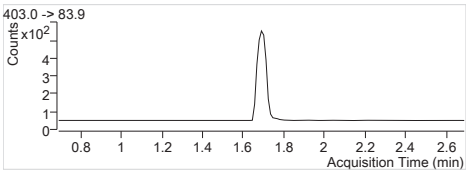

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.478) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



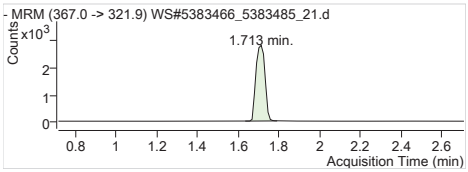



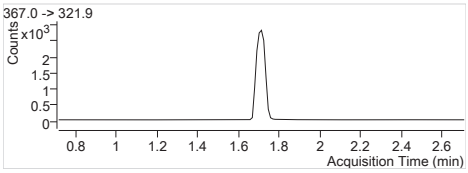

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.456 (1.456) |
| Calc. conc. | 109.24 µg/L |
| Area ratio: | 0.25883 |
| Sample type: | Sample |



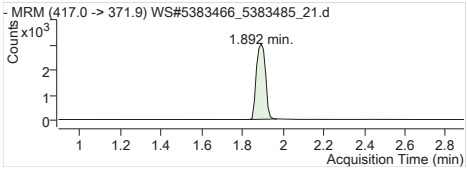



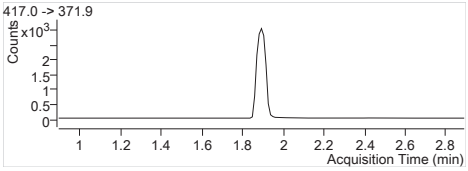

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 102.71 µg/L |
| Area ratio: | 0.05968 |
| Sample type: | Sample |



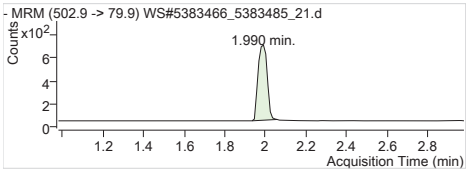



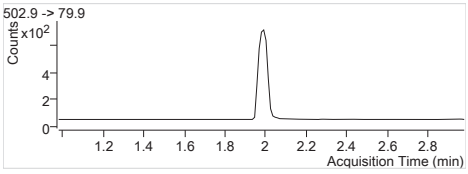

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.713 (1.713) |
| Calc. conc. | 113.02 µg/L |
| Area ratio: | 0.33020 |
| Sample type: | Sample |



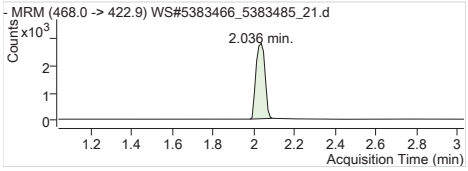



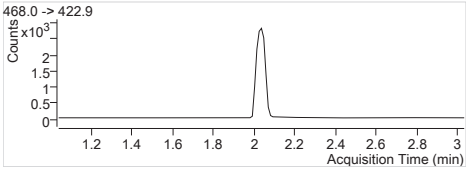

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.892 (1.892) |
| Calc. conc. | 113.26 µg/L |
| Area ratio: | 0.35553 |
| Sample type: | Sample |



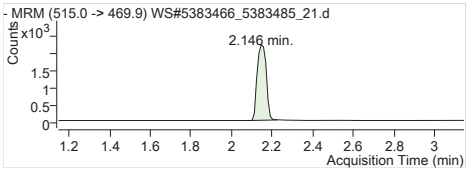



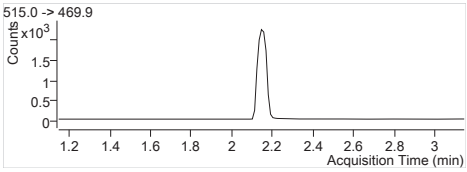

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.990 (1.979) |
| Calc. conc. | 114.48 µg/L |
| Area ratio: | 0.07902 |
| Sample type: | Sample |



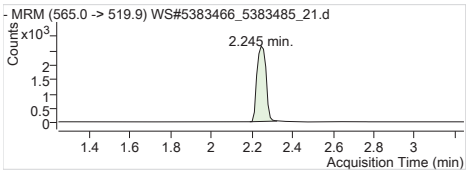



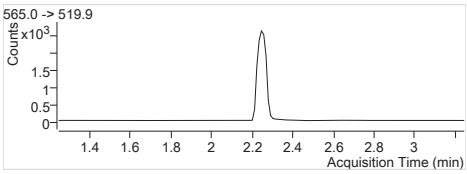

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.036 (2.036) |
| Calc. conc. | 106.06 µg/L |
| Area ratio: | 0.32802 |
| Sample type: | Sample |



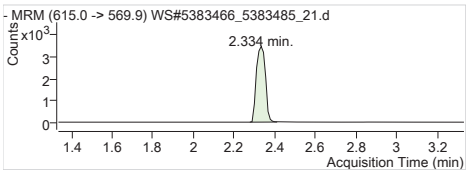



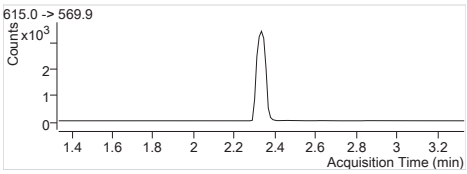

| | |
|---|---|
| **13C2-PFDA** | 515.0 -> 469.9 |
| RT (Exp. RT): | 2.146 (2.146) |
| Calc. conc. | 93.56 µg/L |
| Area ratio: | 0.18774 |
| Sample type: | Sample |



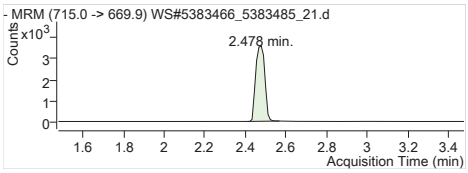



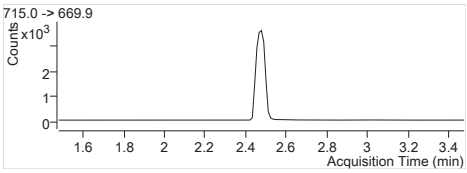

| | |
|---|---|
| **13C2-PFUnA** | 565.0 -> 519.9 |
| RT (Exp. RT): | 2.245 (2.245) |
| Calc. conc. | 91.31 µg/L |
| Area ratio: | 0.22085 |
| Sample type: | Sample |



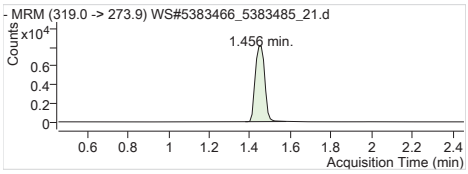



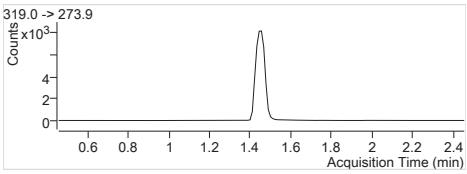

| | |
|---|---|
| **13C2-PFDoA** | 615.0 -> 569.9 |
| RT (Exp. RT): | 2.334 (2.334) |
| Calc. conc. | 90.06 µg/L |
| Area ratio: | 0.28990 |
| Sample type: | Sample |



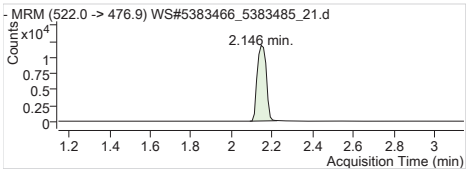



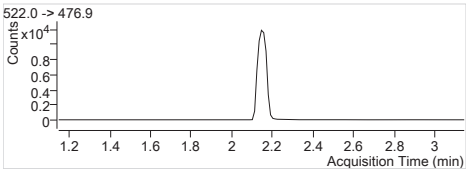

| | |
|---|---|
| **13C2-PFTeDA** | 715.0 -> 669.9 |
| RT (Exp. RT): | 2.478 (2.478) |
| Calc. conc. | 82.76 µg/L |
| Area ratio: | 0.30356 |
| Sample type: | Sample |




| | |
|---|---|
| **13C6-PFHxA** | 319.0 -> 273.9 |
| RT (Exp. RT): | 1.456 (1.456) |
| Calc. conc. | 2.21 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |



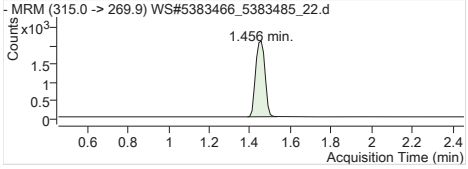

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 2.146 (2.146) |
| Calc. conc. | 2.46 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

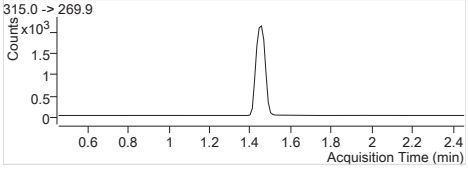
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA790-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_22.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-C2 |
| **Acq. Date** | 2018/02/06 7:50:36 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

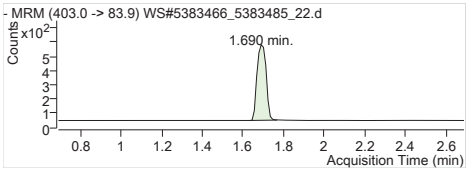
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6682 | 1.46 | 1 µg/L | | |
| MPFHxS | 1659 | 1.69 | 1 µg/L | | |
| MPFHpA | 8845 | 1.71 | 1 µg/L | | |
| MPFOA | 8848 | 1.89 | 1 µg/L | | |
| MPFOS | 1993 | 1.99 | 1 µg/L | | |
| MPFNA | 9018 | 2.04 | 1 µg/L | | |
| MPFDA | 6535 | 2.15 | 1 µg/L | | |
| MPFUnA | 7586 | 2.25 | 1 µg/L | | |
| MPFDoA | 10194 | 2.33 | 1 µg/L | | |
| MPFTeDA | 10797 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 28289 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 37505 | 2.15 | 1 µg/L | | |

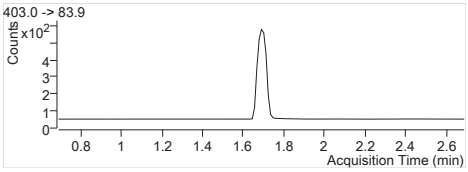
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6682 | 1.46 | - | 99.69 µg/L | - |
| 18O2-PFHxS | 1659 | 1.69 | - | 100.92 µg/L | - |
| 13C4-PFHpA | 8845 | 1.71 | - | 107.02 µg/L | - |
| 13C4-PFOA | 8848 | 1.89 | - | 99.64 µg/L | - |
| 13C4-PFOS | 1993 | 1.99 | - | 102.07 µg/L | - |
| 13C5-PFNA | 9019 | 2.04 | - | 103.08 µg/L | - |
| 13C2-PFDA | 6438 | 2.15 | - | 85.54 µg/L | - |
| 13C2-PFUnA | 7586 | 2.25 | - | 83.62 µg/L | - |
| 13C2-PFDoA | 10194 | 2.33 | - | 84.43 µg/L | - |
| 13C2-PFTeDA | 10969 | 2.48 | - | 79.74 µg/L | - |
| 13C6-PFHxA | 28289 | 1.46 | - | 2.39 µg/L | - |
| 13C9-PFDA | 37505 | 2.15 | - | 2.52 µg/L | - |



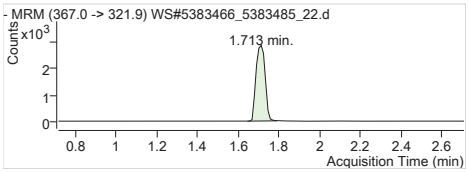



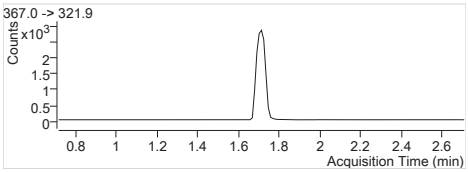

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



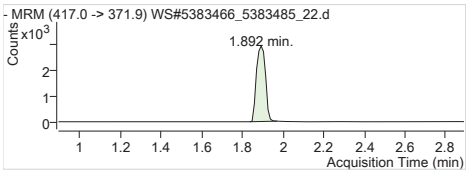



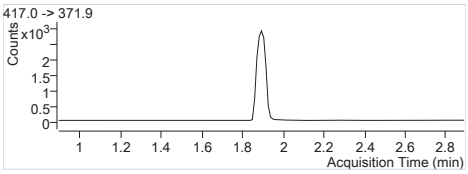

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



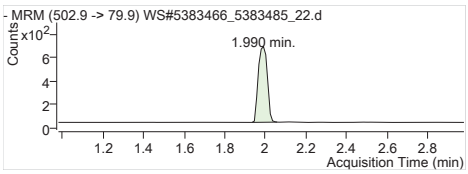



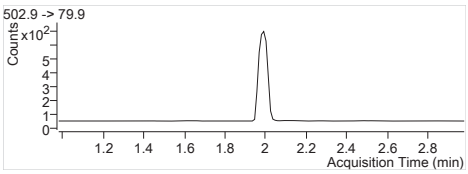

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Sample



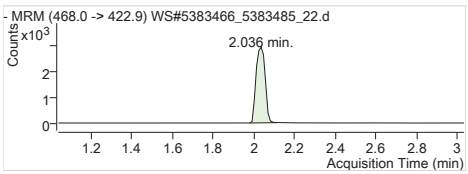



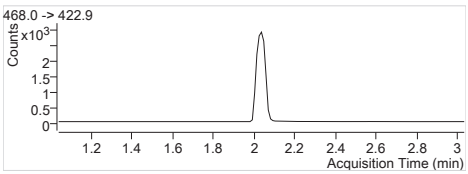

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Sample



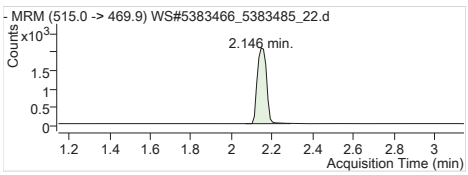



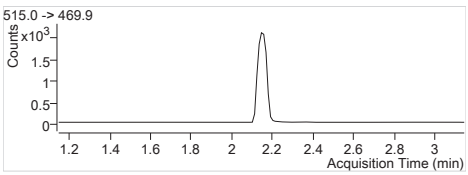

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Sample



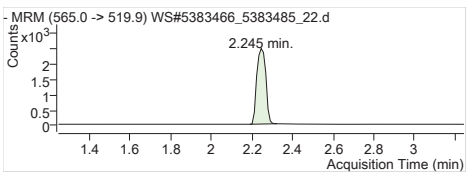



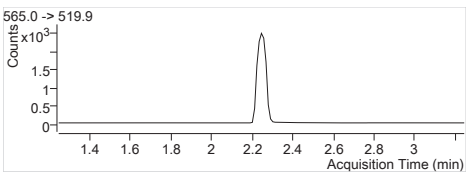

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Sample



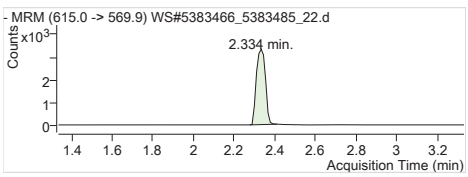



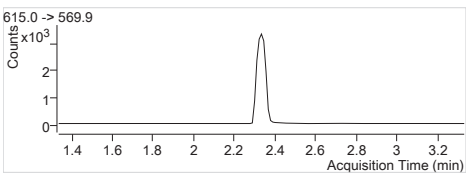

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



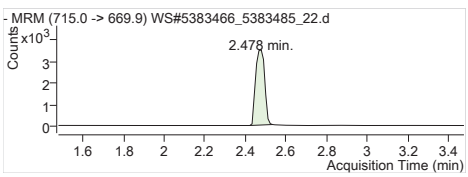



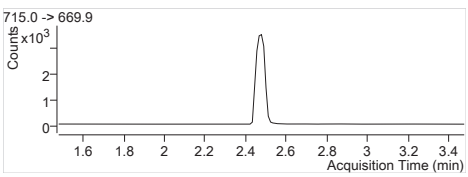

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



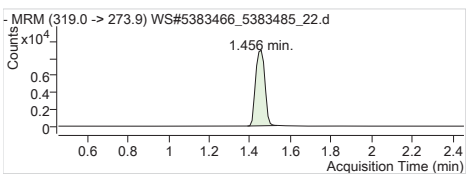



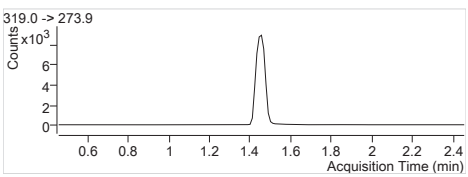

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Sample



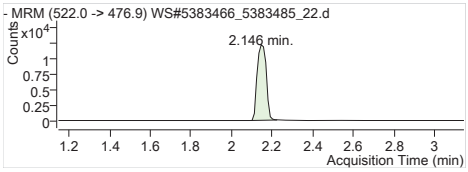



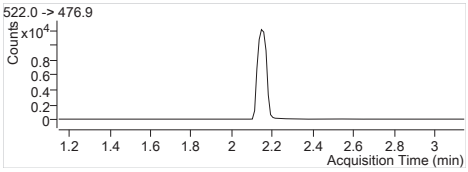

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Sample



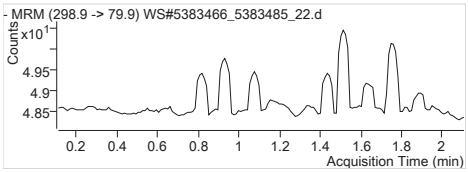



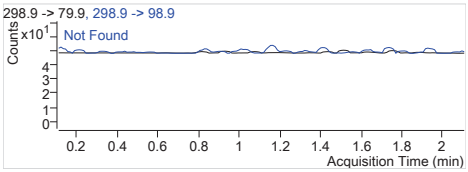

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: Sample



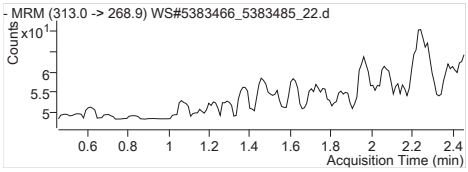



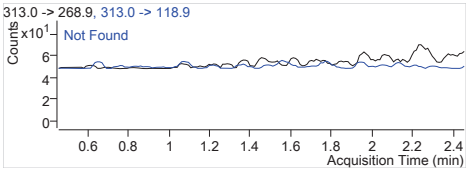

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



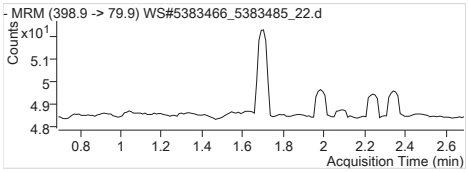



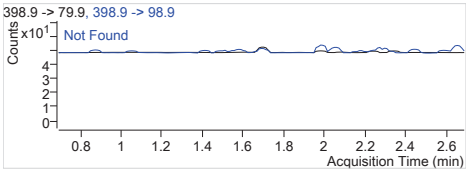

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.109)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



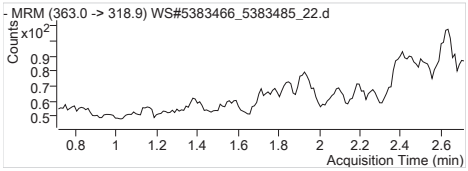



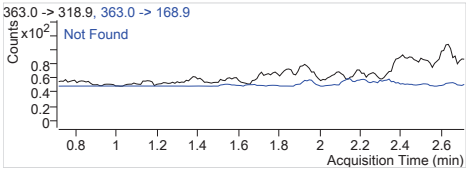

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.456)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



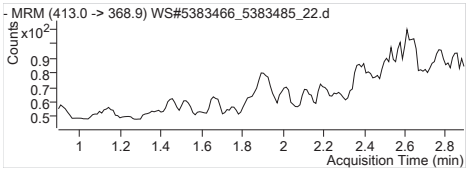



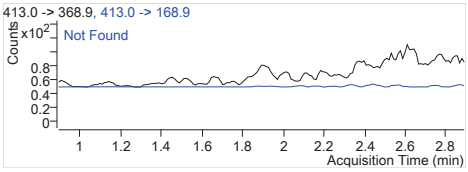

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



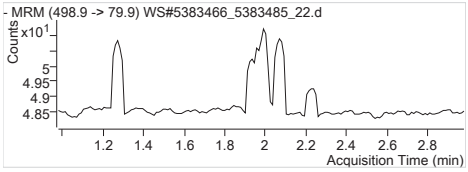



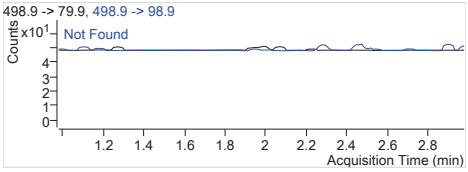

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.713)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



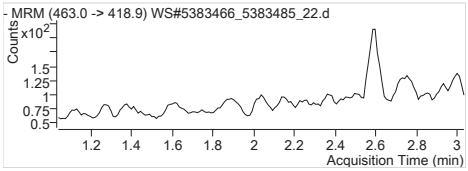



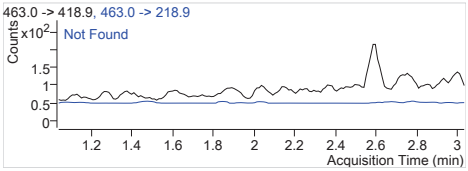

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.892)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



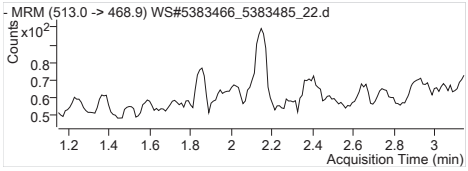



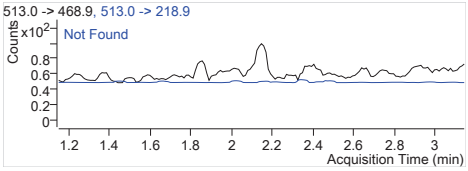

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



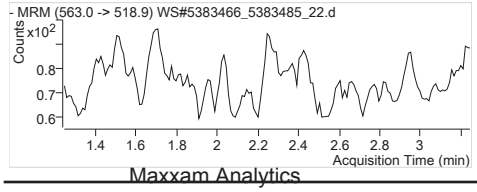



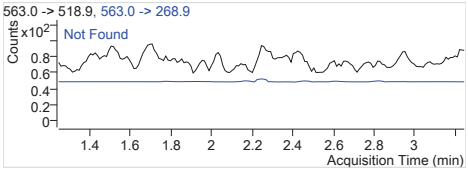

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.036)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



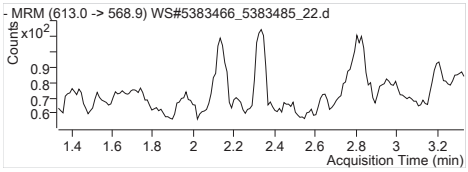



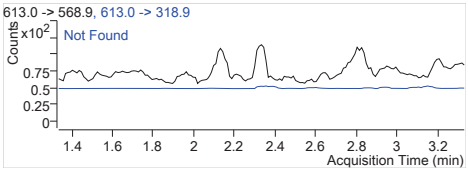

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.147)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



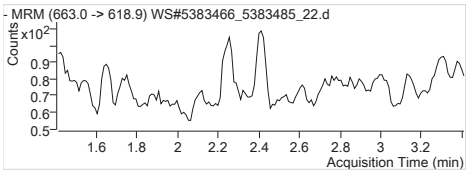



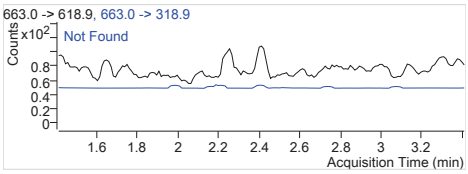

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



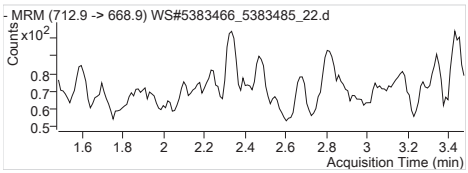



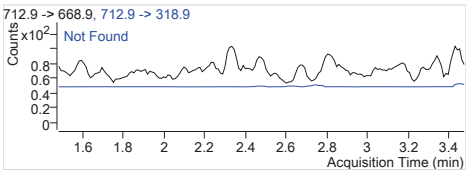

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.334) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



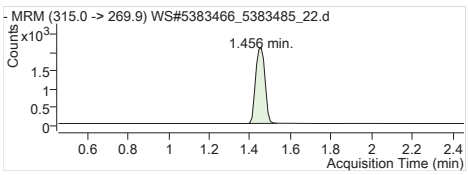



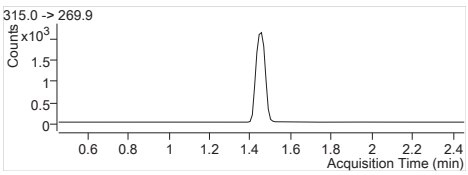

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.411) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



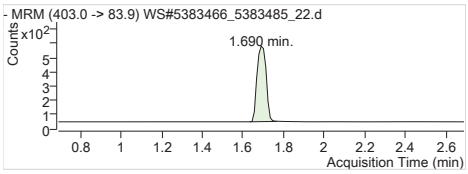



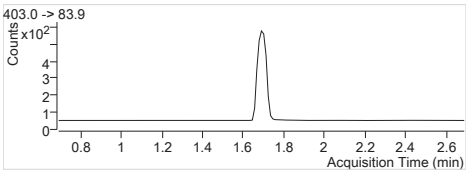

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.478) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



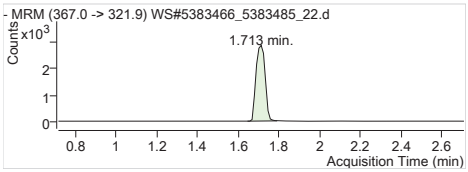



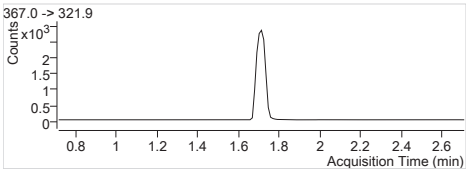

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.456 (1.456) |
| Calc. conc. | 99.69 µg/L |
| Area ratio: | 0.23620 |
| Sample type: | Sample |



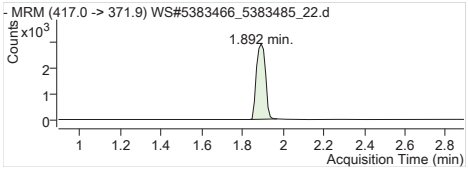



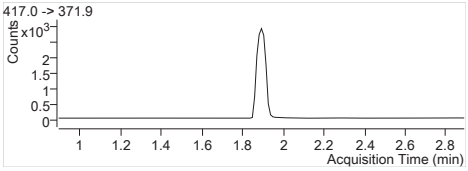

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 100.92 µg/L |
| Area ratio: | 0.05864 |
| Sample type: | Sample |



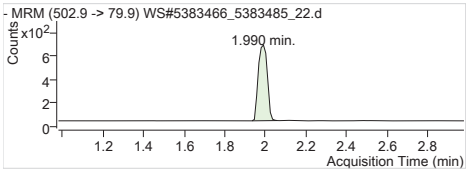



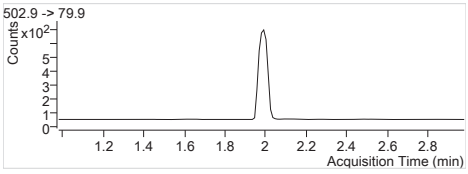

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.713 (1.713) |
| Calc. conc. | 107.02 µg/L |
| Area ratio: | 0.31267 |
| Sample type: | Sample |



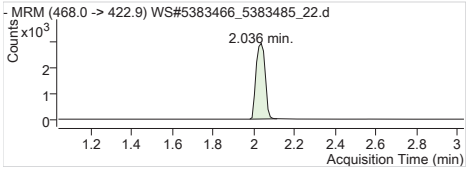



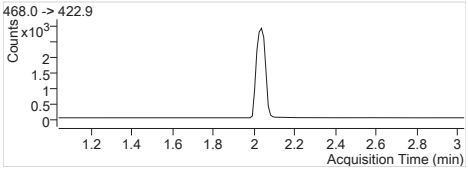

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.892 (1.892) |
| Calc. conc. | 99.64 µg/L |
| Area ratio: | 0.31277 |
| Sample type: | Sample |



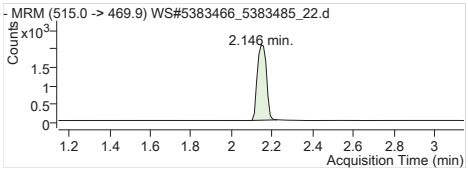



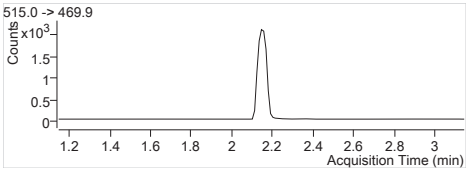

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.990 (1.979) |
| Calc. conc. | 102.07 µg/L |
| Area ratio: | 0.07045 |
| Sample type: | Sample |



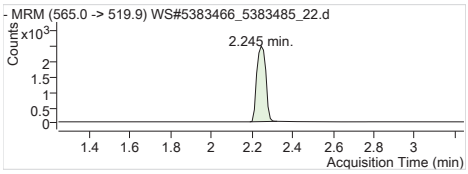



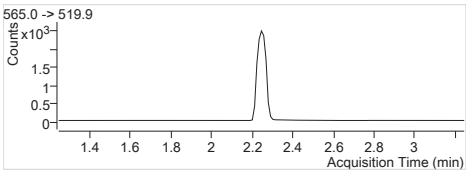

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.036 (2.036) |
| Calc. conc. | 103.08 µg/L |
| Area ratio: | 0.31882 |
| Sample type: | Sample |



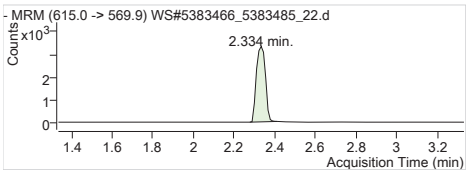



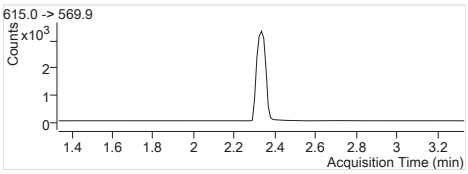

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 85.54 µg/L
Area ratio: 0.17166
Sample type: Sample



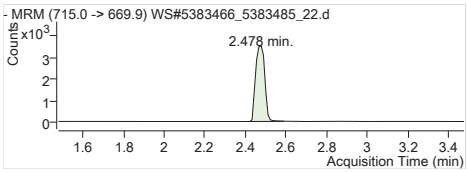



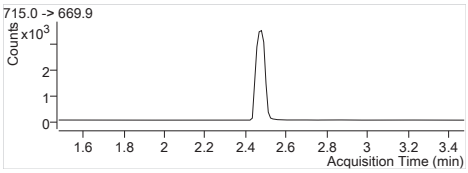

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 83.62 µg/L
Area ratio: 0.20227
Sample type: Sample



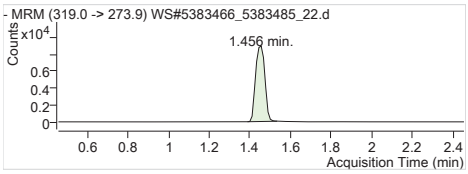



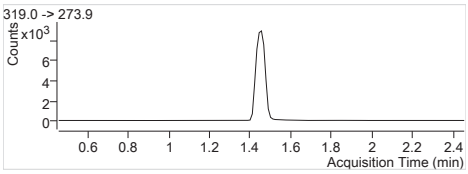

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 84.43 µg/L
Area ratio: 0.27180
Sample type: Sample



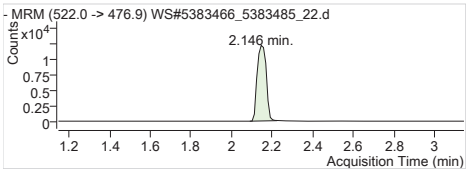



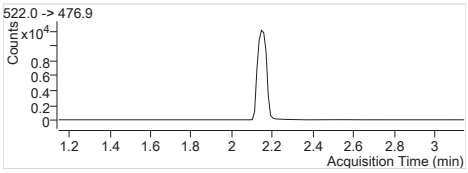

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 79.74 µg/L
Area ratio: 0.29247
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 2.39 µg/L
Area ratio: 0
Sample type: Sample



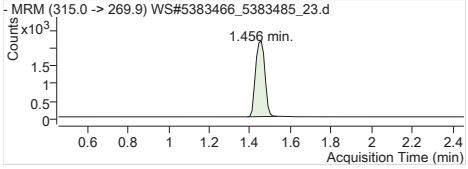

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.52 µg/L
Area ratio: 0
Sample type: Sample

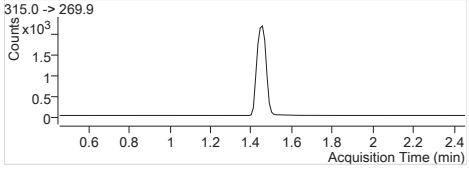
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA791-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_23.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-C3 |
| **Acq. Date** | 2018/02/06 7:55:32 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

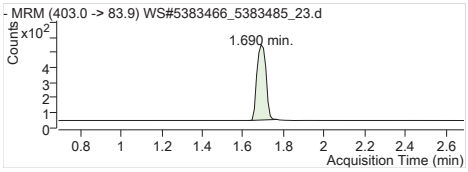
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6911 | 1.46 | 1 µg/L | | |
| MPFHxS | 1548 | 1.69 | 1 µg/L | | |
| MPFHpA | 8793 | 1.71 | 1 µg/L | | |
| MPFOA | 9589 | 1.89 | 1 µg/L | | |
| MPFOS | 2053 | 1.99 | 1 µg/L | | |
| MPFNA | 9519 | 2.04 | 1 µg/L | | |
| MPFDA | 7752 | 2.15 | 1 µg/L | | |
| MPFUnA | 9023 | 2.25 | 1 µg/L | | |
| MPFDoA | 11389 | 2.33 | 1 µg/L | | |
| MPFTeDA | 11954 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 28121 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 36445 | 2.15 | 1 µg/L | | |

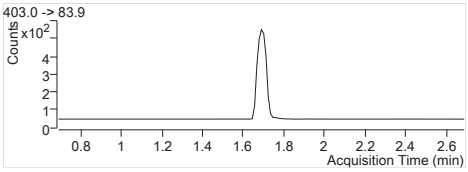
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6911 | 1.46 | - | 103.73 µg/L | - |
| 18O2-PFHxS | 1548 | 1.69 | - | 94.73 µg/L | - |
| 13C4-PFHpA | 8793 | 1.71 | - | 107.03 µg/L | - |
| 13C4-PFOA | 9589 | 1.89 | - | 108.63 µg/L | - |
| 13C4-PFOS | 2053 | 1.99 | - | 105.77 µg/L | - |
| 13C5-PFNA | 9521 | 2.04 | - | 109.47 µg/L | - |
| 13C2-PFDA | 7699 | 2.15 | - | 105.27 µg/L | - |
| 13C2-PFUnA | 9023 | 2.25 | - | 102.36 µg/L | - |
| 13C2-PFDoA | 11389 | 2.33 | - | 97.07 µg/L | - |
| 13C2-PFTeDA | 12276 | 2.48 | - | 91.83 µg/L | - |
| 13C6-PFHxA | 28121 | 1.46 | - | 2.37 µg/L | - |
| 13C9-PFDA | 36445 | 2.15 | - | 2.45 µg/L | - |



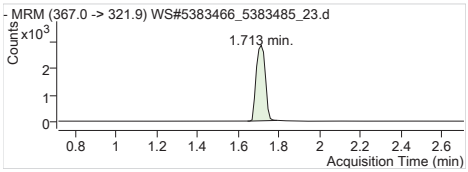



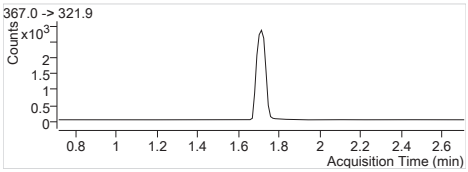

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



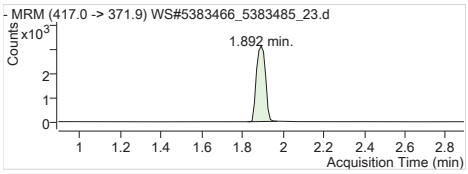



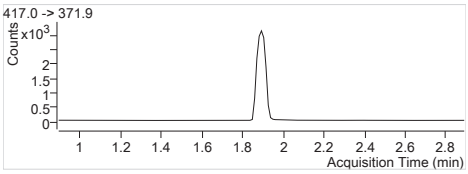

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



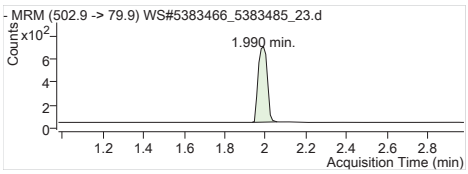



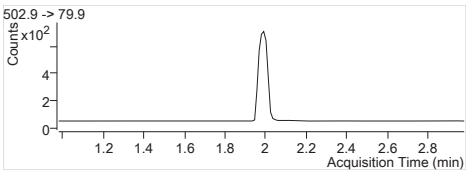

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Sample



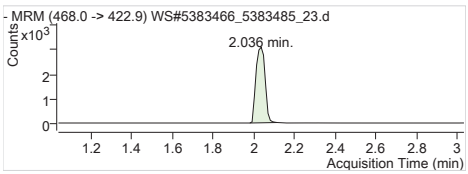



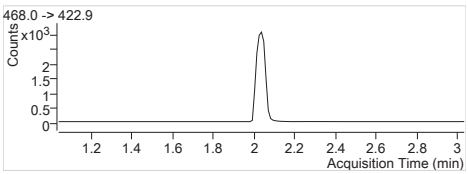

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Sample



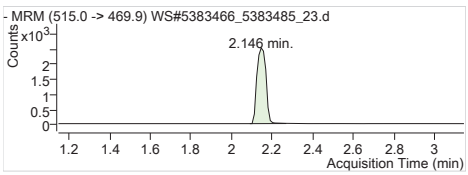



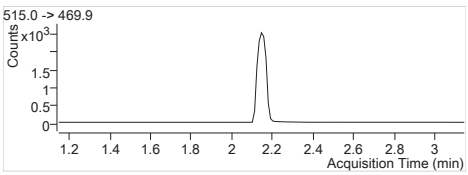

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Sample



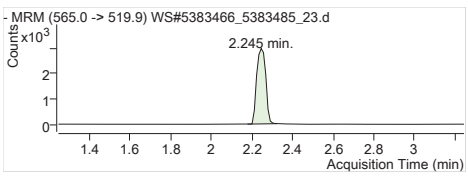



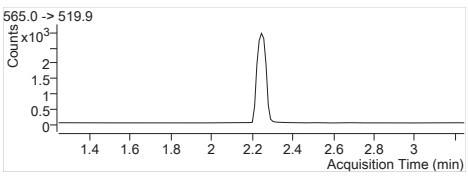

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Sample



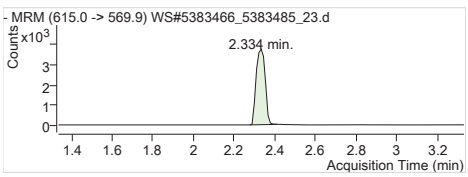



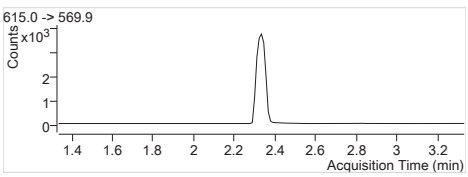

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



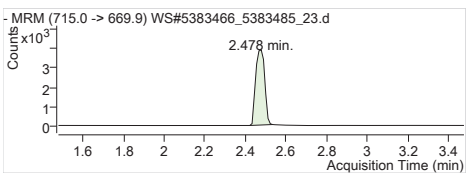



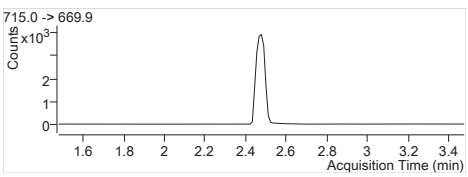

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



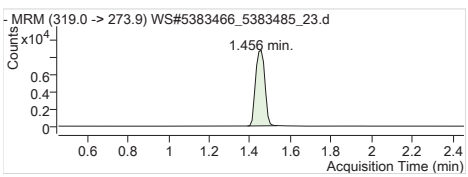



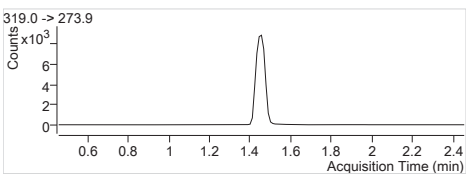

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Sample



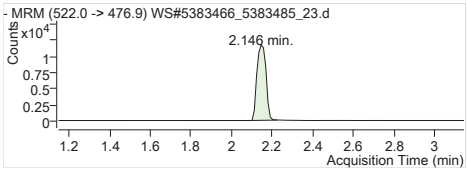



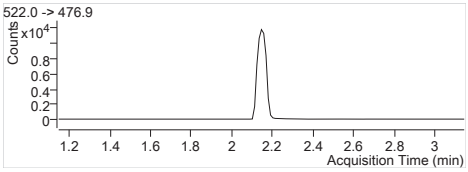

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Sample



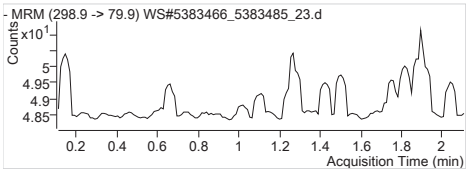



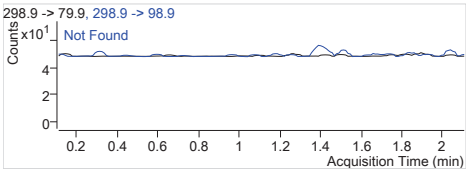

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: Sample



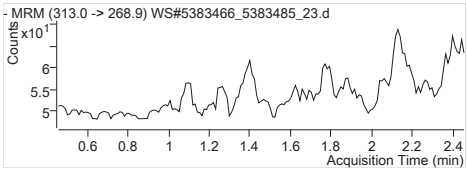



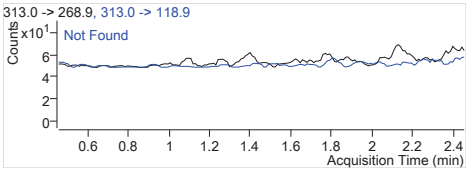

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



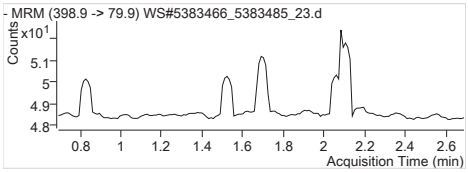



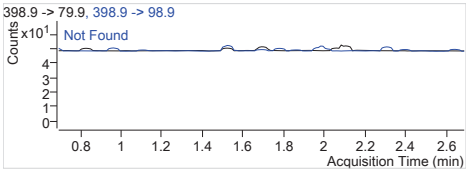

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.109)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



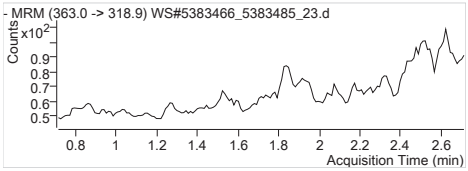



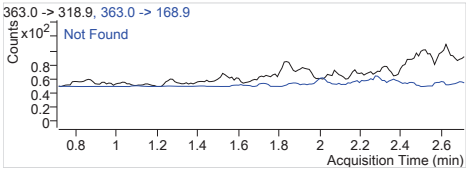

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.456)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



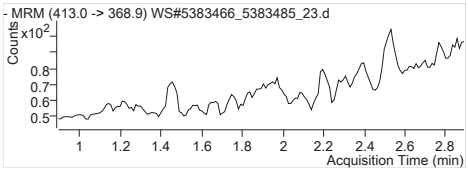



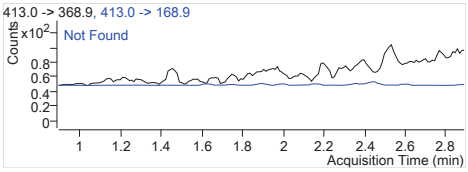

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



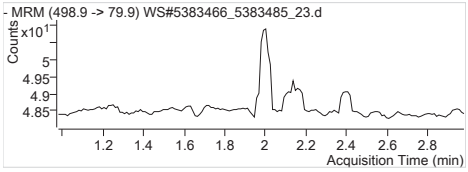



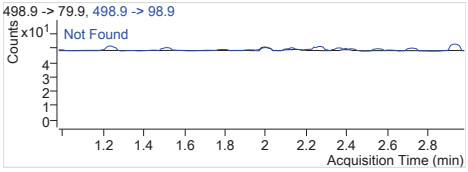

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.713)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



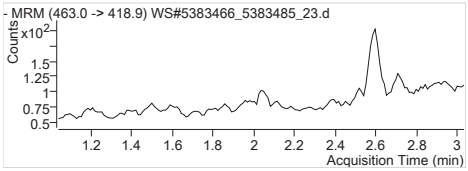



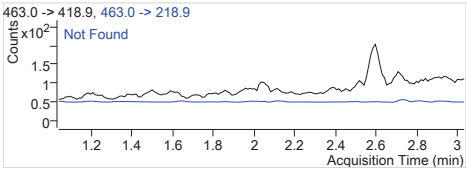

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.892)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



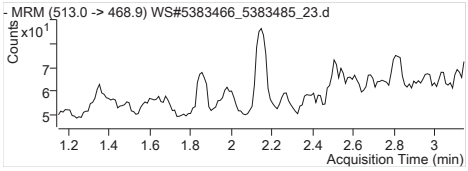



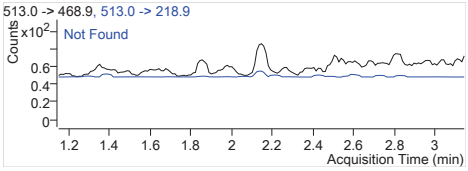

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



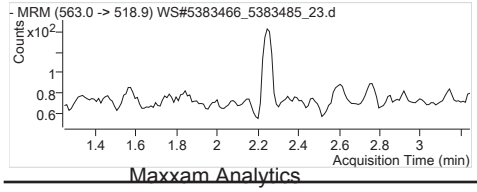



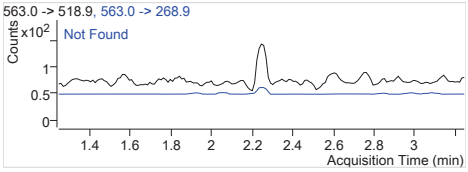

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.036)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



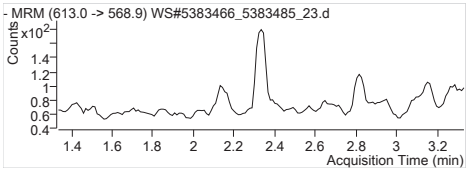



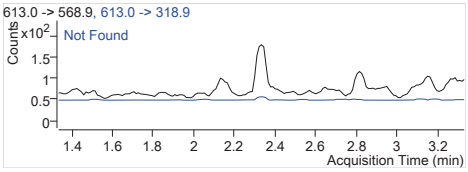

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.147)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



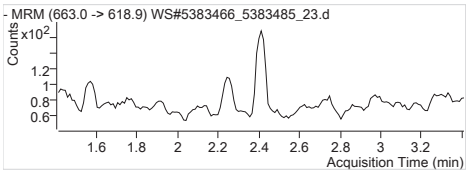



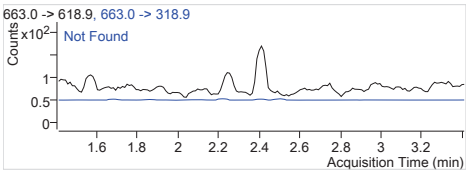

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



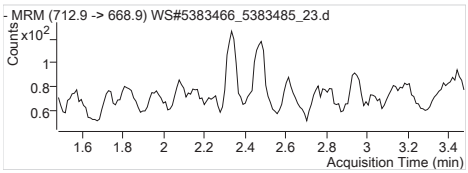



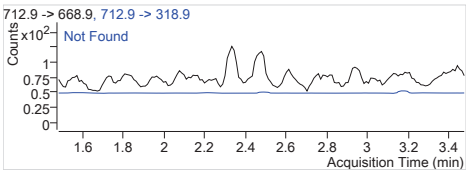

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.334) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



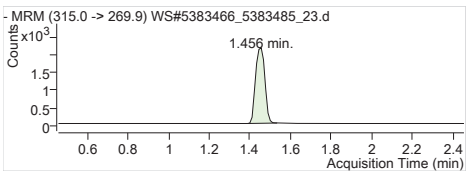



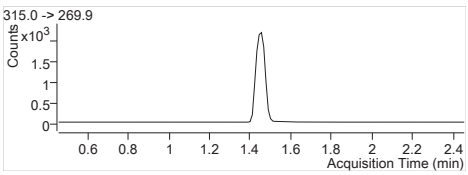

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.411) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



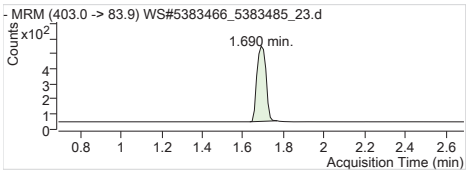



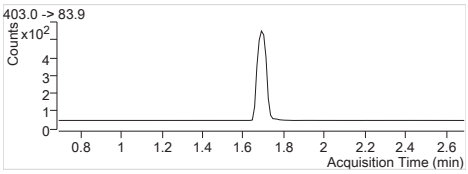

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.478) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



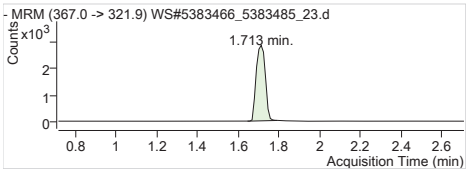



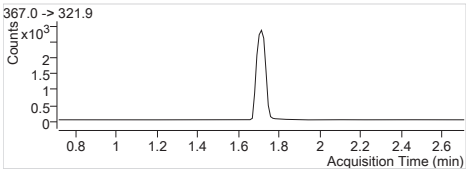

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.456 (1.456) |
| Calc. conc. | 103.73 µg/L |
| Area ratio: | 0.24576 |
| Sample type: | Sample |



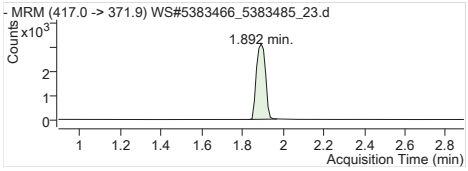



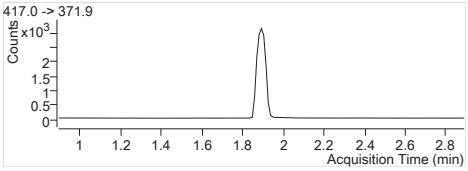

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 94.73 µg/L |
| Area ratio: | 0.05505 |
| Sample type: | Sample |



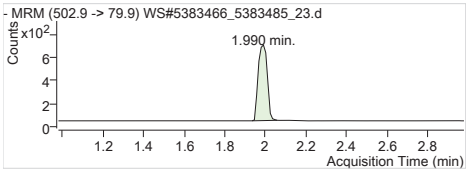



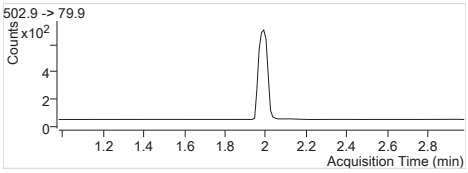

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.713 (1.713) |
| Calc. conc. | 107.03 µg/L |
| Area ratio: | 0.31268 |
| Sample type: | Sample |



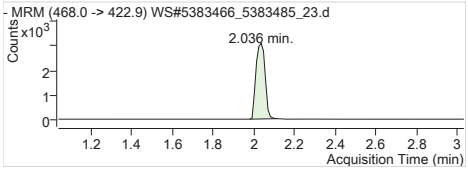



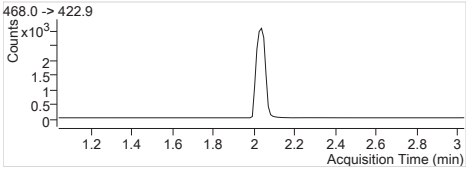

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.892 (1.892) |
| Calc. conc. | 108.63 µg/L |
| Area ratio: | 0.34099 |
| Sample type: | Sample |



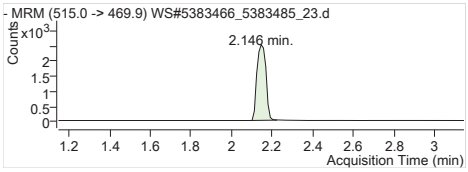



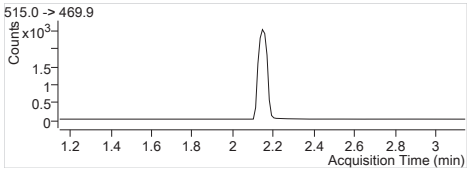

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.990 (1.979) |
| Calc. conc. | 105.77 µg/L |
| Area ratio: | 0.07301 |
| Sample type: | Sample |



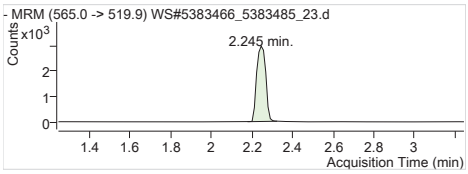



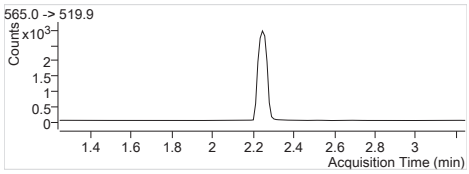

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.036 (2.036) |
| Calc. conc. | 109.47 µg/L |
| Area ratio: | 0.33857 |
| Sample type: | Sample |



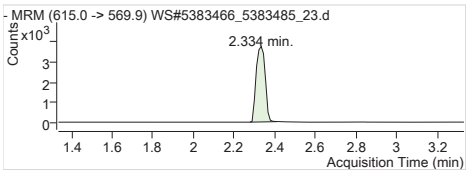



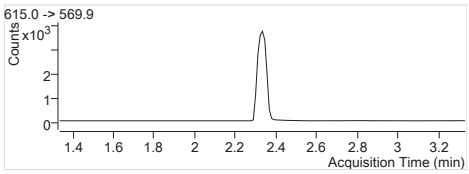

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 105.27 µg/L
Area ratio: 0.21125
Sample type: Sample



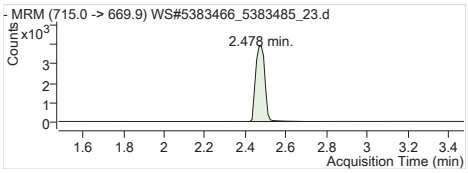



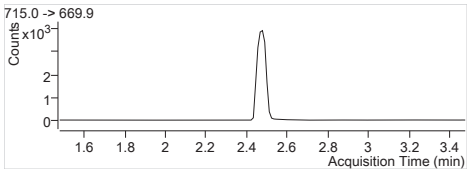

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 102.36 µg/L
Area ratio: 0.24758
Sample type: Sample



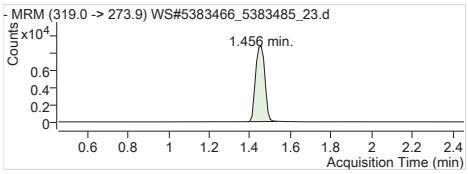



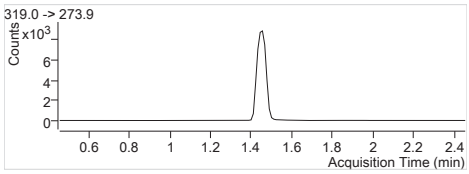

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 97.07 µg/L
Area ratio: 0.31250
Sample type: Sample



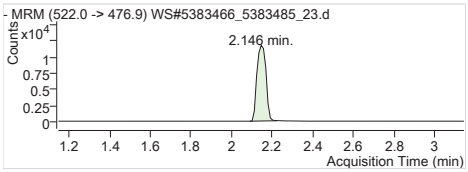



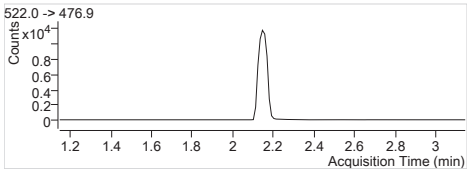

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 91.83 µg/L
Area ratio: 0.33684
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 2.37 µg/L
Area ratio: 0
Sample type: Sample



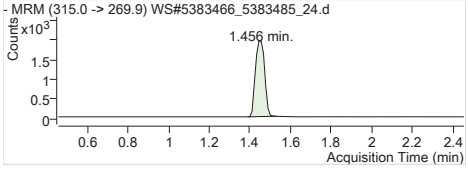

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.45 µg/L
Area ratio: 0
Sample type: Sample

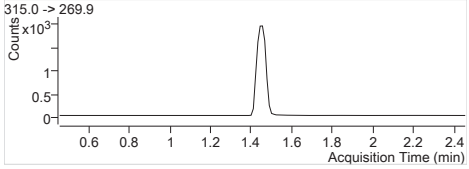
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA792-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_24.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-C4 |
| **Acq. Date** | 2018/02/06 8:00:28 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

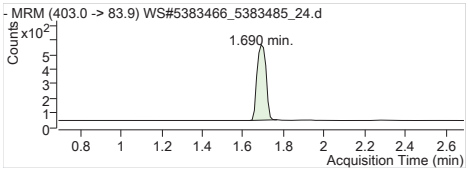
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6099 | 1.46 | 1 µg/L | | |
| MPFHxS | 1603 | 1.69 | 1 µg/L | | |
| MPFHpA | 7724 | 1.71 | 1 µg/L | | |
| MPFOA | 9139 | 1.89 | 1 µg/L | | |
| MPFOS | 2052 | 1.99 | 1 µg/L | | |
| MPFNA | 8379 | 2.04 | 1 µg/L | | |
| MPFDA | 7891 | 2.15 | 1 µg/L | | |
| MPFUnA | 8741 | 2.25 | 1 µg/L | | |
| MPFDoA | 10958 | 2.33 | 1 µg/L | | |
| MPFTeDA | 10754 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 28688 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 38079 | 2.15 | 1 µg/L | | |

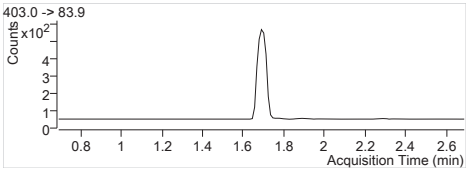
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6099 | 1.46 | - | 89.73 µg/L | - |
| 18O2-PFHxS | 1603 | 1.69 | - | 96.16 µg/L | - |
| 13C4-PFHpA | 7724 | 1.71 | - | 92.16 µg/L | - |
| 13C4-PFOA | 9139 | 1.89 | - | 101.49 µg/L | - |
| 13C4-PFOS | 2052 | 1.99 | - | 103.63 µg/L | - |
| 13C5-PFNA | 8259 | 2.04 | - | 93.08 µg/L | - |
| 13C2-PFDA | 7760 | 2.15 | - | 101.55 µg/L | - |
| 13C2-PFUnA | 8741 | 2.25 | - | 94.90 µg/L | - |
| 13C2-PFDoA | 10958 | 2.33 | - | 89.39 µg/L | - |
| 13C2-PFTeDA | 10985 | 2.48 | - | 78.65 µg/L | - |
| 13C6-PFHxA | 28688 | 1.46 | - | 2.42 µg/L | - |
| 13C9-PFDA | 38079 | 2.15 | - | 2.55 µg/L | - |



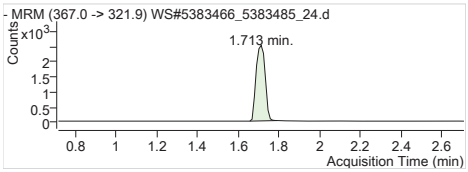



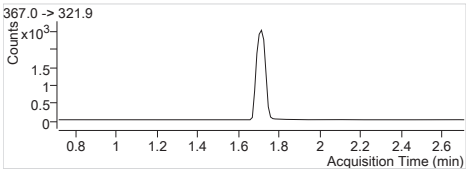

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



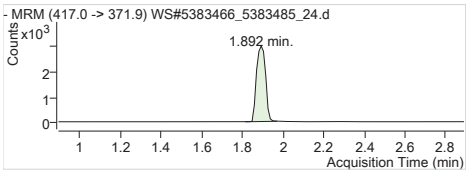



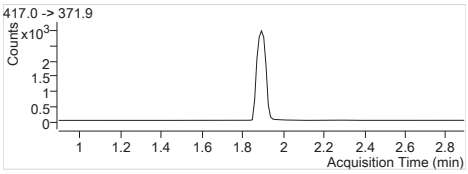

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



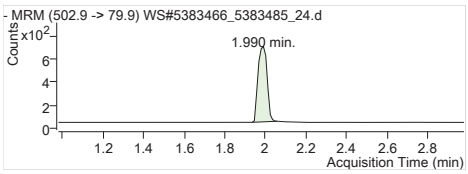



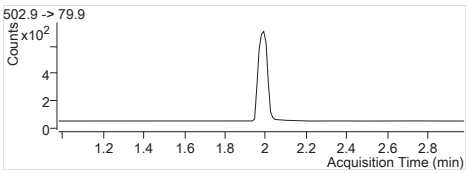

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Sample



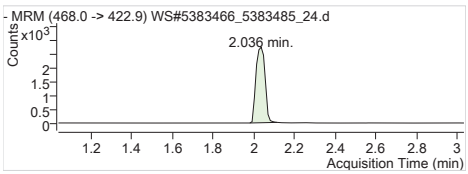



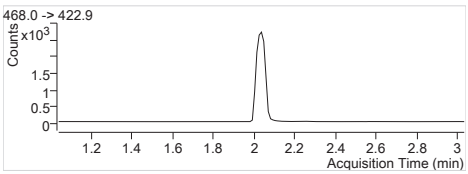

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Sample



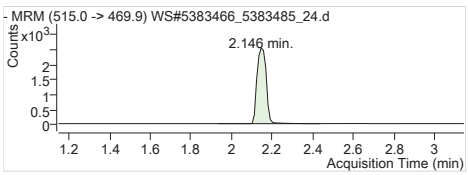



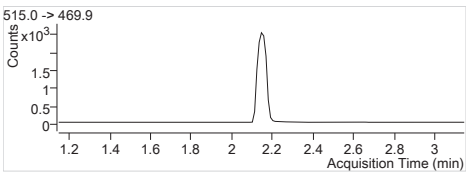

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Sample



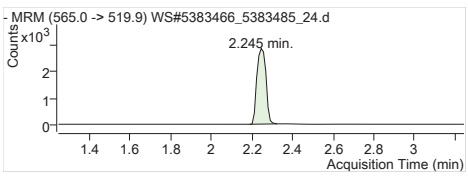



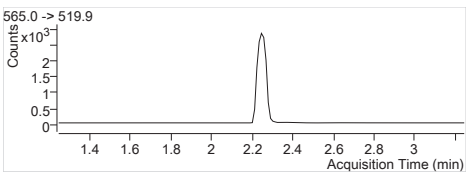

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Sample



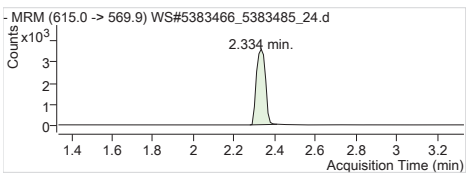



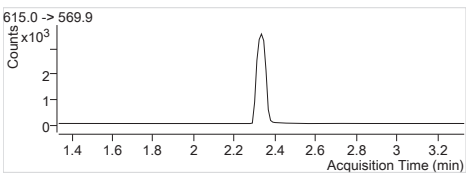

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



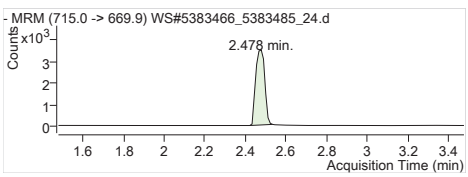



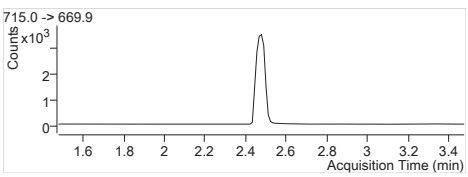

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



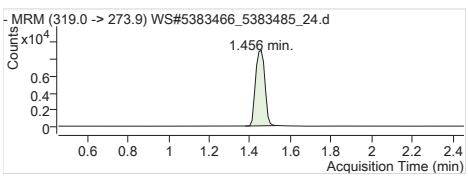



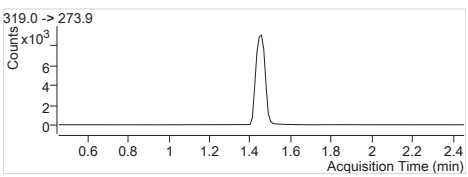

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Sample



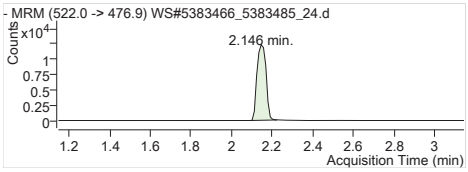



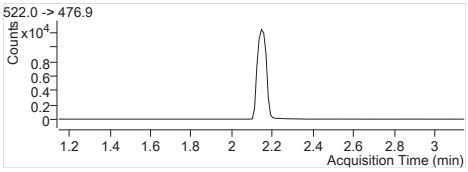

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Sample



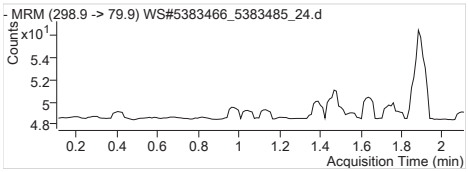



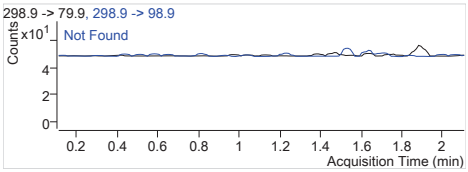

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: Sample



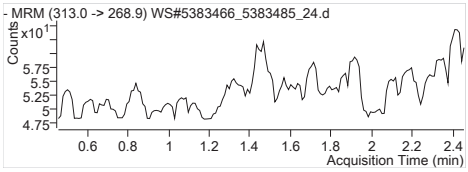



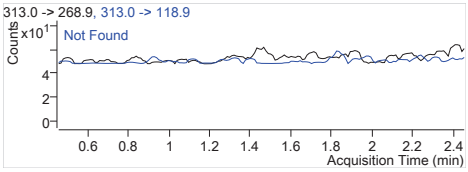

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



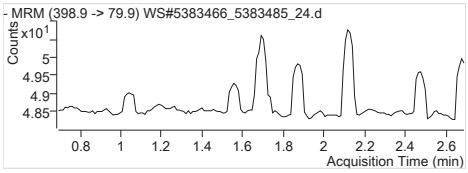



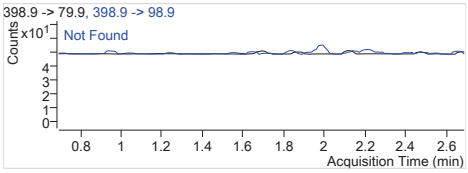

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.109)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



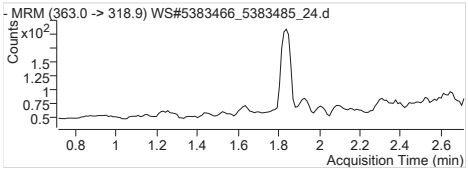



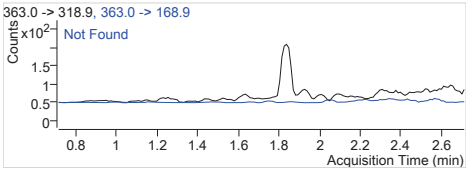

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.456)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



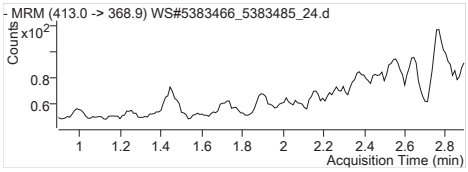



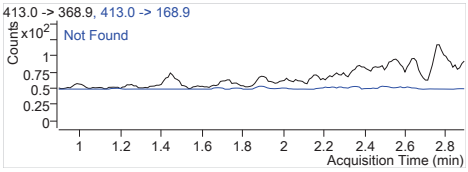

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



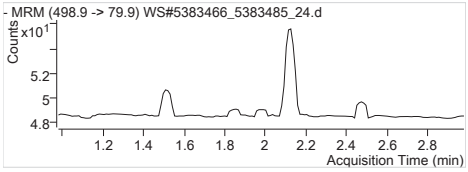



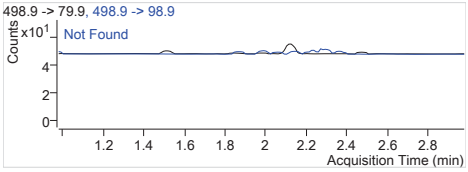

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.713)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



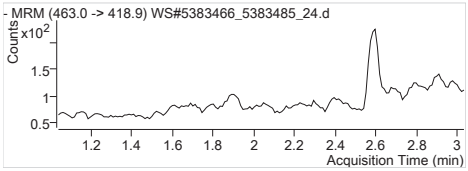



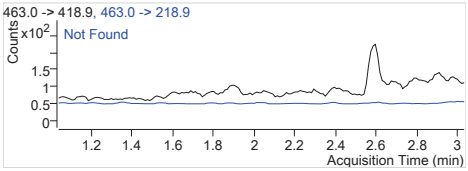

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.892)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



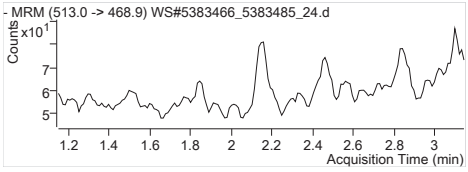



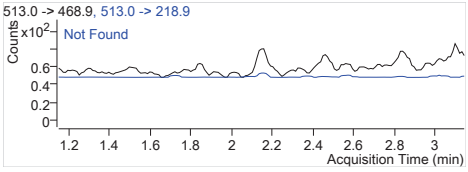

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



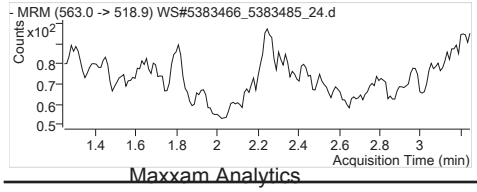



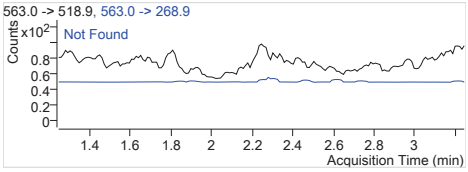

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.036)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



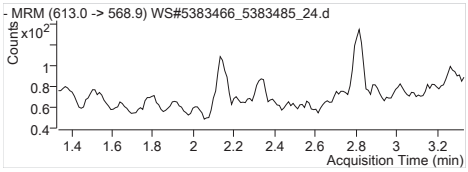



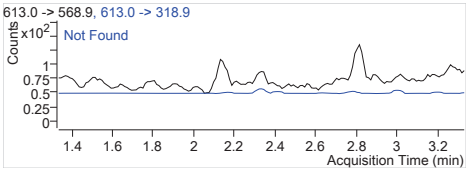

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.147)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



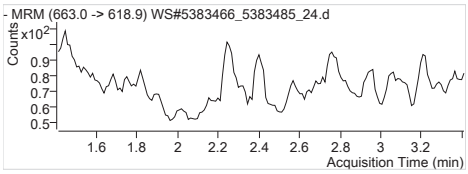



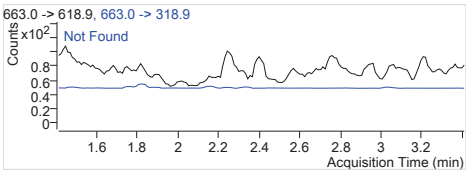

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



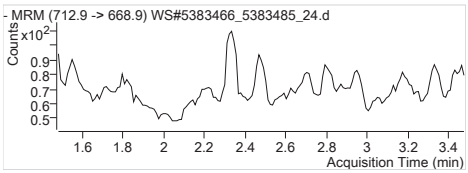



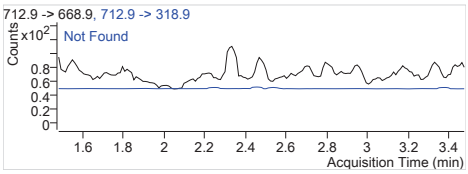

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.334) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



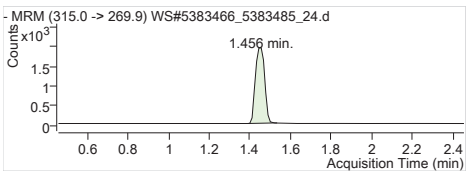



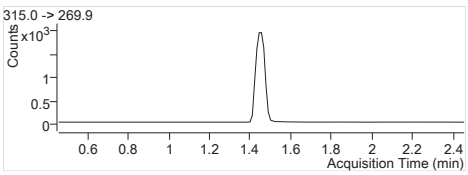

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.411) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



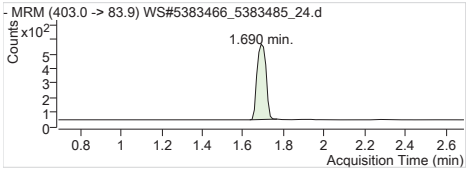



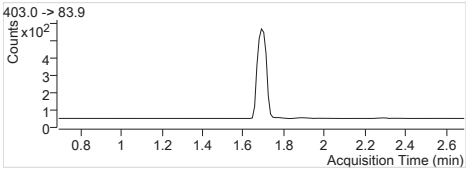

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.478) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



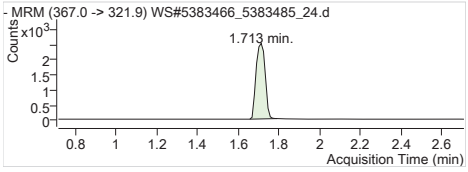



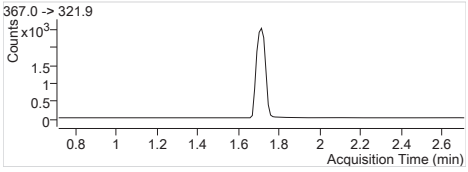

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.456 (1.456) |
| Calc. conc. | 89.73 µg/L |
| Area ratio: | 0.21260 |
| Sample type: | Sample |



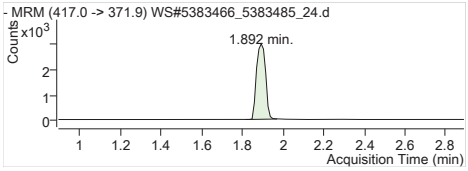



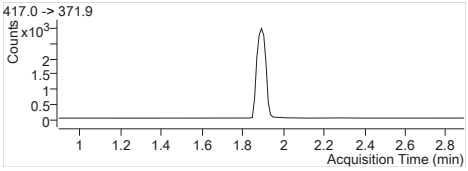

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 96.16 µg/L |
| Area ratio: | 0.05588 |
| Sample type: | Sample |



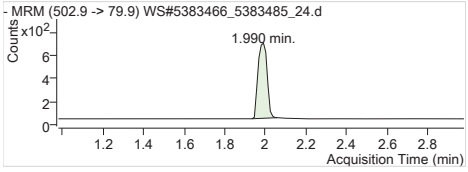



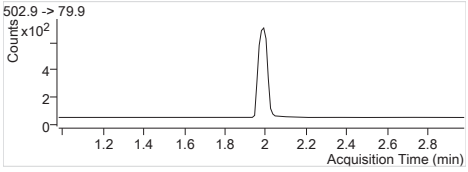

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.713 (1.713) |
| Calc. conc. | 92.16 µg/L |
| Area ratio: | 0.26924 |
| Sample type: | Sample |



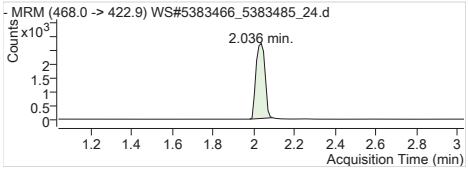



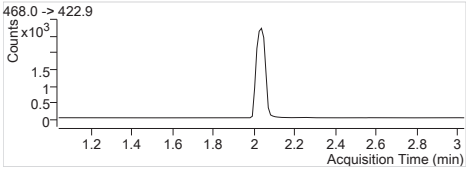

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.892 (1.892) |
| Calc. conc. | 101.49 µg/L |
| Area ratio: | 0.31857 |
| Sample type: | Sample |



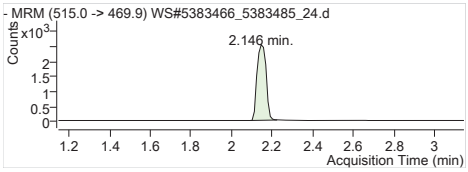



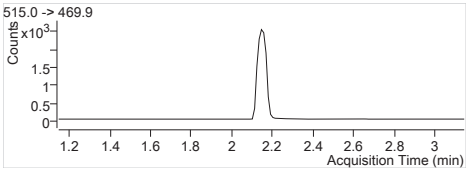

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.990 (1.979) |
| Calc. conc. | 103.63 µg/L |
| Area ratio: | 0.07153 |
| Sample type: | Sample |



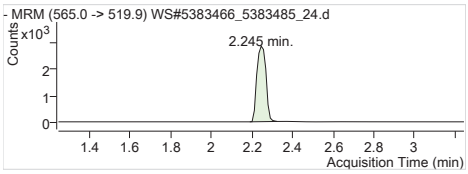



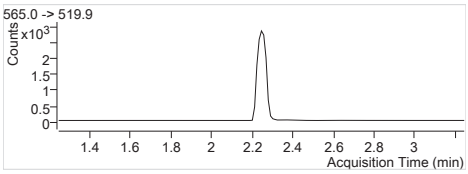

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.036 (2.036) |
| Calc. conc. | 93.08 µg/L |
| Area ratio: | 0.28789 |
| Sample type: | Sample |



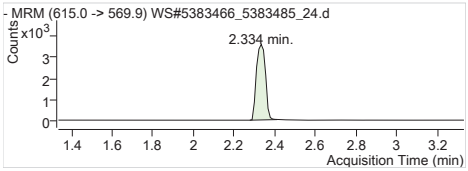



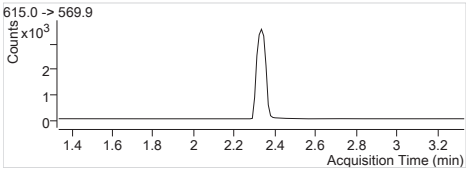

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 101.55 µg/L
Area ratio: 0.20379
Sample type: Sample



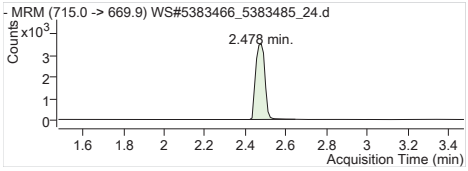



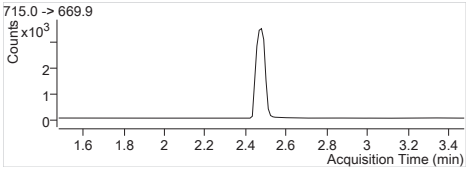

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 94.90 µg/L
Area ratio: 0.22955
Sample type: Sample



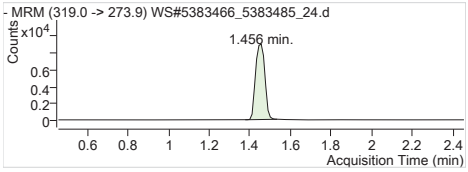



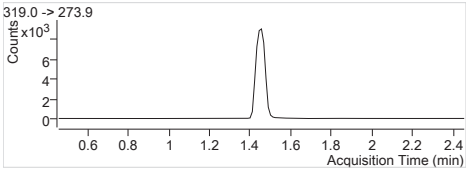

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 89.39 µg/L
Area ratio: 0.28777
Sample type: Sample



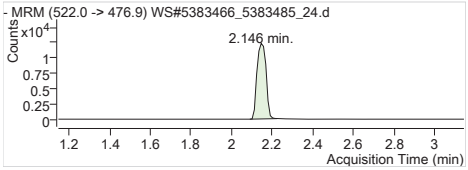



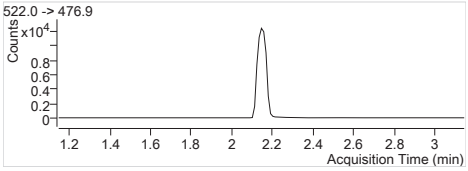

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 78.65 µg/L
Area ratio: 0.28848
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 2.42 µg/L
Area ratio: 0
Sample type: Sample




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.55 µg/L
Area ratio: 0
Sample type: Sample

# Quantitation Results

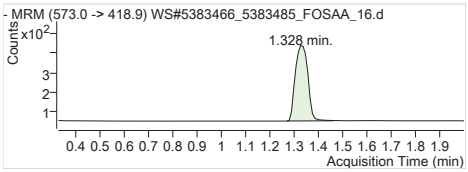
Agilent Technologies

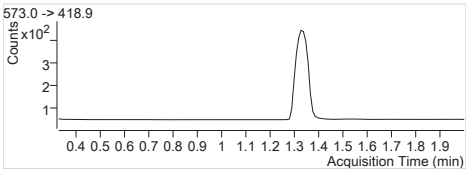
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA783-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_16.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B5 |
| **Acq. Date** | 2018/02/06 1:01:51 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

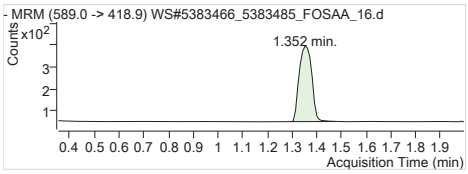
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1399 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1227 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 28291 | 0.94 | 1 µg/L | | |

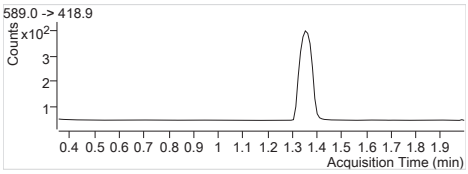
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1399 | 1.33 | - | 75.28 µg/L | - |
| D5-EtFOSAA | 1227 | 1.35 | - | 76.63 µg/L | - |
| 13C9-PFDA | 28289 | 0.94 | - | 2.41 µg/L | - |



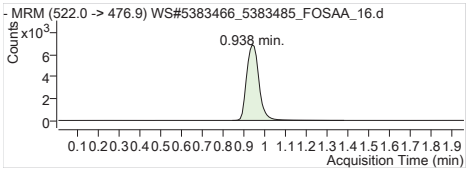



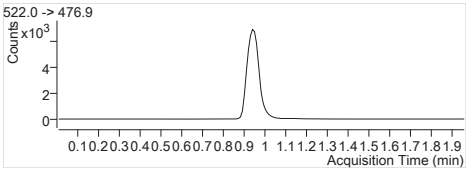

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Sample



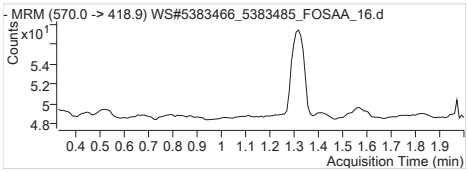



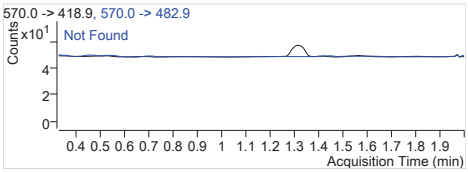

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Sample



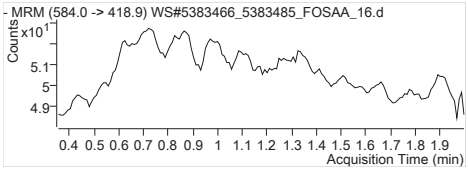



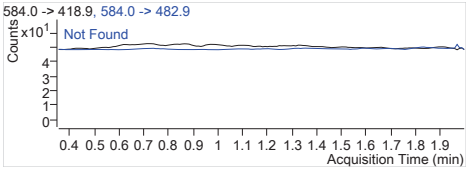

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.938 (0.958)
Concentration: 1 µg/L
Sample type: Sample



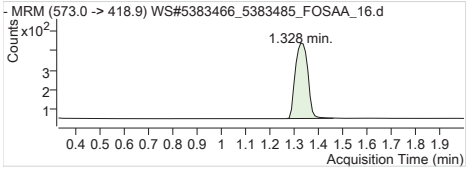



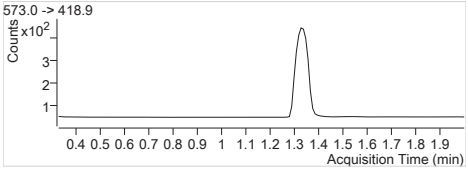

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.329)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



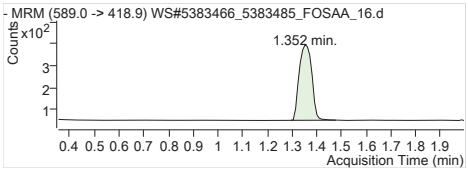



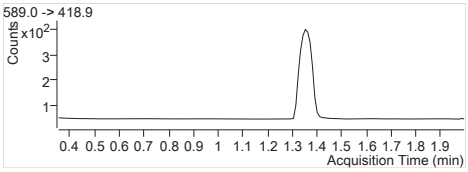

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.354)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



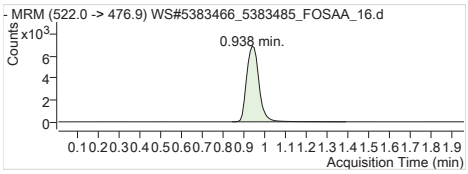



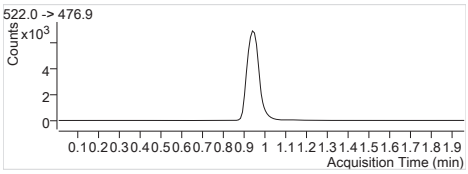

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 75.28 µg/L
Area ratio: 0.04945
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 76.63 µg/L |
| Area ratio: | 0.04337 |
| Sample type: | Sample |



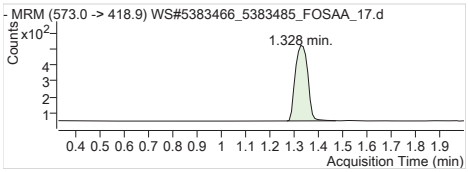

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.938 (0.958) |
| Calc. conc. | 2.41 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

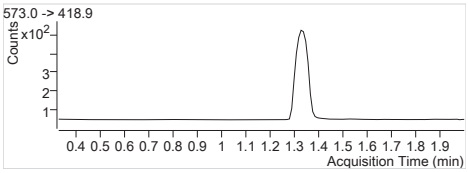
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA784-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_17.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B6 |
| **Acq. Date** | 2018/02/06 1:04:16 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

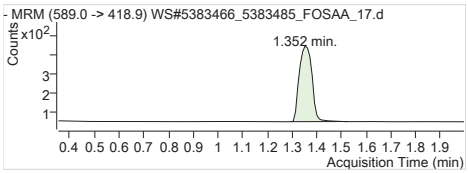
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1690 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1424 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 26587 | 0.95 | 1 µg/L | | |

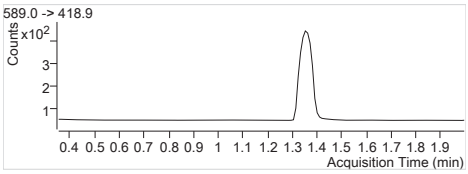
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1690 | 1.33 | - | 96.77 µg/L | - |
| D5-EtFOSAA | 1424 | 1.35 | - | 94.64 µg/L | - |
| 13C9-PFDA | 26622 | 0.95 | - | 2.27 µg/L | - |



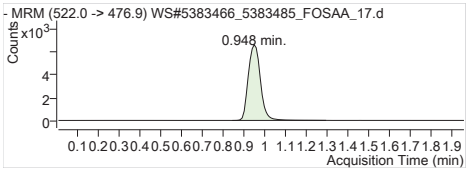



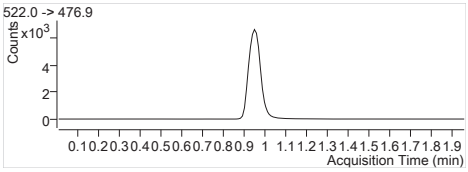

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Sample



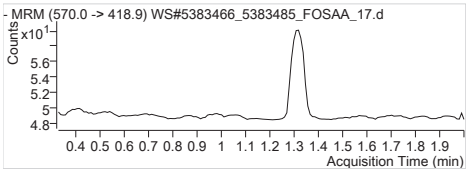



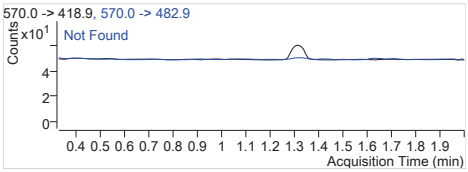

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Sample



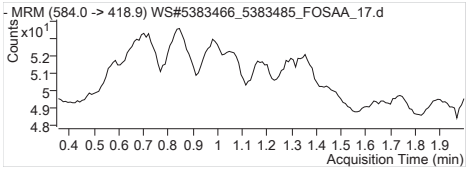



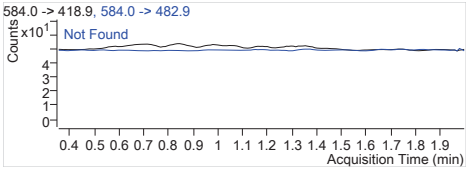

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.948 (0.958)
Concentration: 1 µg/L
Sample type: Sample



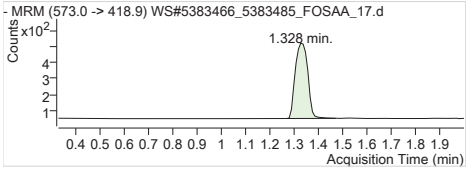



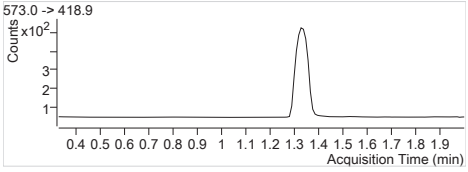

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.329)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



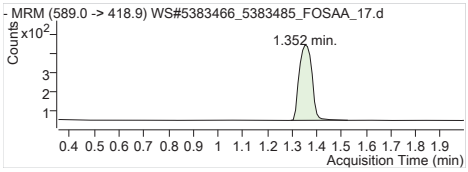



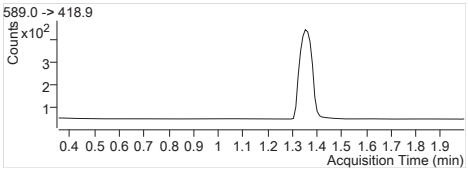

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.354)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



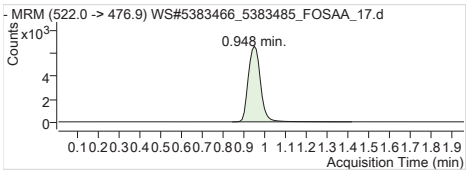



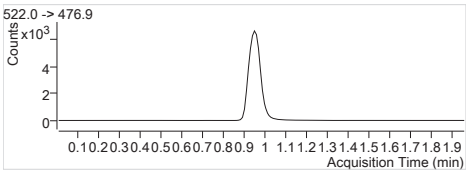

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 96.77 µg/L
Area ratio: 0.06356
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 94.64 µg/L |
| Area ratio: | 0.05356 |
| Sample type: | Sample |



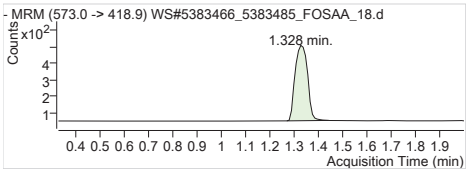

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.948 (0.958) |
| Calc. conc. | 2.27 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

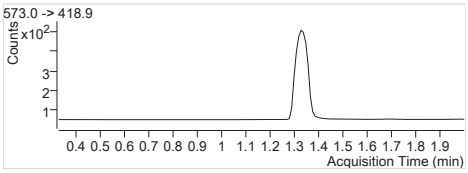
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA785-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_18.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B7 |
| **Acq. Date** | 2018/02/06 1:06:41 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

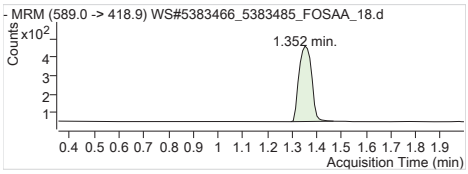
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1632 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1462 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 27993 | 0.93 | 1 µg/L | | |

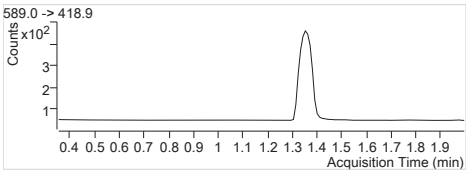
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1632 | 1.33 | - | 88.75 µg/L | - |
| D5-EtFOSAA | 1462 | 1.35 | - | 92.28 µg/L | - |
| 13C9-PFDA | 27990 | 0.93 | - | 2.38 µg/L | - |



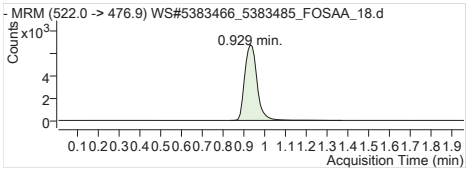



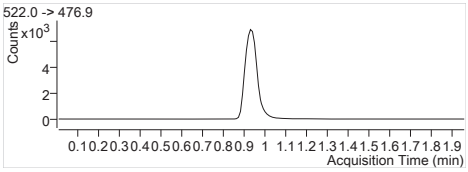

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Sample



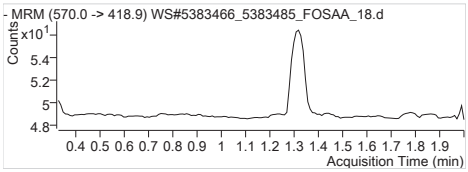



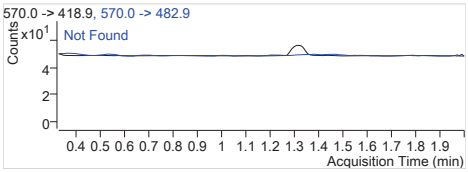

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Sample



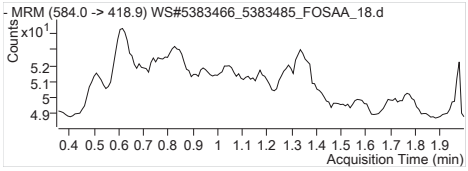



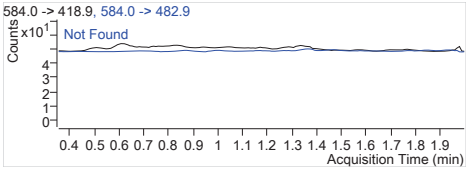

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.929 (0.958)
Concentration: 1 µg/L
Sample type: Sample



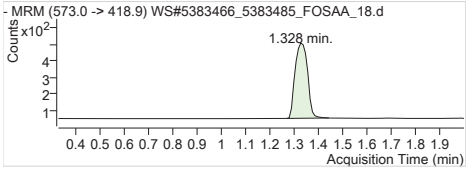



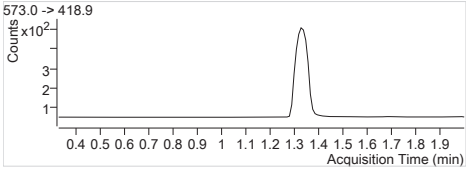

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.329)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



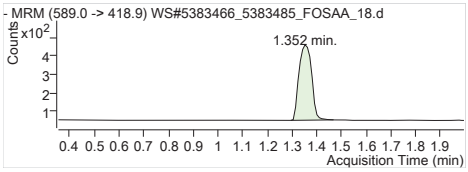



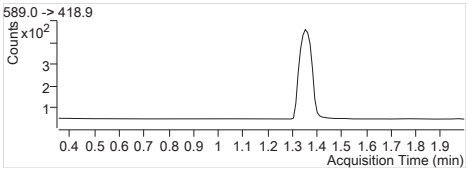

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.354)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



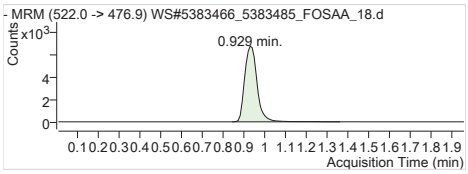



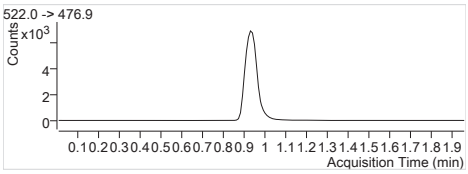

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 88.75 µg/L
Area ratio: 0.05830
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 92.28 µg/L |
| Area ratio: | 0.05223 |
| Sample type: | Sample |



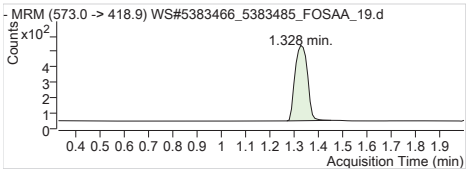

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.929 (0.958) |
| Calc. conc. | 2.38 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

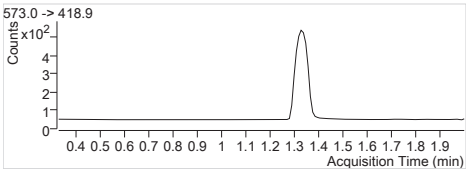
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA786-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_19.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B8 |
| **Acq. Date** | 2018/02/06 1:09:06 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

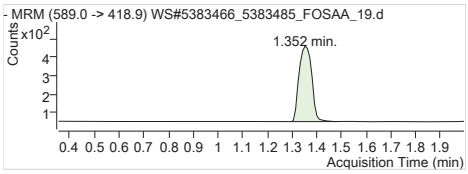
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1741 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1468 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 27456 | 0.93 | 1 µg/L | | |

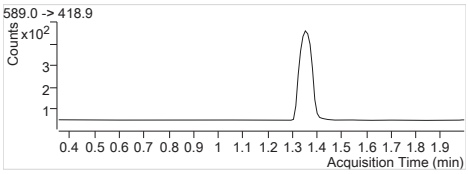
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1741 | 1.33 | - | 96.53 µg/L | - |
| D5-EtFOSAA | 1468 | 1.35 | - | 94.47 µg/L | - |
| 13C9-PFDA | 27719 | 0.93 | - | 2.36 µg/L | - |



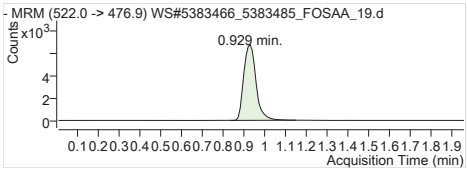



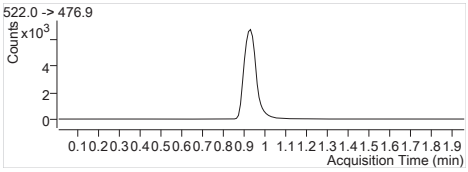

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Sample



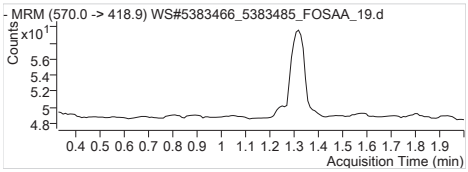



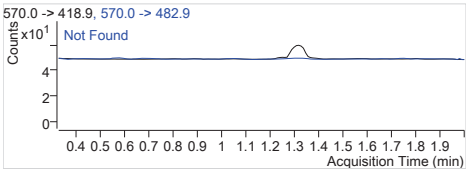

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Sample



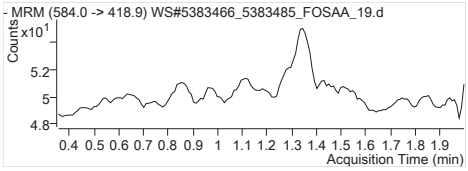



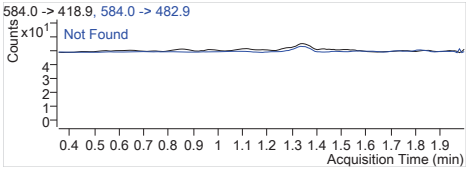

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.929 (0.958)
Concentration: 1 µg/L
Sample type: Sample



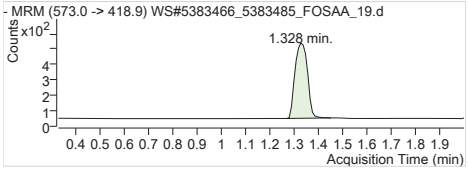



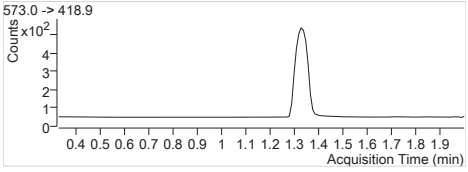

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.329)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



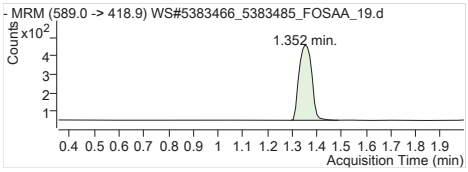



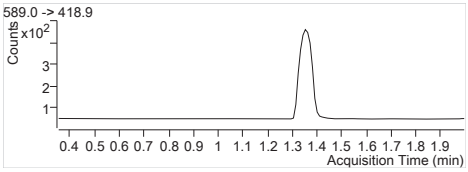

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.354)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



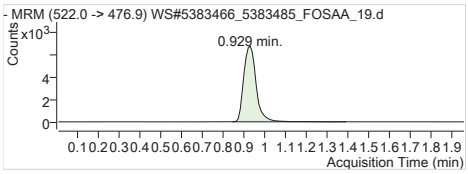



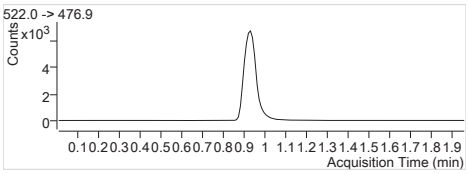

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 96.53 µg/L
Area ratio: 0.06341
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 94.47 µg/L |
| Area ratio: | 0.05347 |
| Sample type: | Sample |



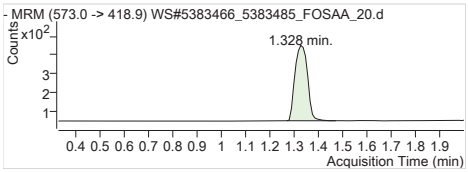

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.929 (0.958) |
| Calc. conc. | 2.36 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

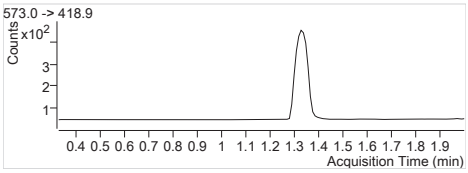
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA788-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_20.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B9 |
| **Acq. Date** | 2018/02/06 1:11:31 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

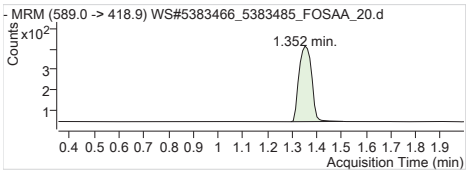
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1434 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1287 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 27333 | 0.93 | 1 µg/L | | |

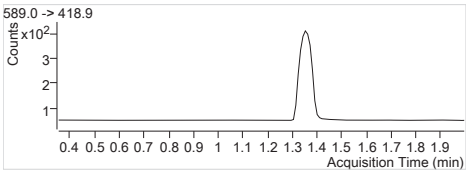
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1434 | 1.33 | - | 79.87 µg/L | - |
| D5-EtFOSAA | 1287 | 1.35 | - | 83.20 µg/L | - |
| 13C9-PFDA | 27328 | 0.93 | - | 2.33 µg/L | - |



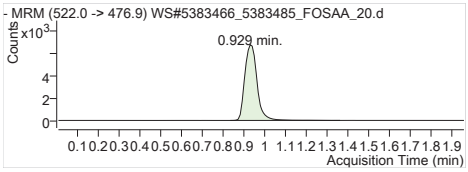



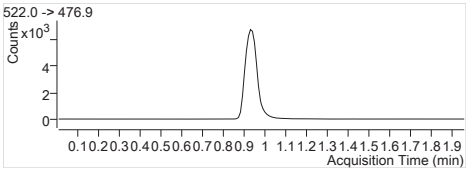

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Sample



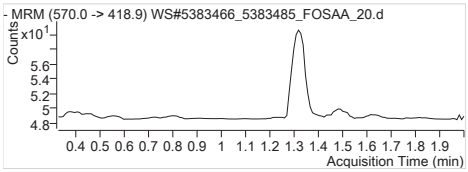



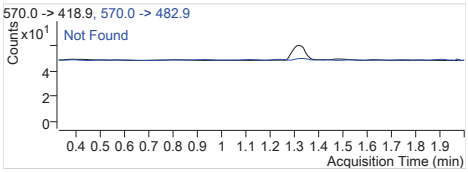

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Sample



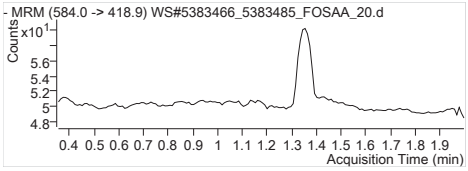



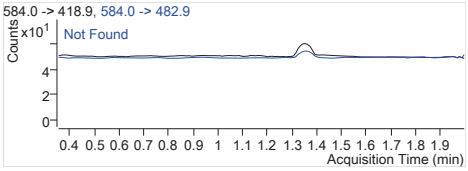

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.929 (0.958)
Concentration: 1 µg/L
Sample type: Sample



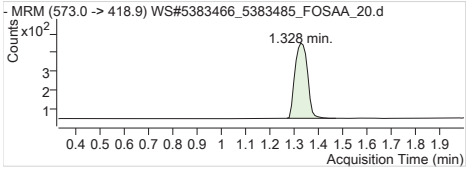



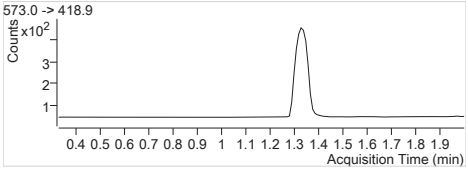

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.329)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



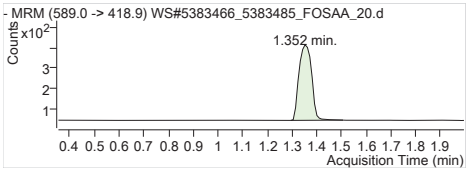



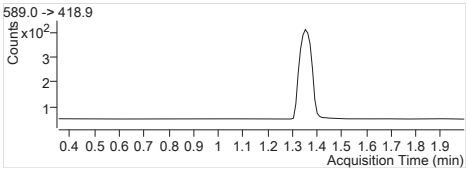

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.354)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



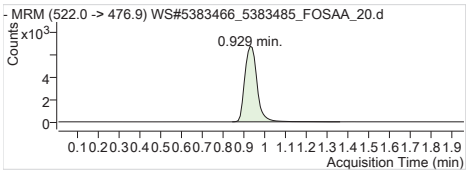



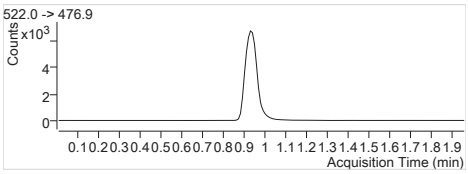

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 79.87 µg/L
Area ratio: 0.05246
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 83.20 µg/L |
| Area ratio: | 0.04709 |
| Sample type: | Sample |



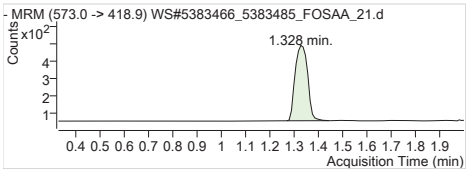

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.929 (0.958) |
| Calc. conc. | 2.33 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

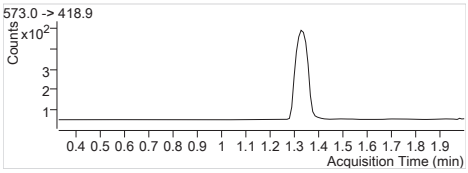
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA789-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_21.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-C1 |
| **Acq. Date** | 2018/02/06 1:13:56 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

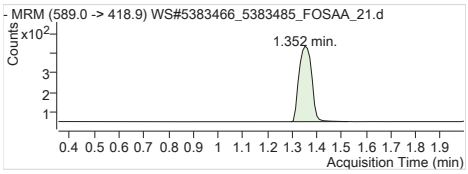
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1577 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1389 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 28436 | 0.95 | 1 µg/L | | |

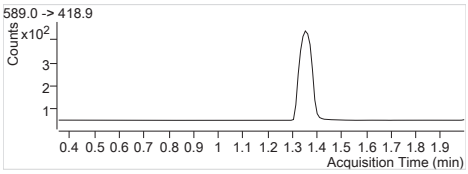
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 84 | 1.32 | - | 0.00 µg/L | - |
| EtFOSAA 1 | 61 | 1.35 | - | 0.01 µg/L | - |
| D3-MeFOSAA | 1577 | 1.33 | - | 84.42 µg/L | - |
| D5-EtFOSAA | 1389 | 1.35 | - | 86.31 µg/L | - |
| 13C9-PFDA | 28684 | 0.95 | - | 2.44 µg/L | - |



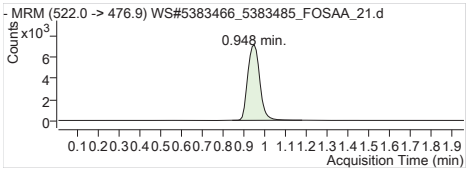



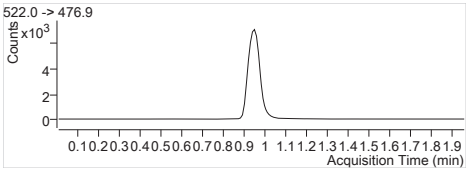

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Sample



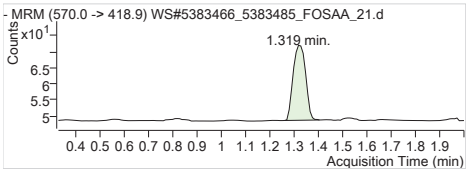



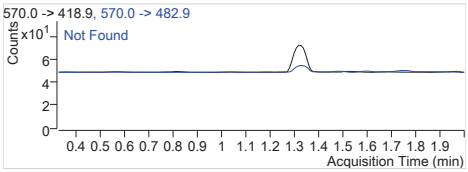

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Sample



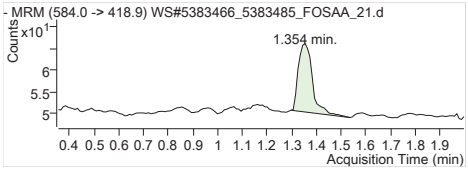



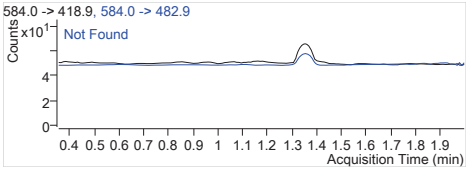

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.948 (0.958)
Concentration: 1 µg/L
Sample type: Sample



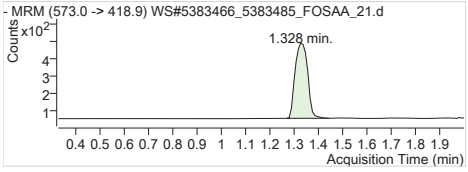



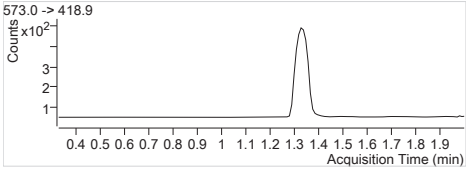

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.319 (1.329)
Calc. conc. 0.00 µg/L
Area ratio: 0.05327
Sample type: Sample



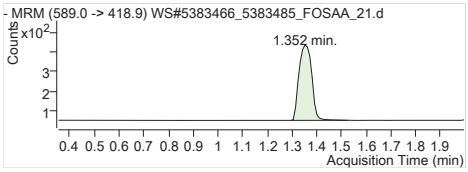



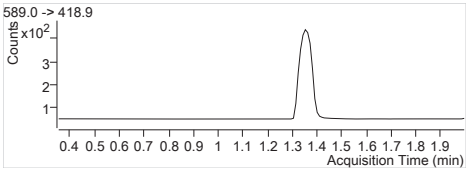

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 0.01 µg/L
Area ratio: 0.04392
Sample type: Sample



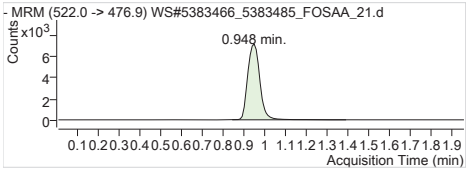



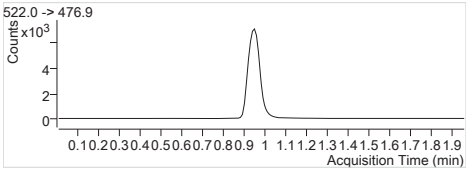

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 84.42 µg/L
Area ratio: 0.05546
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 86.31 µg/L |
| Area ratio: | 0.04885 |
| Sample type: | Sample |



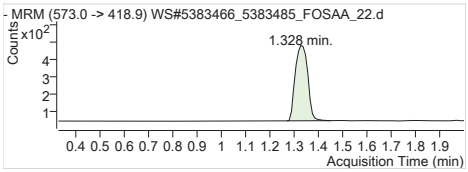

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.948 (0.958) |
| Calc. conc. | 2.44 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

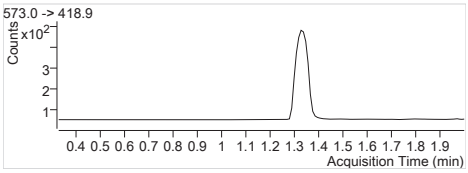
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA790-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_22.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-C2 |
| **Acq. Date** | 2018/02/06 1:16:20 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

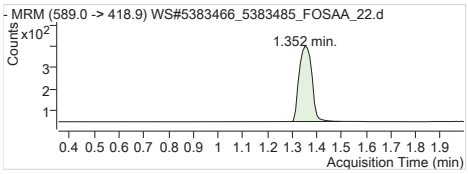
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1543 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1257 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 29125 | 0.94 | 1 µg/L | | |

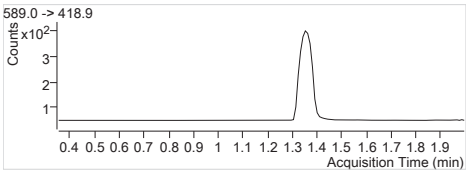
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1543 | 1.33 | - | 80.65 µg/L | - |
| D5-EtFOSAA | 1257 | 1.35 | - | 76.26 µg/L | - |
| 13C9-PFDA | 29109 | 0.94 | - | 2.48 µg/L | - |



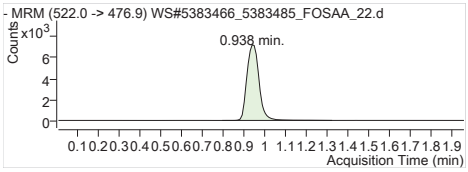



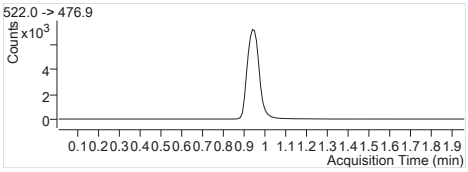

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Sample



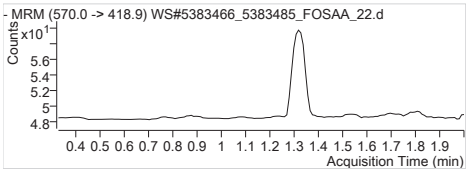



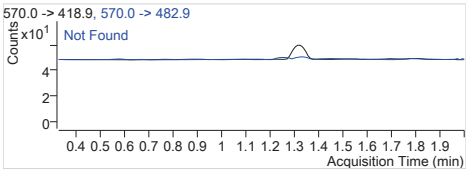

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Sample



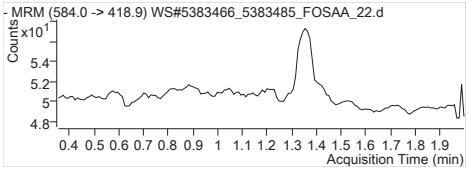



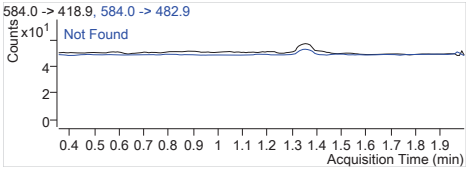

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.938 (0.958)
Concentration: 1 µg/L
Sample type: Sample



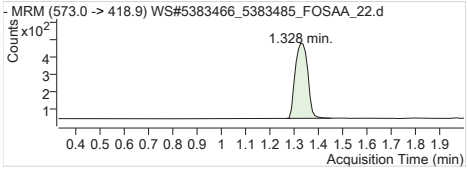



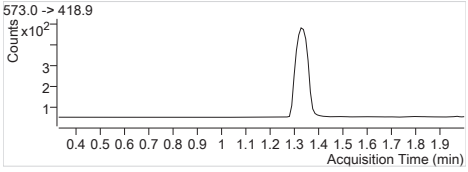

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.329)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



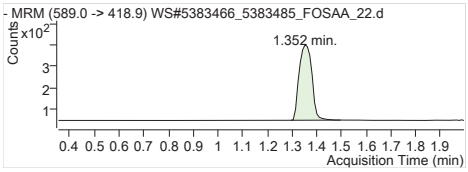



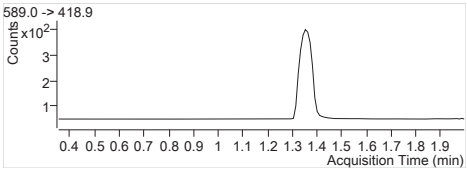

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.354)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



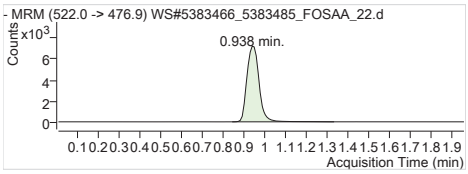



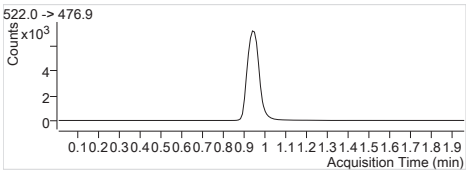

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 80.65 µg/L
Area ratio: 0.05298
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 76.26 µg/L |
| Area ratio: | 0.04316 |
| Sample type: | Sample |



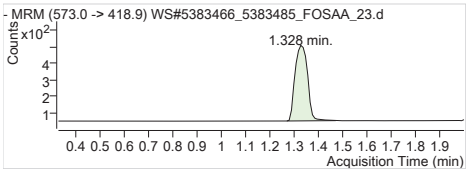

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.938 (0.958) |
| Calc. conc. | 2.48 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

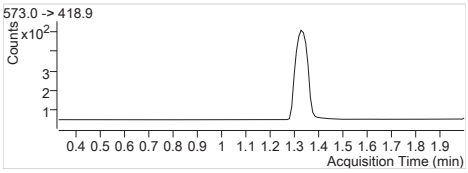
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA791-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_23.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-C3 |
| **Acq. Date** | 2018/02/06 1:18:44 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

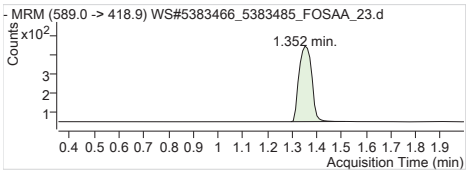
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1641 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1416 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 29147 | 0.94 | 1 µg/L | | |

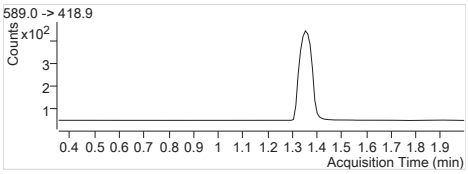
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 99 | 1.33 | - | 0.00 µg/L | - |
| EtFOSAA 1 | 76 | 1.35 | - | 0.01 µg/L | - |
| D3-MeFOSAA | 1641 | 1.33 | - | 85.71 µg/L | - |
| D5-EtFOSAA | 1416 | 1.35 | - | 85.84 µg/L | - |
| 13C9-PFDA | 29148 | 0.94 | - | 2.48 µg/L | - |



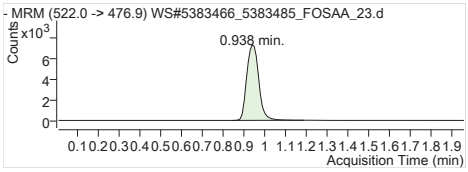



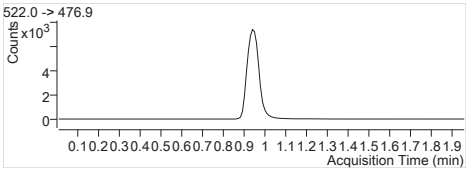

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Sample



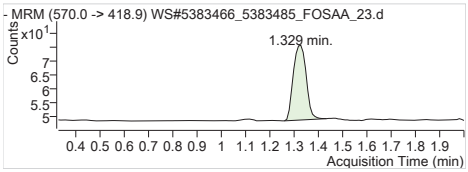



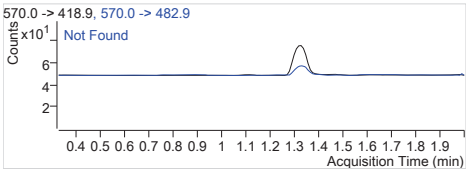

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Sample



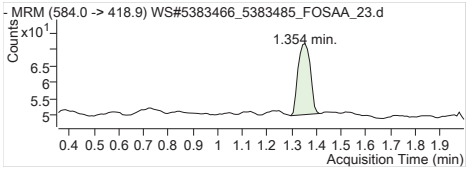



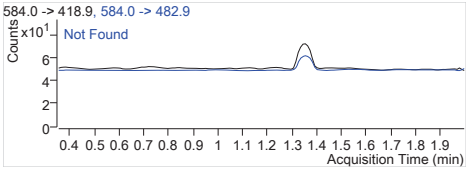

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.938 (0.958)
Concentration: 1 µg/L
Sample type: Sample



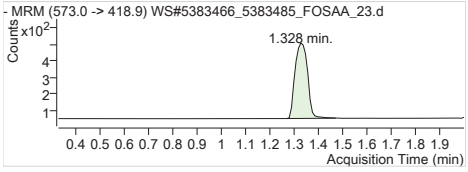



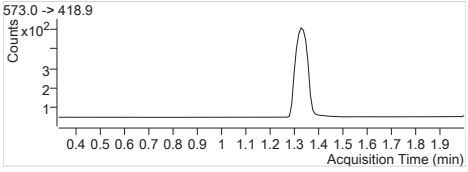

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 0.00 µg/L
Area ratio: 0.06033
Sample type: Sample



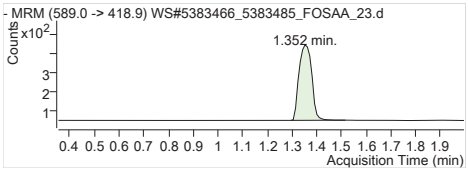



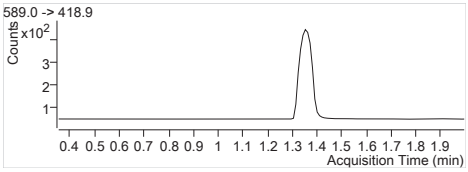

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 0.01 µg/L
Area ratio: 0.05367
Sample type: Sample



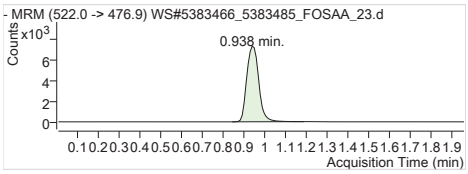



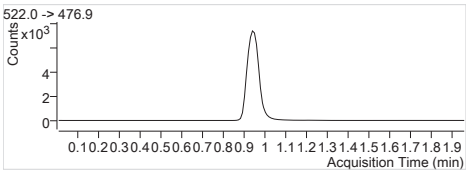

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 85.71 µg/L
Area ratio: 0.05630
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 85.84 µg/L |
| Area ratio: | 0.04858 |
| Sample type: | Sample |



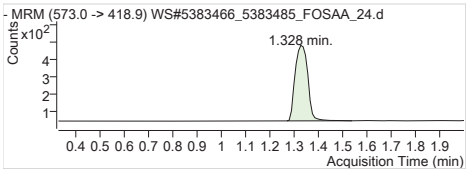

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.938 (0.958) |
| Calc. conc. | 2.48 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

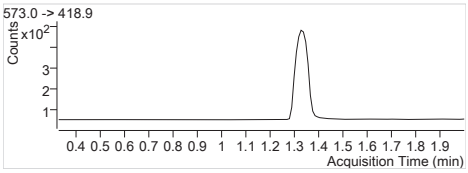
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:FZA792-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_24.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-C4 |
| **Acq. Date** | 2018/02/06 1:21:07 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

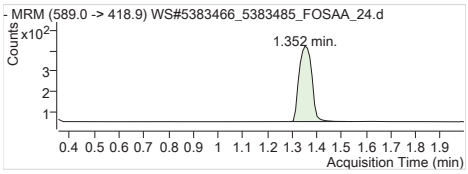
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1576 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1343 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 29613 | 0.95 | 1 µg/L | | |

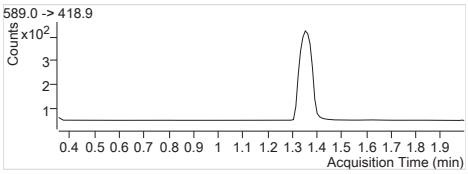
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1576 | 1.33 | - | 81.02 µg/L | - |
| D5-EtFOSAA | 1343 | 1.35 | - | 80.13 µg/L | - |
| 13C9-PFDA | 29407 | 0.95 | - | 2.50 µg/L | - |



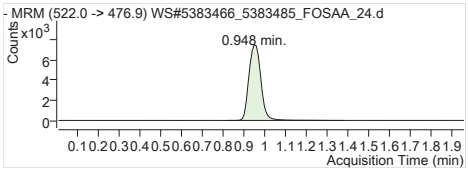



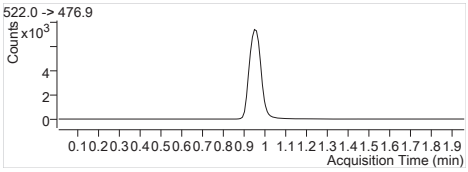

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Sample



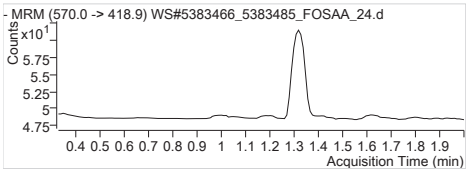



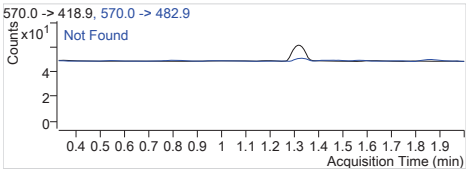

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Sample



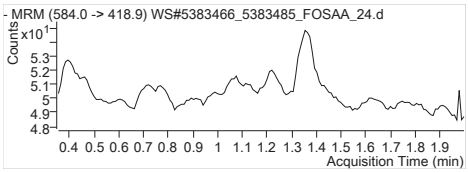



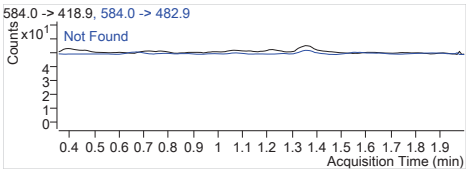

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.948 (0.958)
Concentration: 1 µg/L
Sample type: Sample



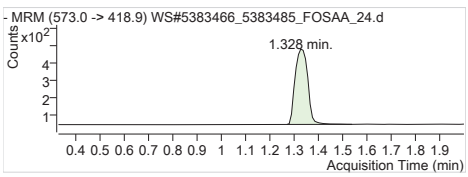



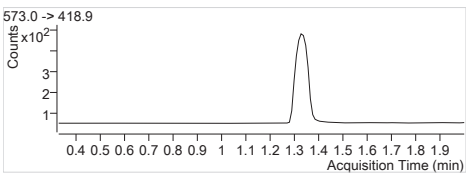

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.329)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



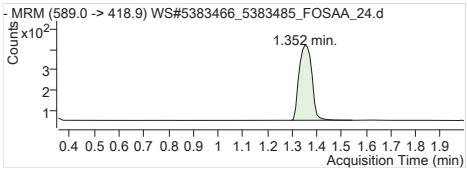



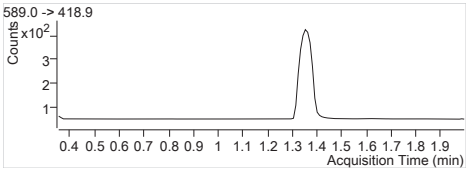

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.354)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



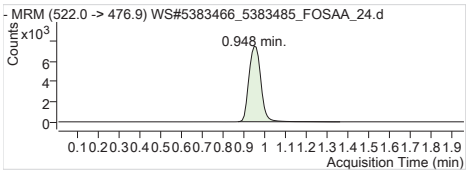



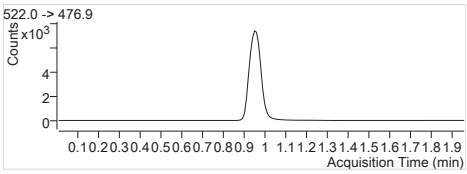

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 81.02 µg/L
Area ratio: 0.05322
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 80.13 µg/L |
| Area ratio: | 0.04535 |
| Sample type: | Sample |



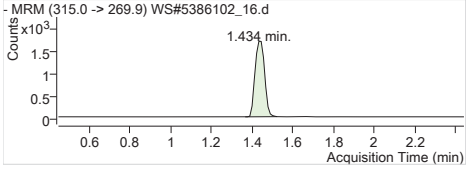

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.948 (0.958) |
| Calc. conc. | 2.50 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

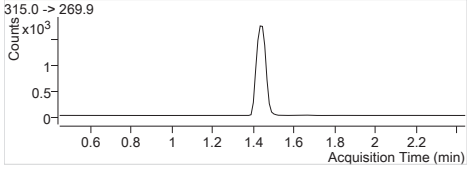
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:FZA801-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_16.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-E2 |
| **Acq. Date** | 2018/02/08 4:20:52 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

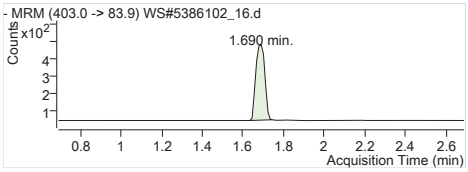
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5549 | 1.43 | 1 µg/L | | |
| MPFHxS | 1346 | 1.69 | 1 µg/L | | |
| MPFHpA | 7367 | 1.70 | 1 µg/L | | |
| MPFOA | 7219 | 1.88 | 1 µg/L | | |
| MPFOS | 1406 | 1.98 | 1 µg/L | | |
| MPFNA | 7154 | 2.02 | 1 µg/L | | |
| MPFDA | 5759 | 2.14 | 1 µg/L | | |
| MPFUnA | 6004 | 2.23 | 1 µg/L | | |
| MPFDoA | 8487 | 2.32 | 1 µg/L | | |
| MPFTeDA | 9192 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 31765 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 42246 | 2.13 | 1 µg/L | | |

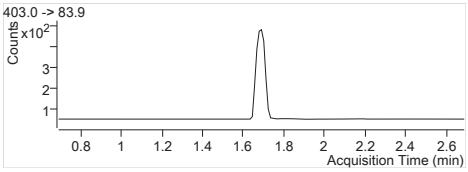
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 5549 | 1.43 | - | 89.89 µg/L | - |
| 18O2-PFHxS | 1346 | 1.69 | - | 85.23 µg/L | - |
| 13C4-PFHpA | 7367 | 1.70 | - | 91.14 µg/L | - |
| 13C4-PFOA | 7219 | 1.88 | - | 84.65 µg/L | - |
| 13C4-PFOS | 1406 | 1.98 | - | 73.10 µg/L | - |
| 13C5-PFNA | 7153 | 2.02 | - | 84.04 µg/L | - |
| 13C2-PFDA | 5624 | 2.14 | - | 78.21 µg/L | - |
| 13C2-PFUnA | 6004 | 2.23 | - | 70.41 µg/L | - |
| 13C2-PFDoA | 8487 | 2.32 | - | 71.69 µg/L | - |
| 13C2-PFTeDA | 9287 | 2.47 | - | 68.77 µg/L | - |
| 13C6-PFHxA | 31765 | 1.43 | - | 2.40 µg/L | - |
| 13C9-PFDA | 42246 | 2.13 | - | 2.50 µg/L | - |



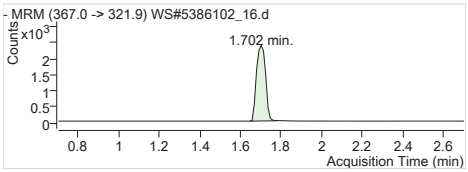



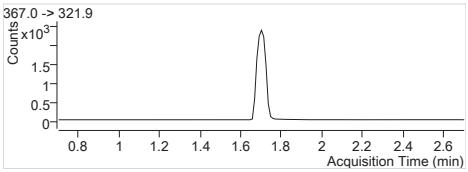

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.445)
Concentration: 1 µg/L
Sample type: Sample



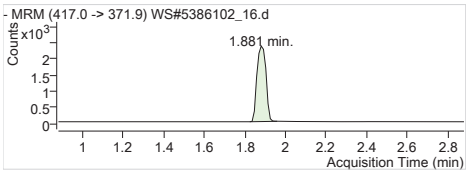



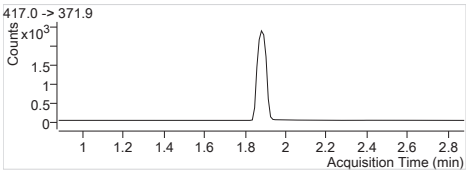

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



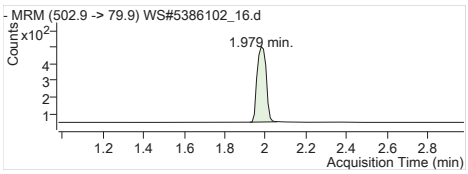



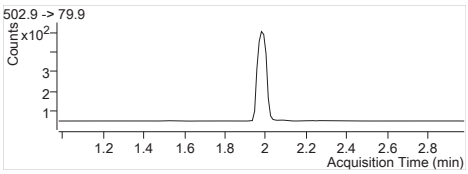

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: Sample



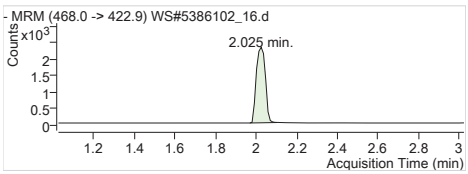



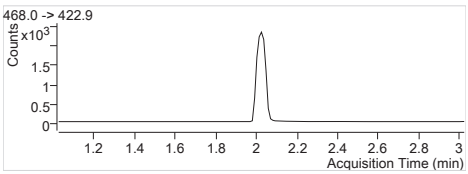

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



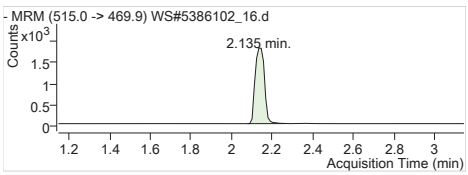



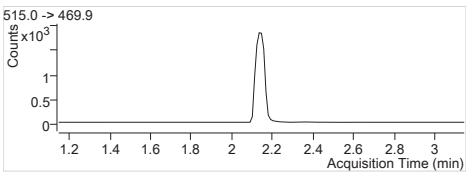

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



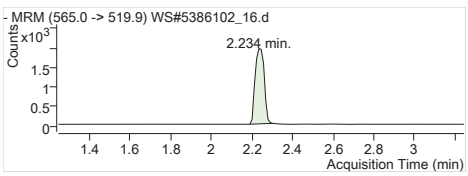



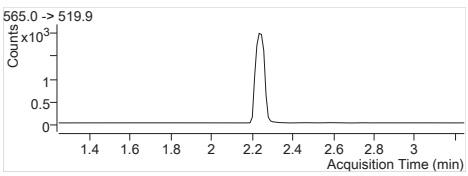

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: Sample



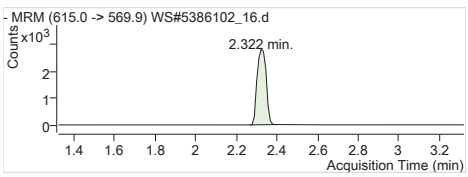



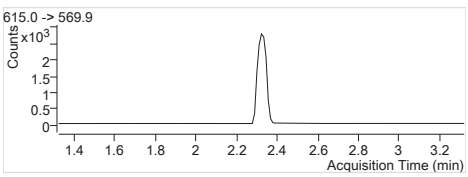

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: Sample



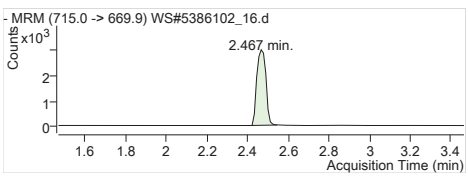



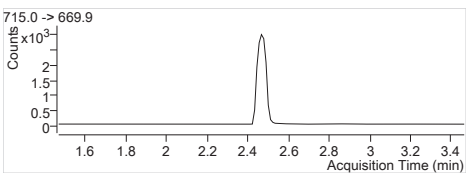

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.245)
Concentration: 1 µg/L
Sample type: Sample



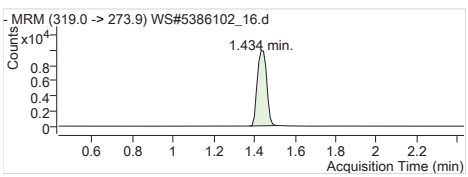



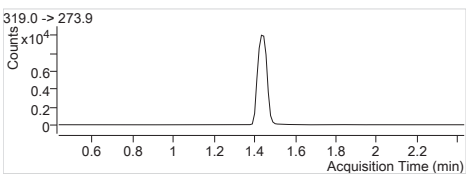

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



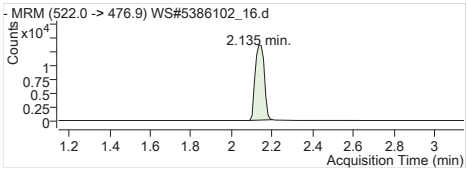



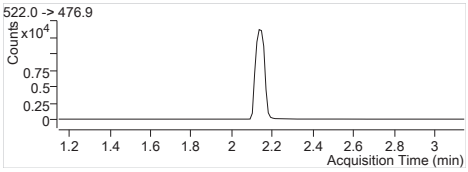

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



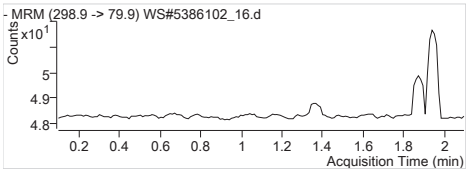



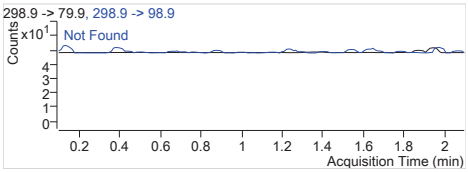

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



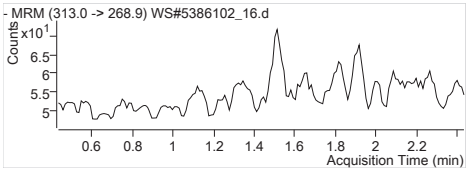



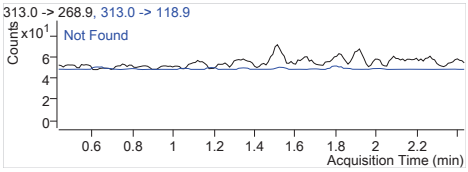

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: Sample



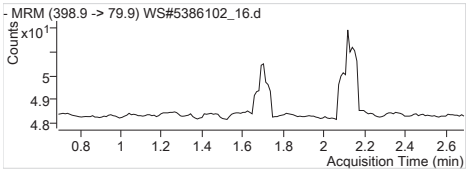



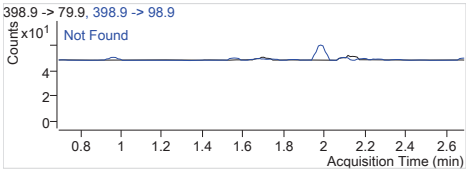

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.098)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



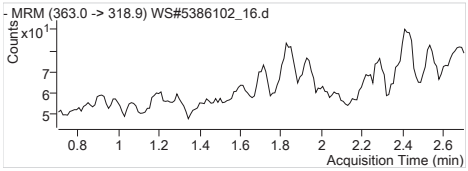



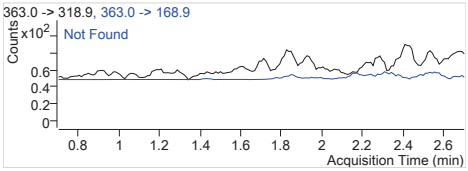

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



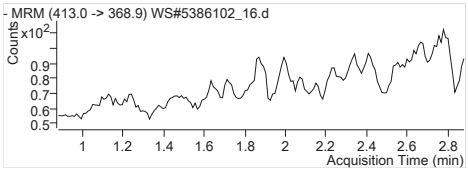



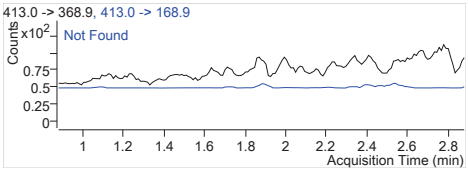

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



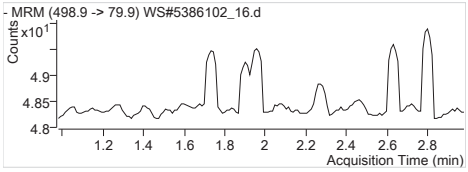



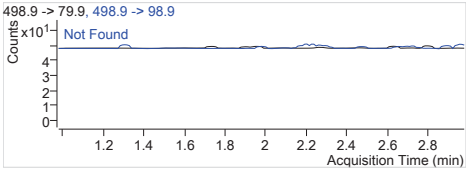

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.702)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



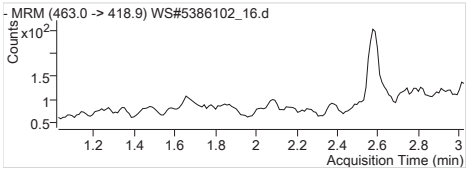



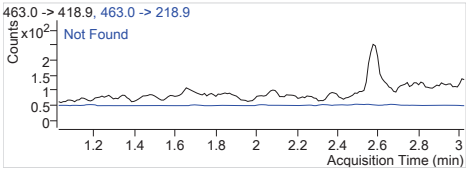

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



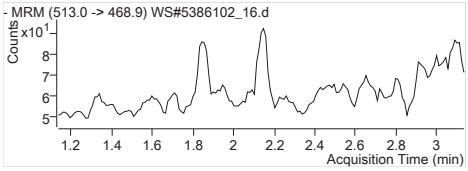



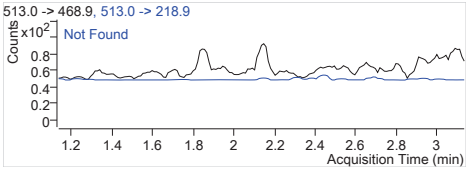

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



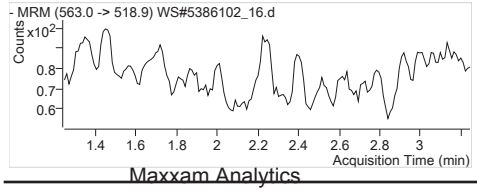



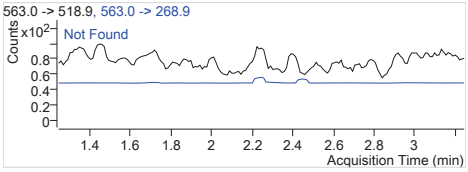

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.025)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



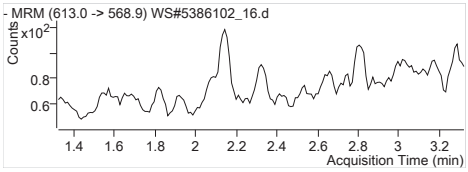



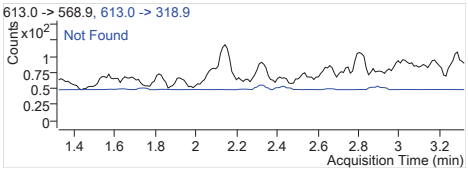

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



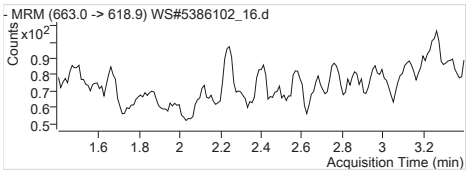



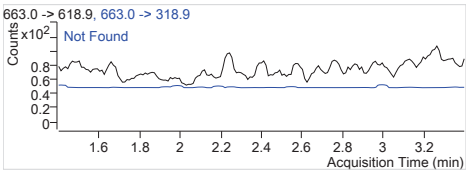

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



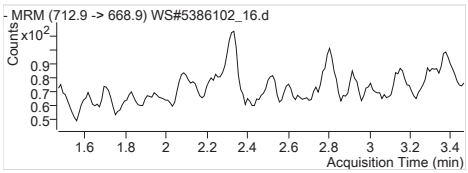



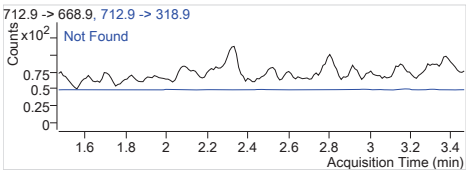

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



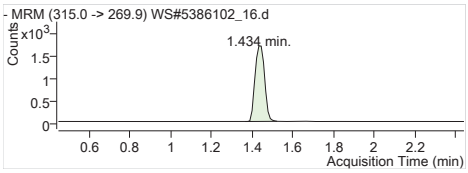



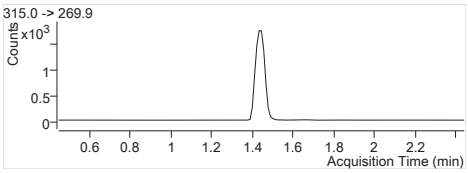

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



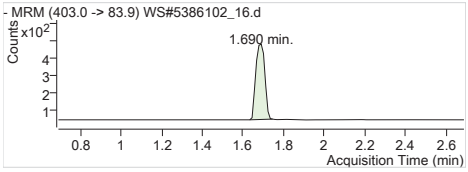



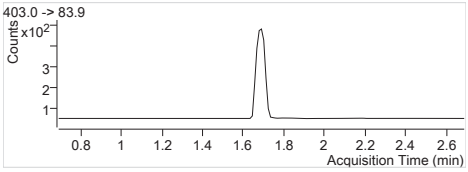

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



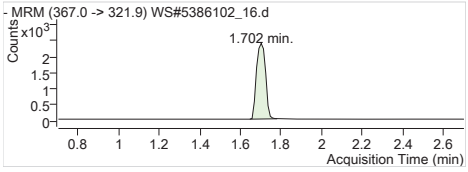



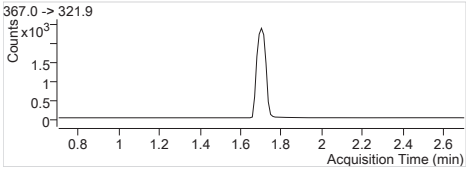

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 89.89 µg/L
Area ratio: 0.17469
Sample type: Sample



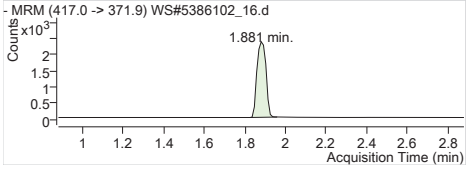



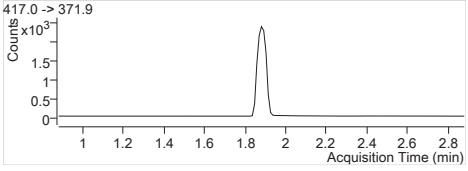

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 85.23 µg/L
Area ratio: 0.04237
Sample type: Sample



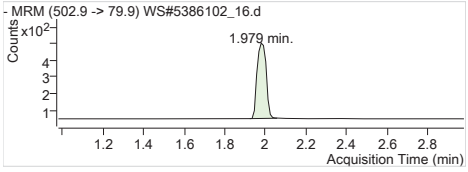



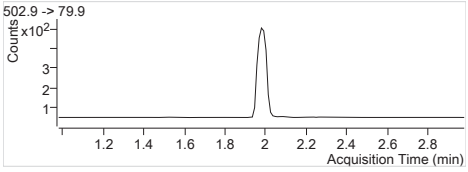

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 91.14 µg/L
Area ratio: 0.23192
Sample type: Sample



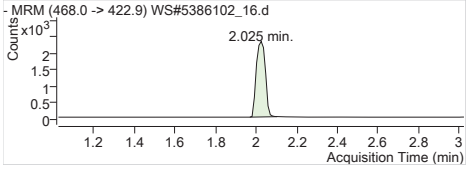



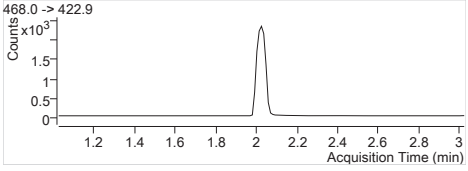

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 84.65 µg/L
Area ratio: 0.22726
Sample type: Sample



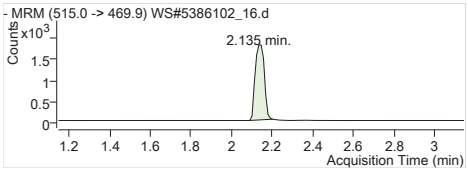



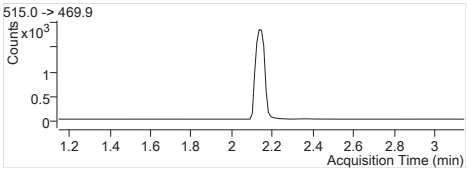

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 73.10 µg/L
Area ratio: 0.04426
Sample type: Sample



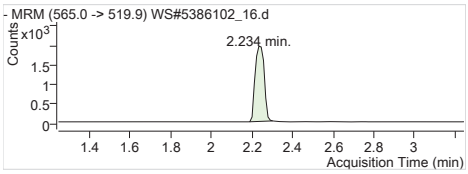



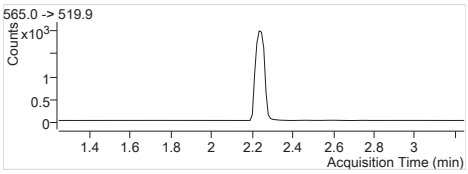

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 84.04 µg/L
Area ratio: 0.22518
Sample type: Sample



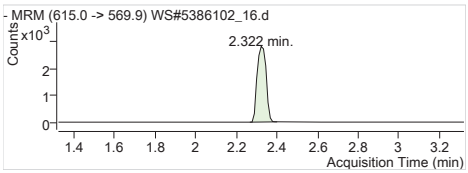



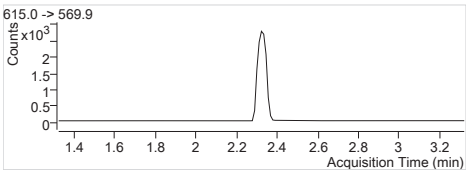

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 78.21 µg/L
Area ratio: 0.13313
Sample type: Sample



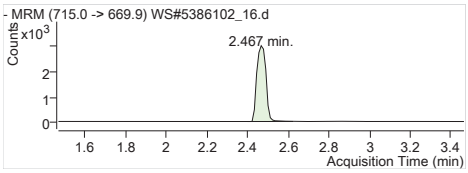



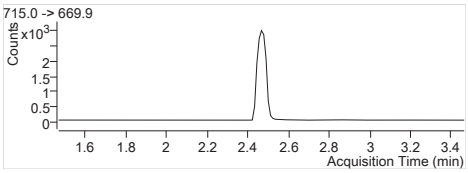

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.245)
Calc. conc. 70.41 µg/L
Area ratio: 0.14212
Sample type: Sample



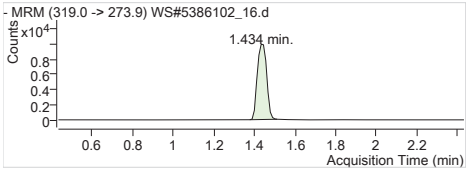



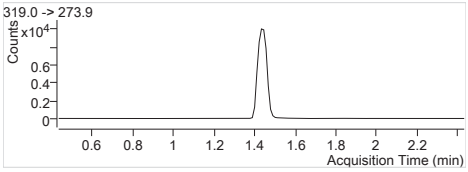

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 71.69 µg/L
Area ratio: 0.20089
Sample type: Sample



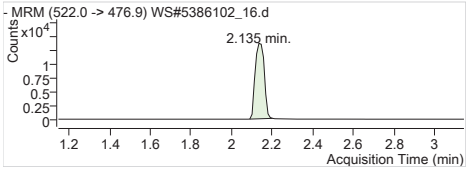



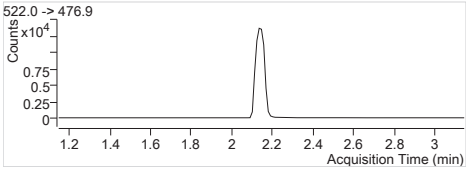

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 68.77 µg/L
Area ratio: 0.21983
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.40 µg/L
Area ratio: 0
Sample type: Sample



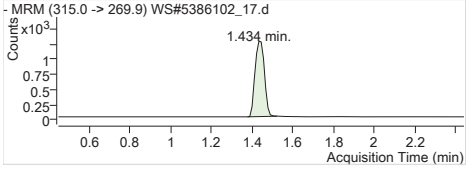

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 2.50 µg/L
Area ratio: 0
Sample type: Sample

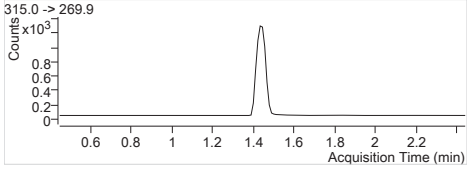
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:FZA802-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_17.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.033 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-E3 |
| **Acq. Date** | 2018/02/08 4:25:48 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | Reanalyzed due to low ext IS recovery | | |

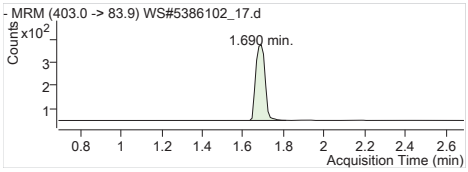
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 4001 | 1.43 | 1 µg/L | | |
| MPFHxS | 1048 | 1.69 | 1 µg/L | | |
| MPFHpA | 5002 | 1.70 | 1 µg/L | | |
| MPFOA | 2831 | 1.88 | 1 µg/L | | |
| MPFOS | 773 | 1.98 | 1 µg/L | | |
| MPFNA | 1414 | 2.02 | 1 µg/L | | |
| MPFDA | 3621 | 2.15 | 1 µg/L | | |
| MPFUnA | 4356 | 2.25 | 1 µg/L | | |
| MPFDoA | 5481 | 2.32 | 1 µg/L | | |
| MPFTeDA | 5160 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 41475 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 49869 | 2.15 | 1 µg/L | | |

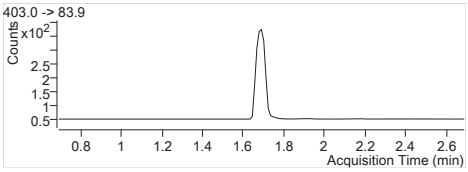
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 4001 | 1.43 | - | 49.64 µg/L | - |
| 18O2-PFHxS | 1048 | 1.69 | - | 50.82 µg/L | - |
| 13C4-PFHpA | 5002 | 1.70 | - | 47.39 µg/L | - |
| 13C4-PFOA | 2831 | 1.88 | - | 25.42 µg/L | - |
| 13C4-PFOS | 773 | 1.98 | - | 30.78 µg/L | - |
| 13C5-PFNA | 1415 | 2.02 | - | 12.73 µg/L | - |
| 13C2-PFDA | 3561 | 2.15 | - | 41.95 µg/L | - |
| 13C2-PFUnA | 4356 | 2.25 | - | 43.28 µg/L | - |
| 13C2-PFDoA | 5481 | 2.32 | - | 39.22 µg/L | - |
| 13C2-PFTeDA | 5292 | 2.47 | - | 33.20 µg/L | - |
| 13C6-PFHxA | 41475 | 1.43 | - | 4.31 µg/L | - |
| 13C9-PFDA | 49869 | 2.15 | - | 4.06 µg/L | - |



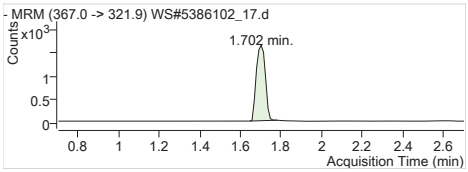



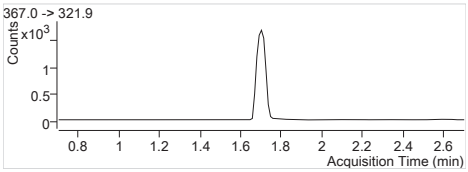

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.445) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



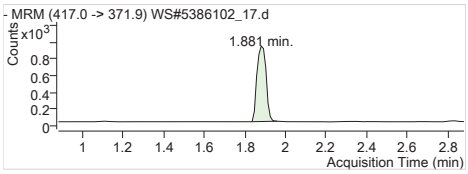



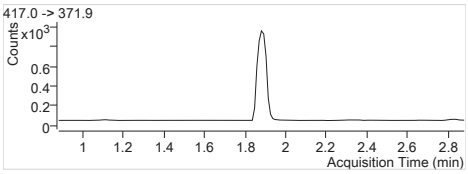

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



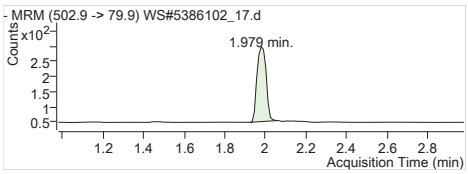



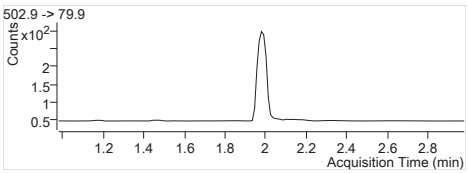

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: Sample



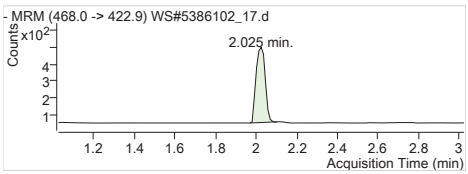



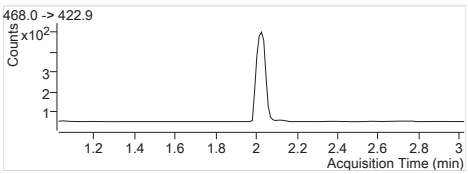

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



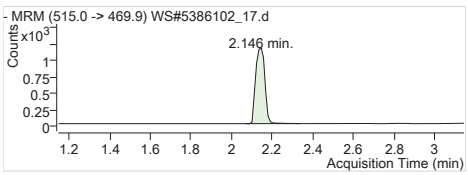



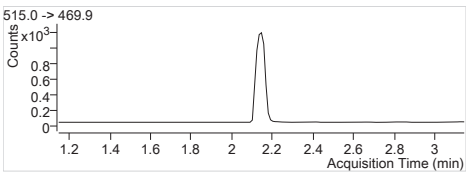

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



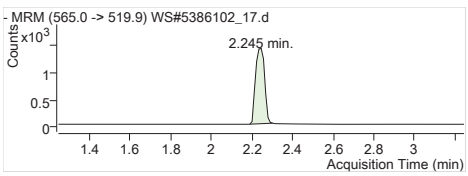



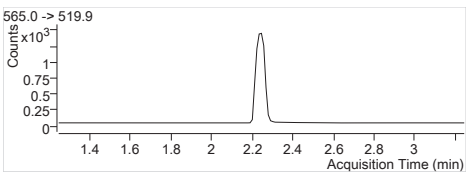

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: Sample



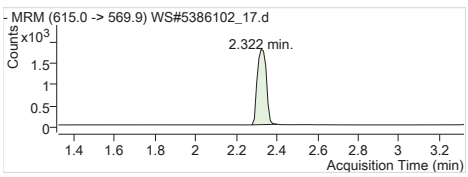



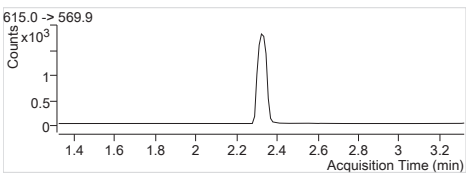

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



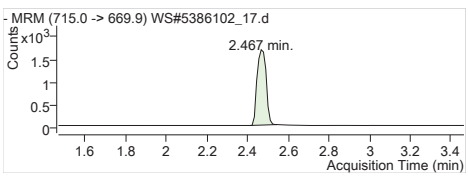



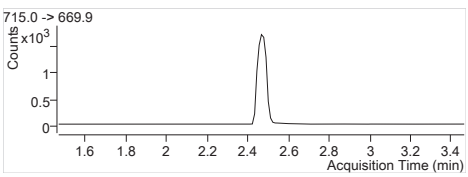

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



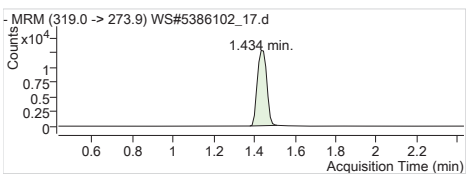



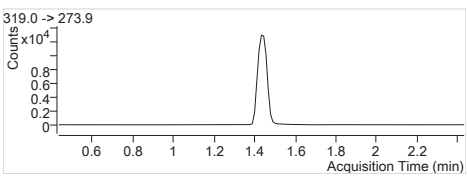

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



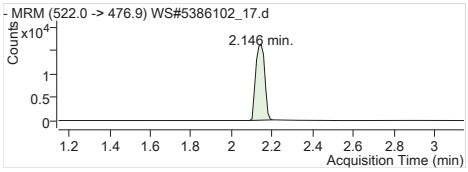



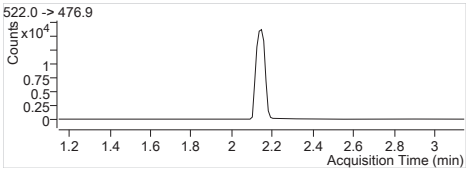

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



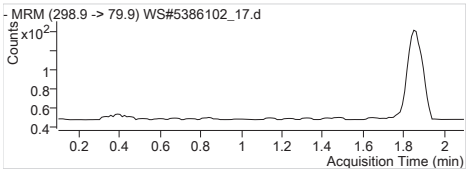



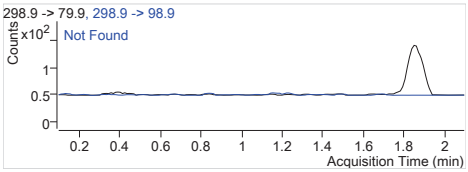

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



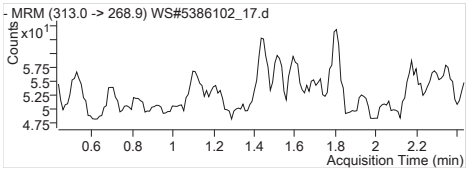



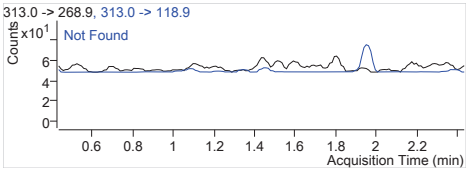

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



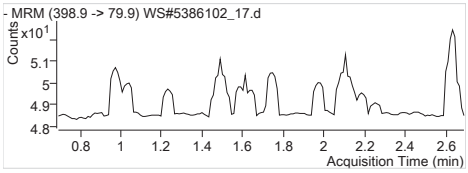



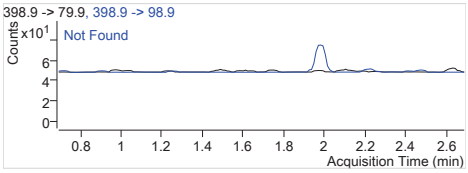

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.098)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



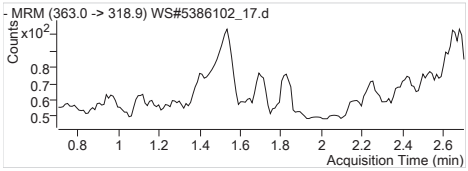



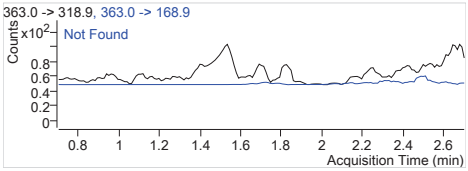

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



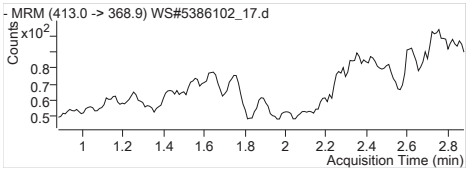



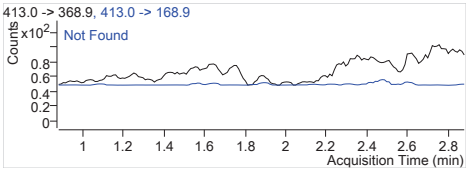

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



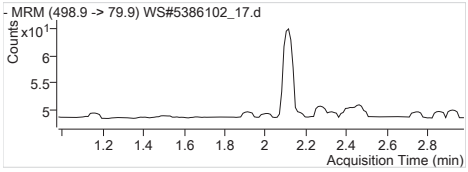



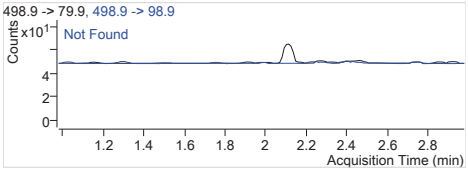

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.702)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



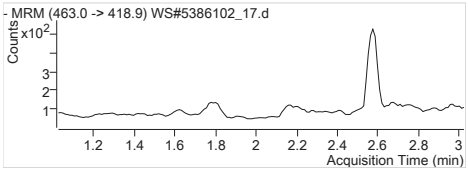



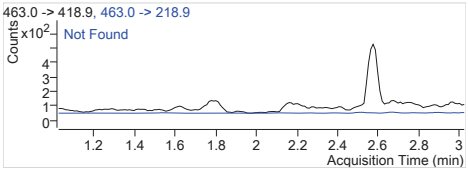

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



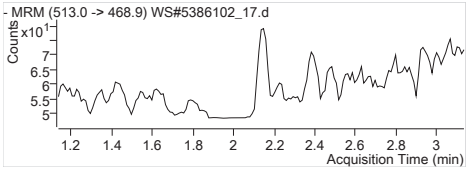



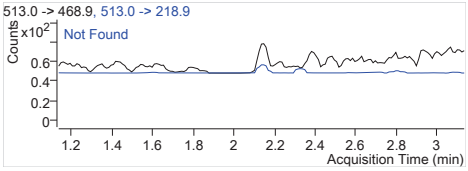

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



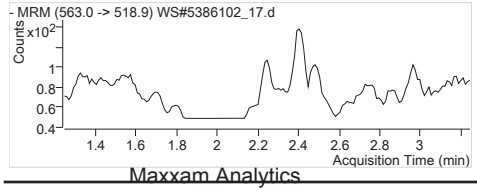



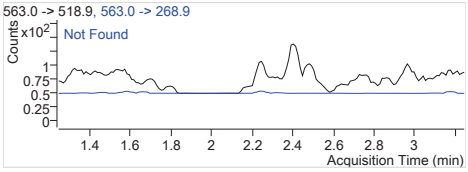

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.025)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



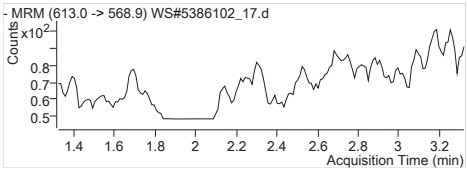



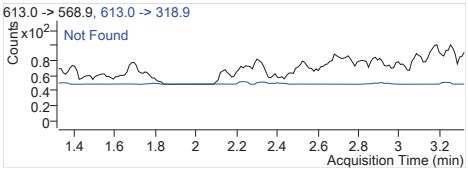

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



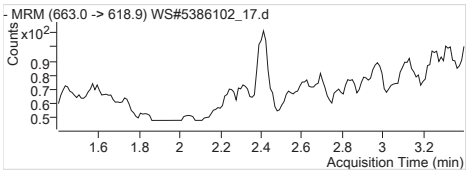



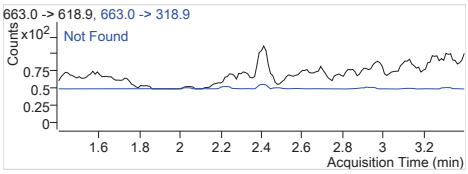

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



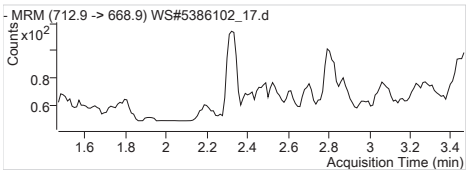



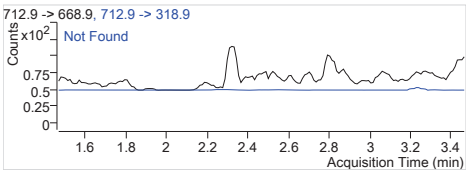

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



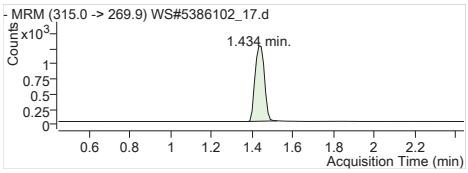



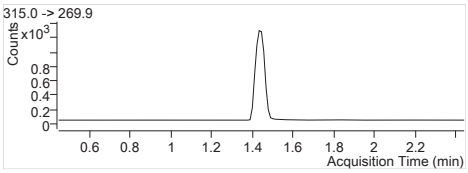

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



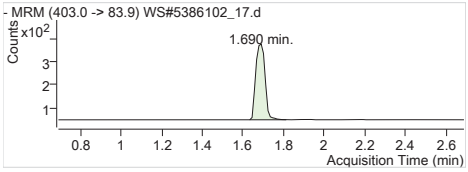



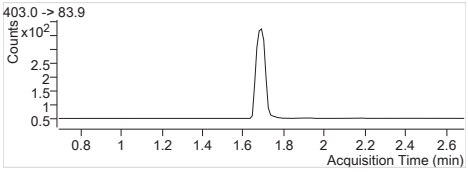

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



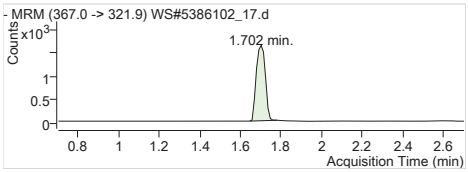



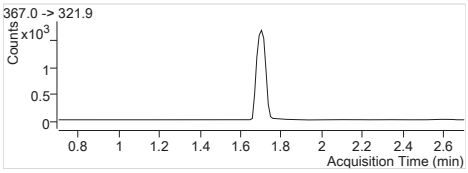

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 49.64 µg/L
Area ratio: 0.09647
Sample type: Sample



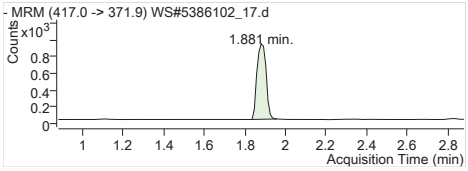



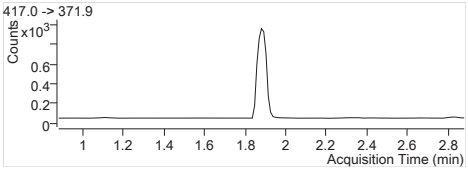

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 50.82 µg/L
Area ratio: 0.02527
Sample type: Sample



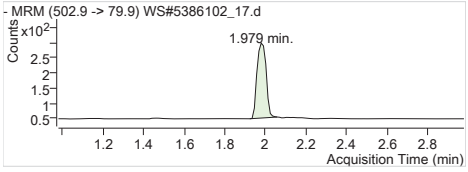



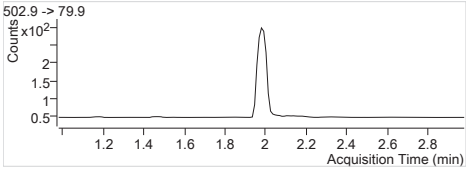

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 47.39 µg/L
Area ratio: 0.12060
Sample type: Sample



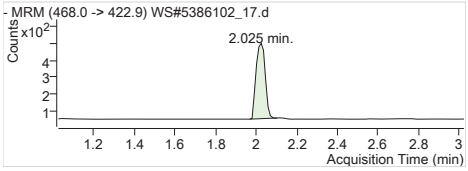



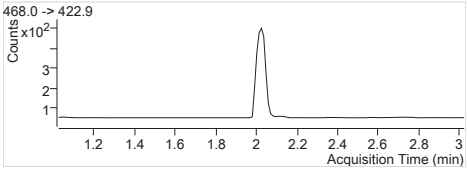

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 25.42 µg/L
Area ratio: 0.06826
Sample type: Sample



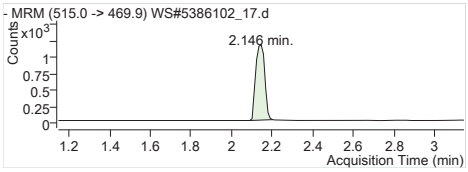



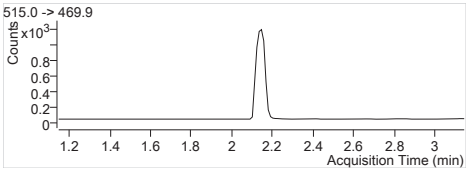

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 30.78 µg/L
Area ratio: 0.01864
Sample type: Sample



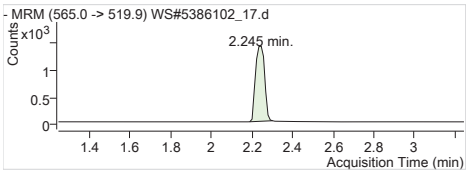



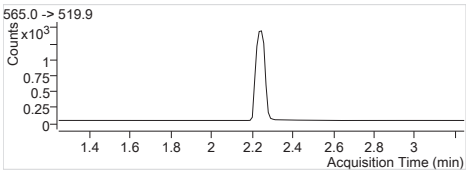

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 12.73 µg/L
Area ratio: 0.03412
Sample type: Sample



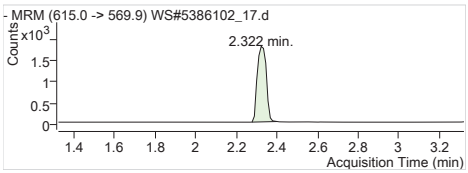



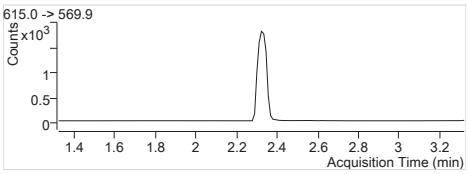

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 41.95 µg/L
Area ratio: 0.07141
Sample type: Sample



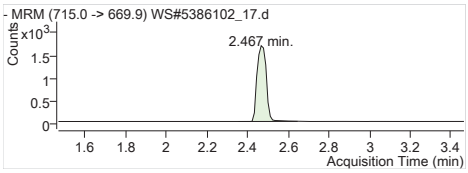



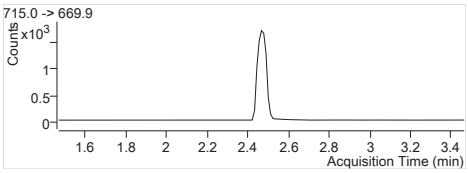

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 43.28 µg/L
Area ratio: 0.08735
Sample type: Sample



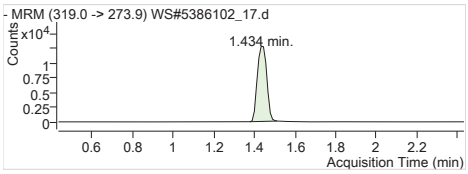



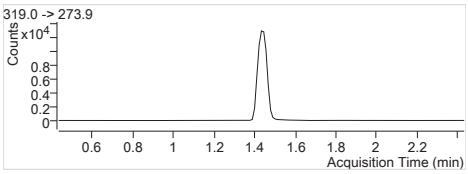

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 39.22 µg/L
Area ratio: 0.10991
Sample type: Sample



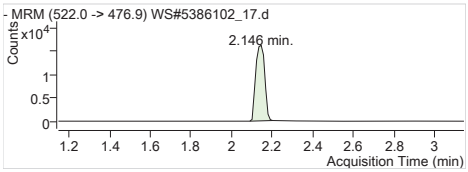



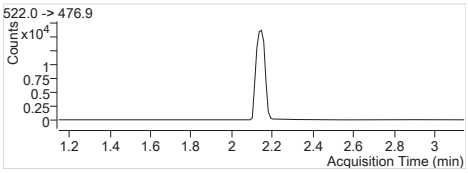

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 33.20 µg/L
Area ratio: 0.10612
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 4.31 µg/L
Area ratio: 0
Sample type: Sample



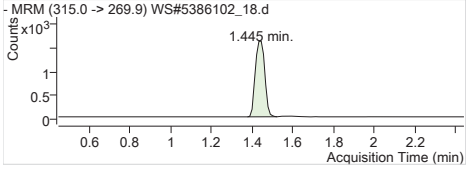

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 4.06 µg/L
Area ratio: 0
Sample type: Sample

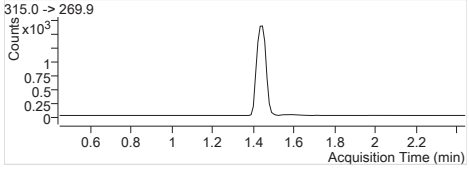
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:FZA803-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_18.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-E4 |
| **Acq. Date** | 2018/02/08 4:30:44 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

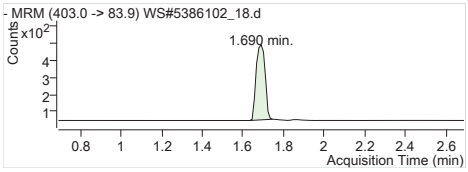
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5205 | 1.44 | 1 µg/L | | |
| MPFHxS | 1343 | 1.69 | 1 µg/L | | |
| MPFHpA | 6360 | 1.70 | 1 µg/L | | |
| MPFOA | 7644 | 1.88 | 1 µg/L | | |
| MPFOS | 1567 | 1.98 | 1 µg/L | | |
| MPFNA | 7152 | 2.02 | 1 µg/L | | |
| MPFDA | 5708 | 2.15 | 1 µg/L | | |
| MPFUnA | 6984 | 2.23 | 1 µg/L | | |
| MPFDoA | 8665 | 2.32 | 1 µg/L | | |
| MPFTeDA | 8928 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 35436 | 1.44 | 1 µg/L | | |
| 13C9-PFDA IS | 45046 | 2.13 | 1 µg/L | | |

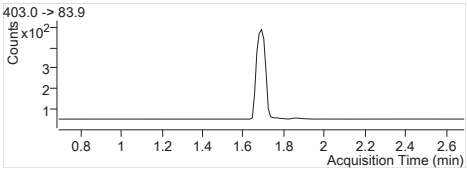
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 5205 | 1.44 | - | 75.59 µg/L | - |
| 18O2-PFHxS | 1343 | 1.69 | - | 76.23 µg/L | - |
| 13C4-PFHpA | 6360 | 1.70 | - | 70.53 µg/L | - |
| 13C4-PFOA | 7644 | 1.88 | - | 80.35 µg/L | - |
| 13C4-PFOS | 1567 | 1.98 | - | 73.03 µg/L | - |
| 13C5-PFNA | 7151 | 2.02 | - | 75.31 µg/L | - |
| 13C2-PFDA | 5625 | 2.15 | - | 73.36 µg/L | - |
| 13C2-PFUnA | 6984 | 2.23 | - | 76.81 µg/L | - |
| 13C2-PFDoA | 8665 | 2.32 | - | 68.65 µg/L | - |
| 13C2-PFTeDA | 8928 | 2.47 | - | 62.00 µg/L | - |
| 13C6-PFHxA | 35436 | 1.44 | - | 2.68 µg/L | - |
| 13C9-PFDA | 45046 | 2.13 | - | 2.67 µg/L | - |



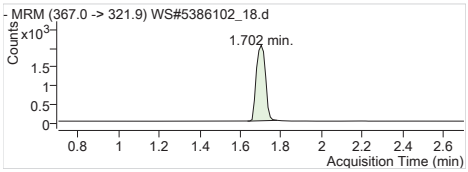



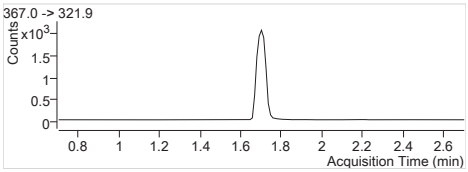

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.445 (1.445) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



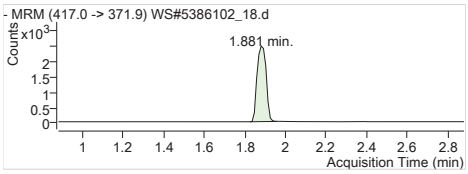



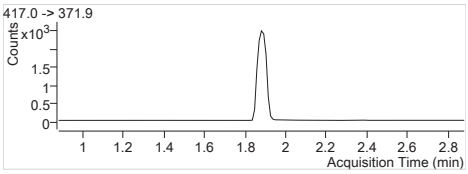

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



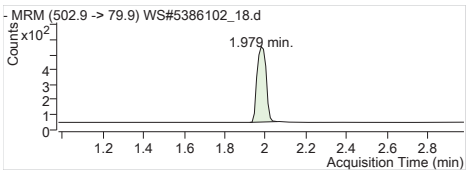



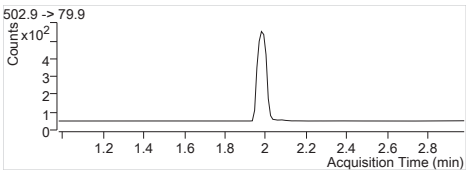

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: Sample



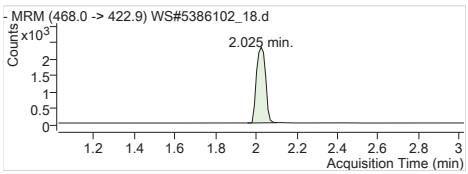



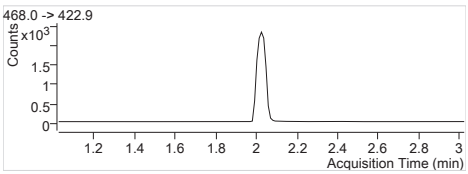

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



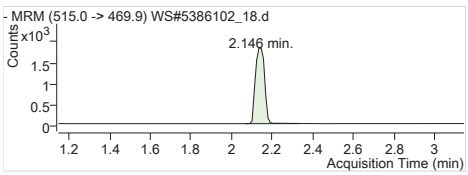



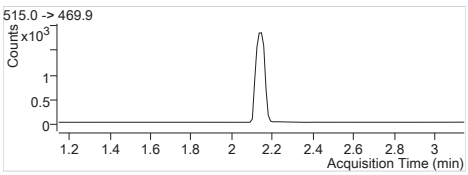

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



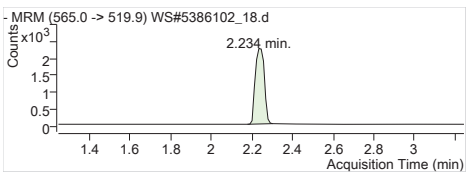



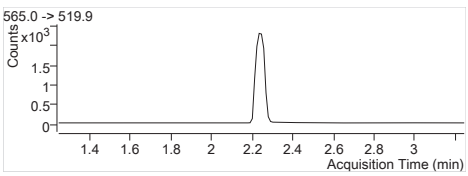

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: Sample



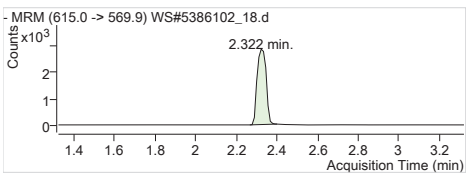



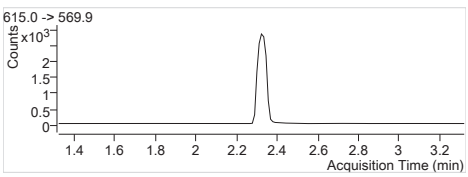

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



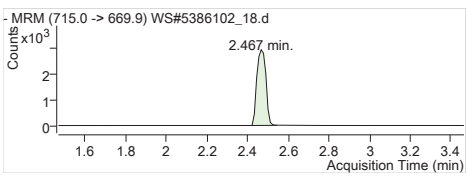



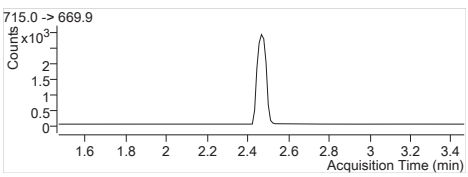

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.245)
Concentration: 1 µg/L
Sample type: Sample



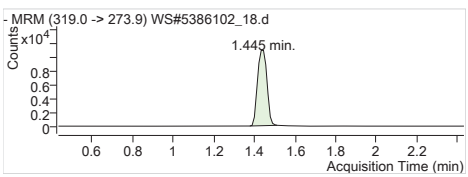



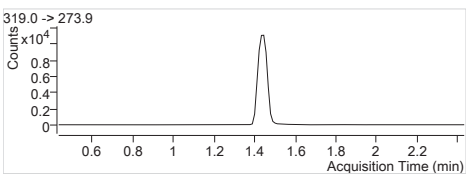

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



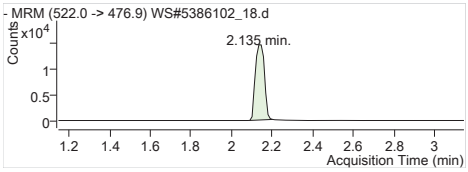



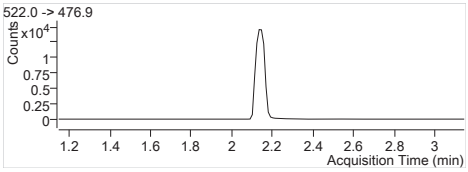

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



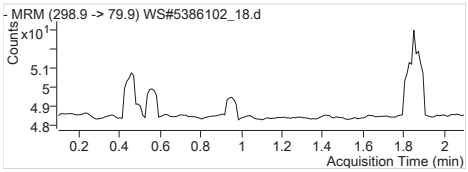



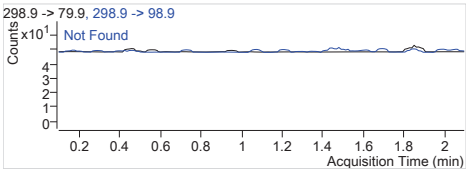

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.445 (1.434)
Concentration: 1 µg/L
Sample type: Sample



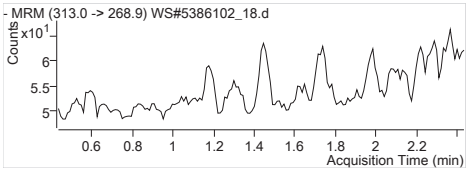



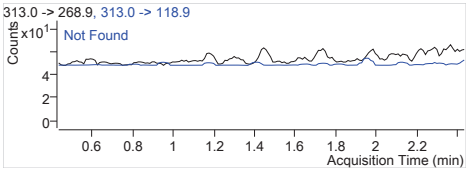

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: Sample



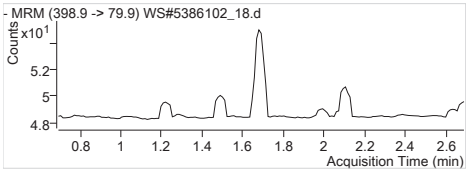



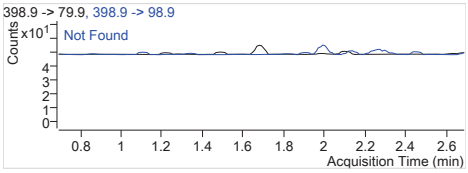

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.098)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



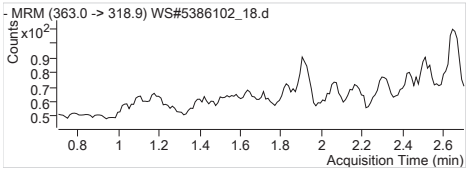



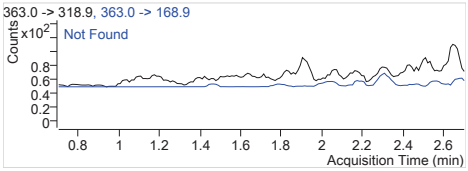

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



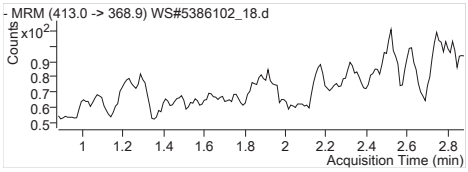



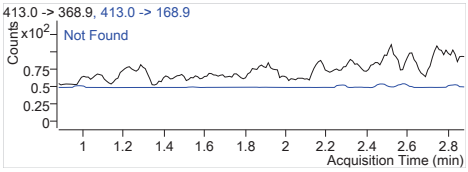

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



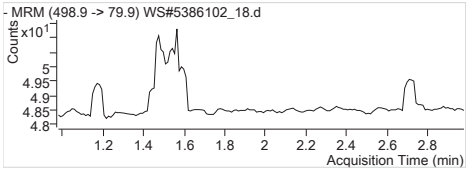



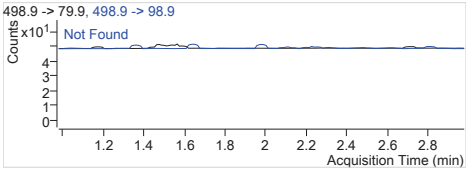

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.702)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



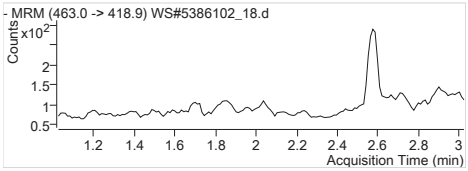



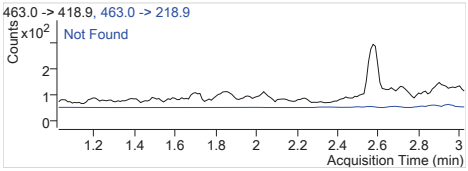

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



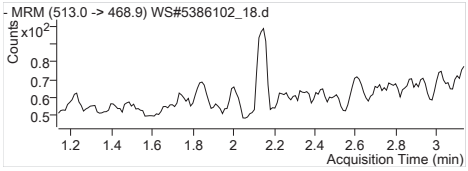



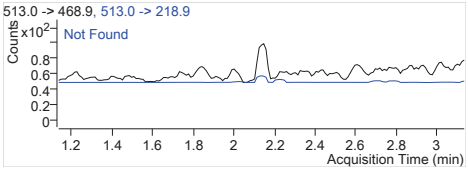

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



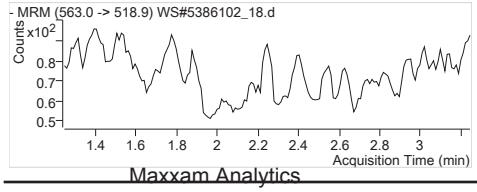



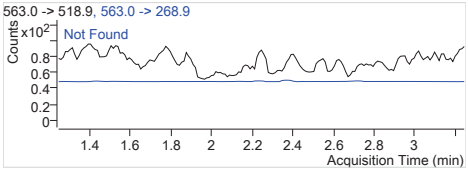

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.025)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



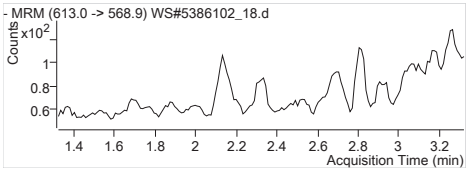



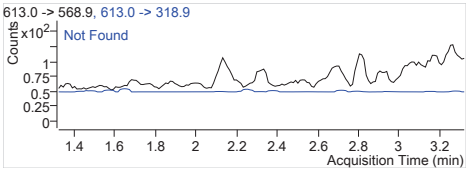

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



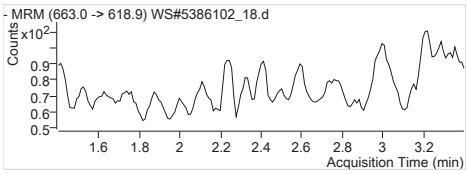



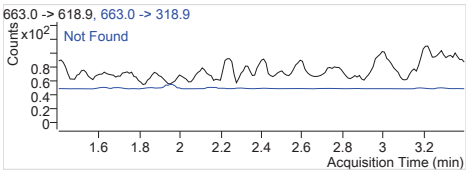

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



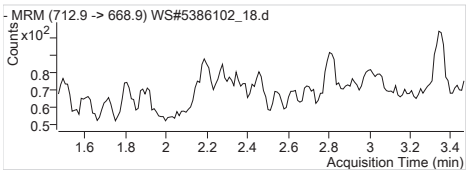



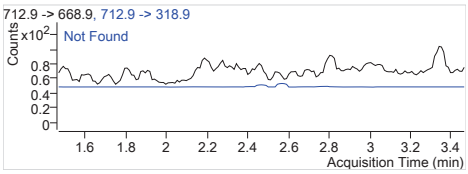

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.323) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



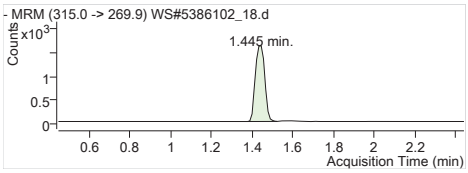



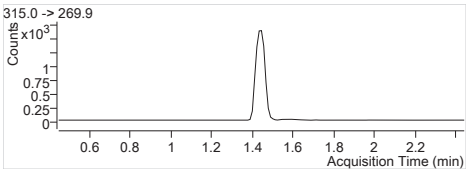

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.400) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



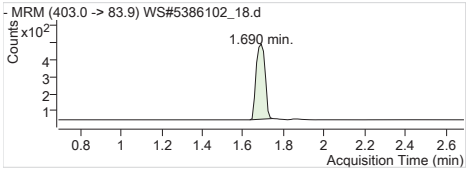



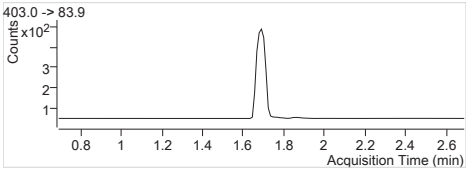

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.467) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



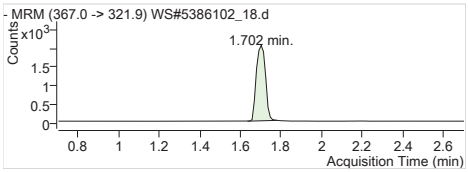



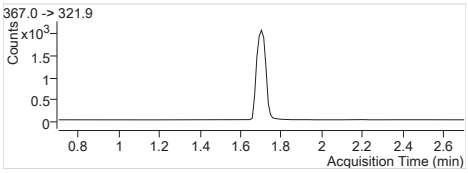

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.445 (1.445) |
| Calc. conc. | 75.59 µg/L |
| Area ratio: | 0.14688 |
| Sample type: | Sample |



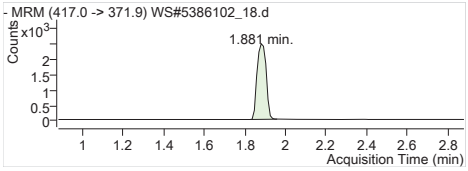



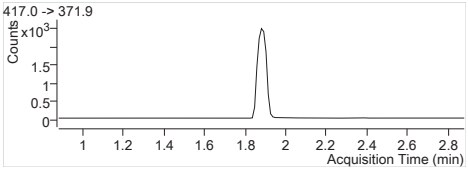

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 76.23 µg/L |
| Area ratio: | 0.03790 |
| Sample type: | Sample |



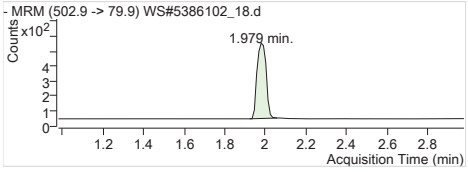



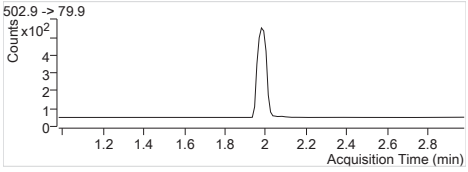

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.702 (1.702) |
| Calc. conc. | 70.53 µg/L |
| Area ratio: | 0.17948 |
| Sample type: | Sample |



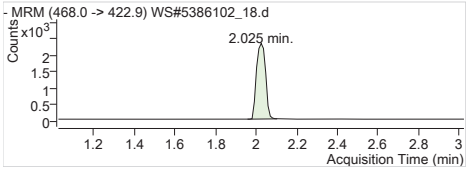



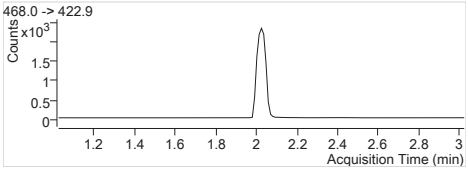

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.881 (1.881) |
| Calc. conc. | 80.35 µg/L |
| Area ratio: | 0.21571 |
| Sample type: | Sample |



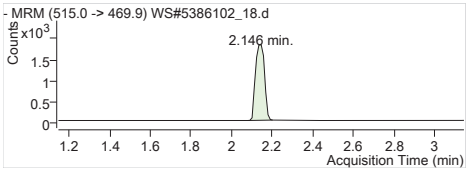



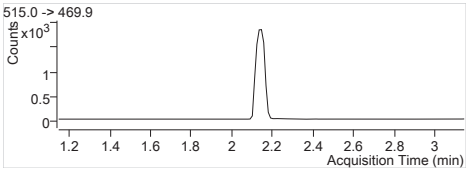

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.979 (1.979) |
| Calc. conc. | 73.03 µg/L |
| Area ratio: | 0.04422 |
| Sample type: | Sample |



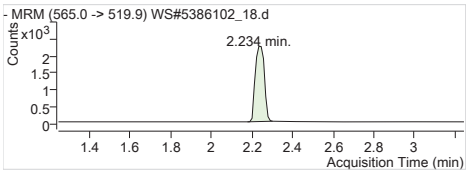



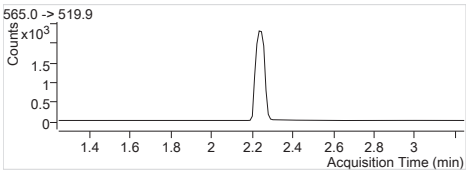

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.025 (2.025) |
| Calc. conc. | 75.31 µg/L |
| Area ratio: | 0.20180 |
| Sample type: | Sample |



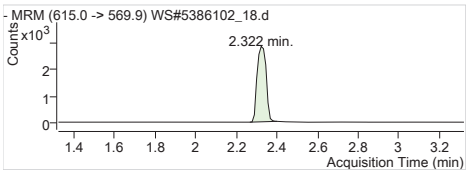



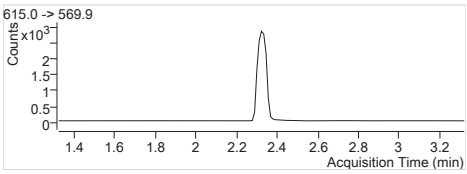

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 73.36 µg/L
Area ratio: 0.12487
Sample type: Sample



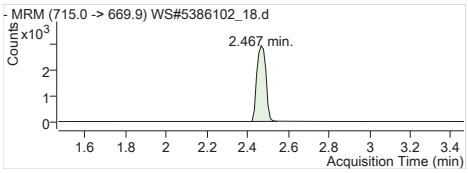



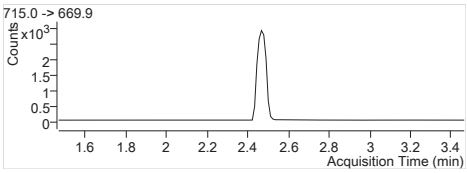

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.245)
Calc. conc. 76.81 µg/L
Area ratio: 0.15504
Sample type: Sample



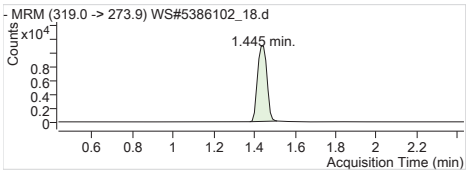



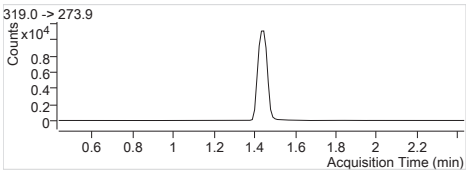

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 68.65 µg/L
Area ratio: 0.19236
Sample type: Sample



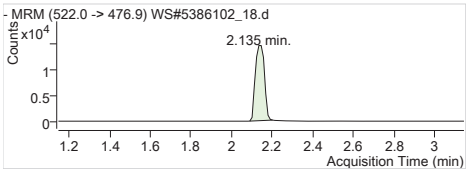



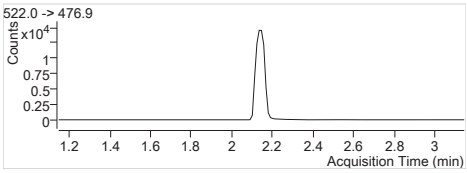

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 62.00 µg/L
Area ratio: 0.19820
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.445 (1.434)
Calc. conc. 2.68 µg/L
Area ratio: 0
Sample type: Sample



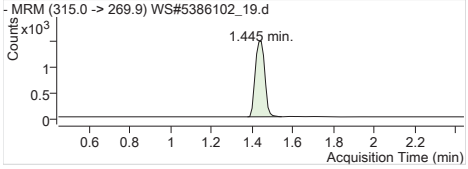

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 2.67 µg/L
Area ratio: 0
Sample type: Sample

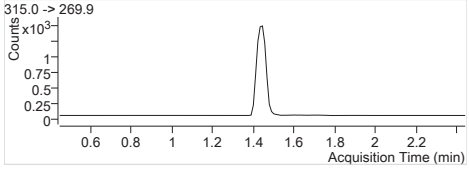
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:FZA804-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_19.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-E5 |
| **Acq. Date** | 2018/02/08 4:35:40 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

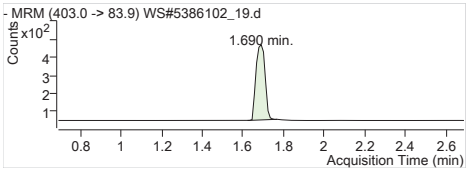
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 4689 | 1.44 | 1 µg/L | | |
| MPFHxS | 1303 | 1.69 | 1 µg/L | | |
| MPFHpA | 5893 | 1.70 | 1 µg/L | | |
| MPFOA | 6090 | 1.88 | 1 µg/L | | |
| MPFOS | 1450 | 1.98 | 1 µg/L | | |
| MPFNA | 6165 | 2.02 | 1 µg/L | | |
| MPFDA | 5063 | 2.15 | 1 µg/L | | |
| MPFUnA | 5527 | 2.25 | 1 µg/L | | |
| MPFDoA | 7794 | 2.32 | 1 µg/L | | |
| MPFTeDA | 8367 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 32197 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 40725 | 2.15 | 1 µg/L | | |

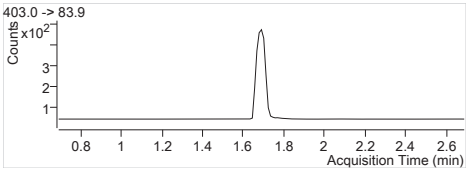
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 4689 | 1.44 | - | 74.94 µg/L | - |
| 18O2-PFHxS | 1303 | 1.69 | - | 81.40 µg/L | - |
| 13C4-PFHpA | 5893 | 1.70 | - | 71.92 µg/L | - |
| 13C4-PFOA | 6090 | 1.88 | - | 70.45 µg/L | - |
| 13C4-PFOS | 1450 | 1.98 | - | 74.38 µg/L | - |
| 13C5-PFNA | 6164 | 2.02 | - | 71.45 µg/L | - |
| 13C2-PFDA | 4965 | 2.15 | - | 71.63 µg/L | - |
| 13C2-PFUnA | 5527 | 2.25 | - | 67.24 µg/L | - |
| 13C2-PFDoA | 7794 | 2.32 | - | 68.30 µg/L | - |
| 13C2-PFTeDA | 8476 | 2.47 | - | 65.11 µg/L | - |
| 13C6-PFHxA | 32197 | 1.43 | - | 2.44 µg/L | - |
| 13C9-PFDA | 40725 | 2.15 | - | 2.41 µg/L | - |



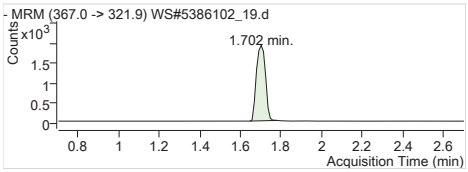



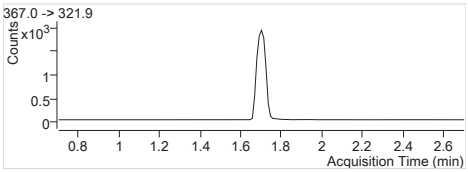

**MPFHxA** Internal Standard
RT (Exp. RT): 1.445 (1.445)
Concentration: 1 µg/L
Sample type: Sample



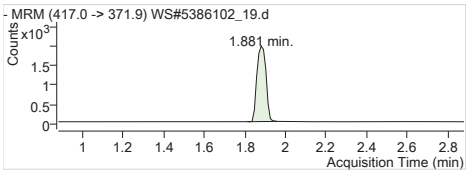



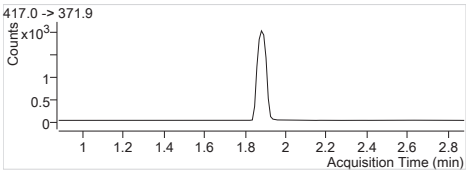

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



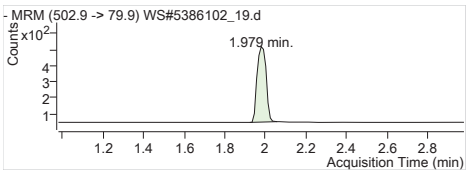



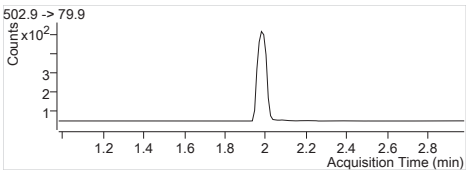

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: Sample



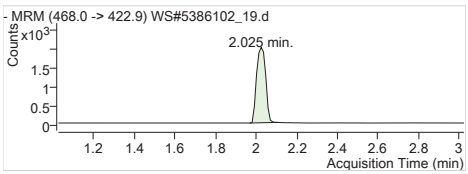



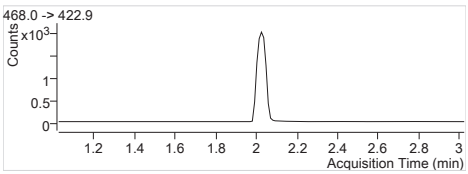

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



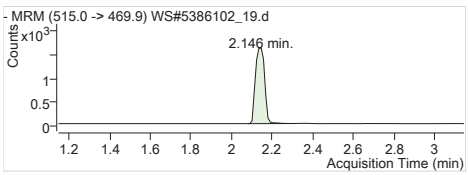



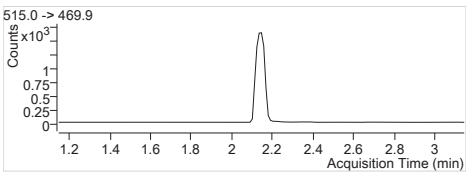

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



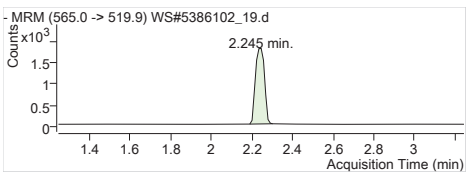



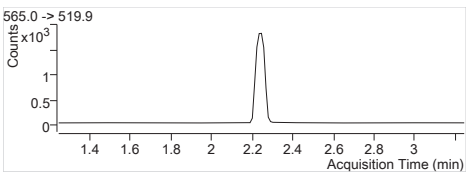

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: Sample



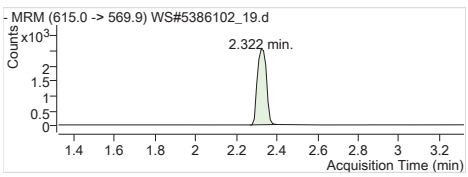



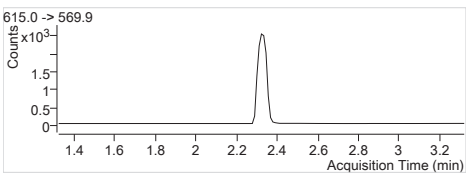

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



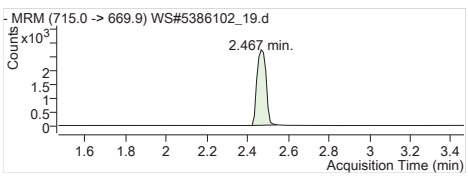



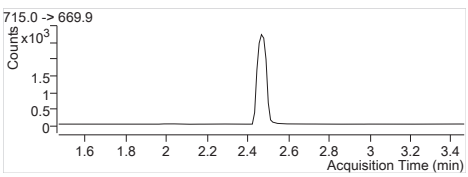

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



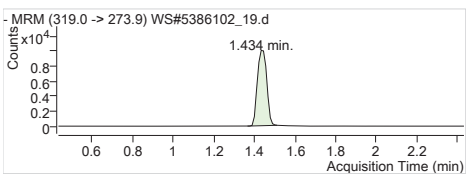



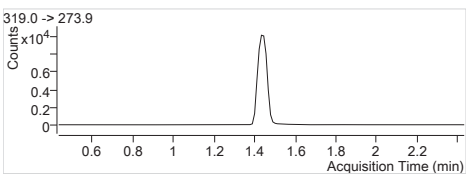

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



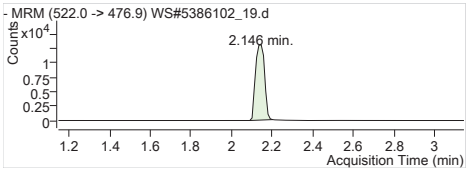



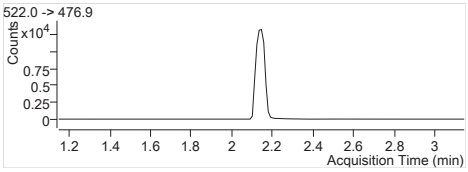

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



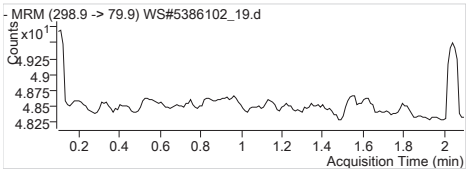



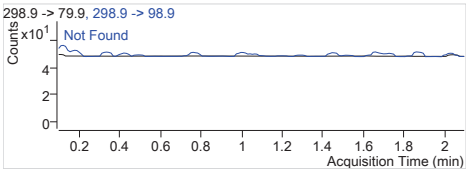

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



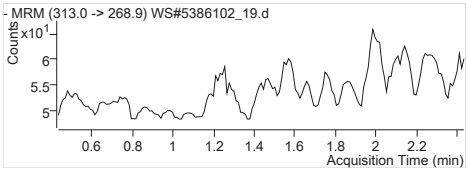



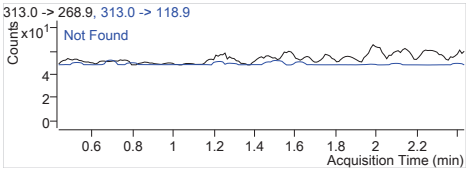

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



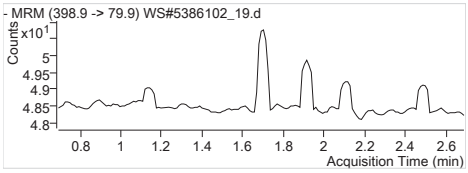



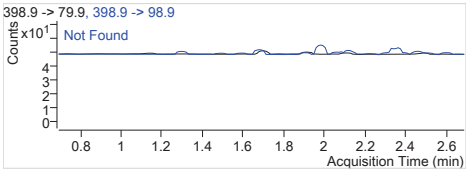

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.098)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



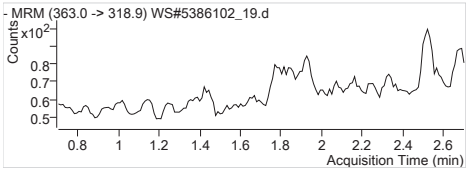



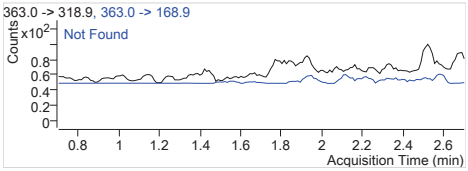

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



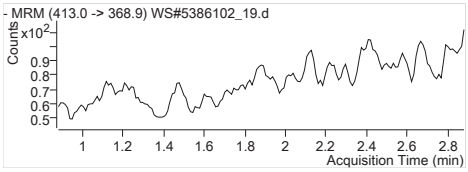



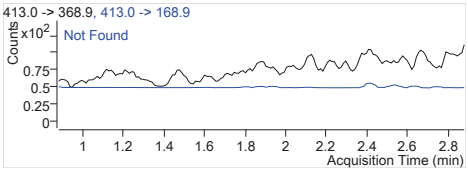

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



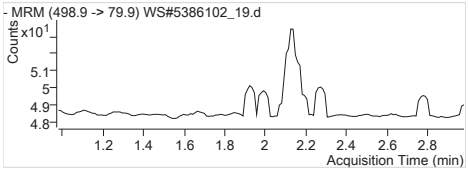



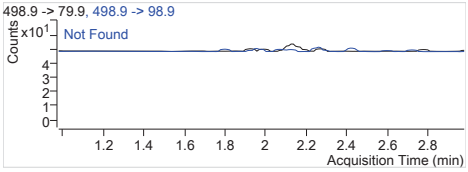

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.702)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



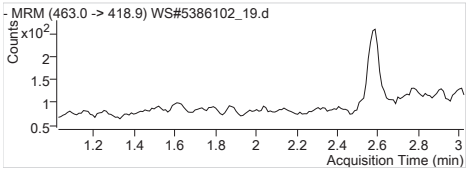



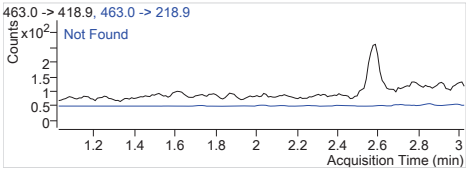

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



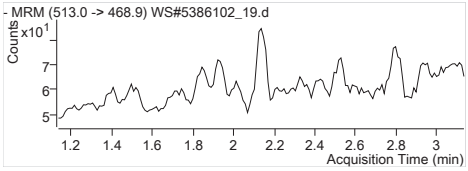



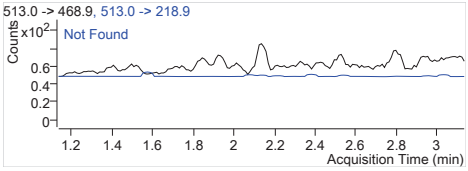

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



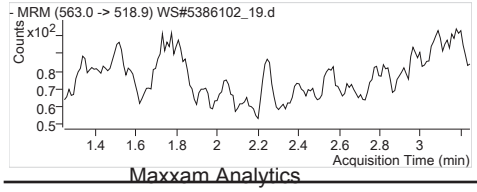



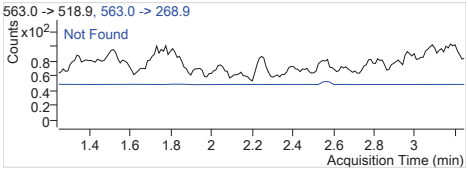

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.025)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



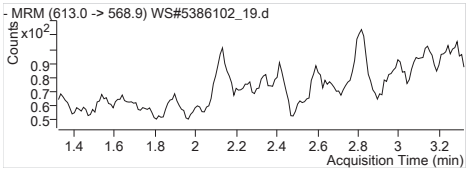



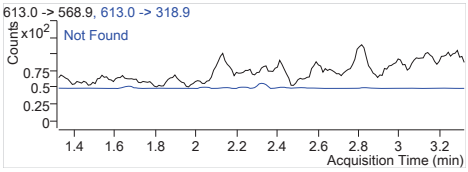

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



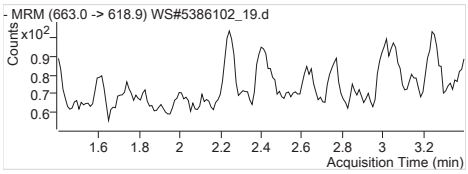



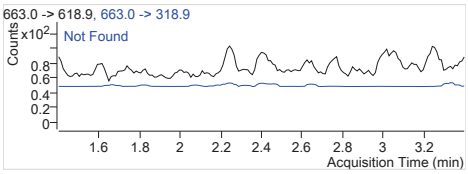

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



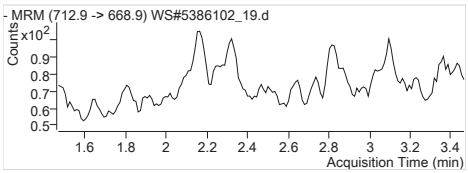



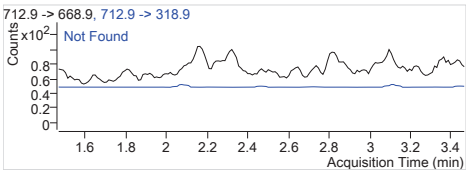

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



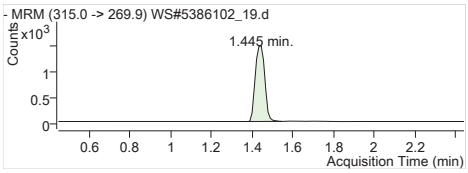



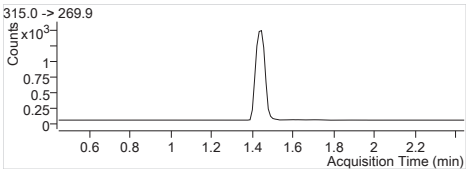

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



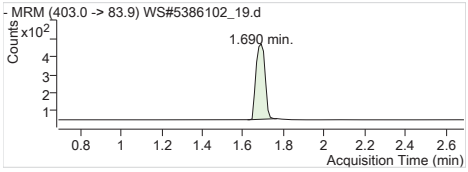



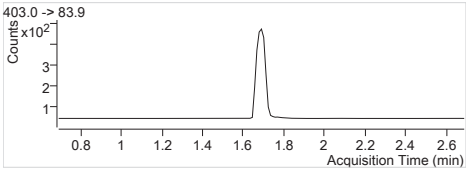

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



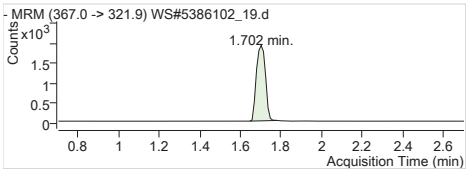



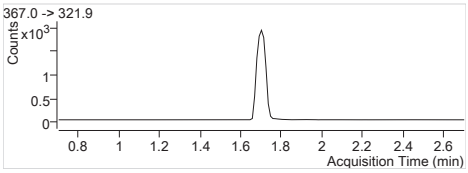

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.445 (1.445)
Calc. conc. 74.94 µg/L
Area ratio: 0.14563
Sample type: Sample



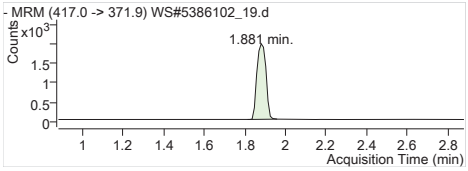



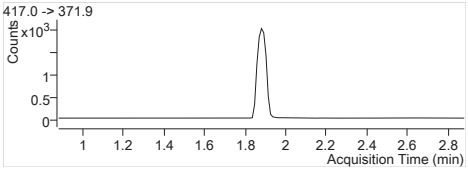

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 81.40 µg/L
Area ratio: 0.04047
Sample type: Sample



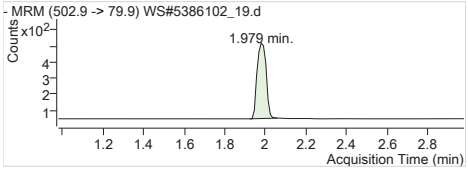



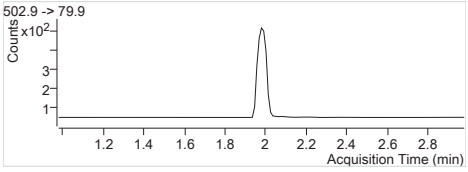

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 71.92 µg/L
Area ratio: 0.18303
Sample type: Sample



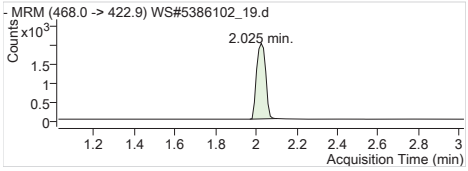



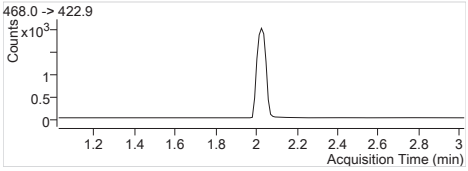

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 70.45 µg/L
Area ratio: 0.18915
Sample type: Sample



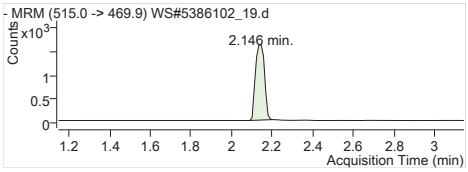



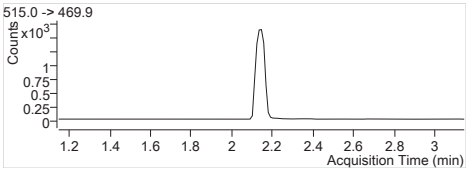

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 74.38 µg/L
Area ratio: 0.04504
Sample type: Sample



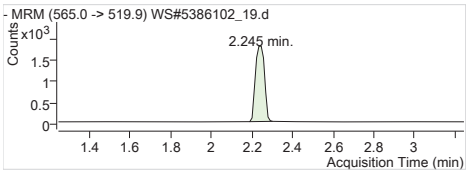



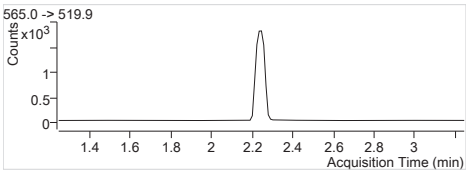

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 71.45 µg/L
Area ratio: 0.19145
Sample type: Sample



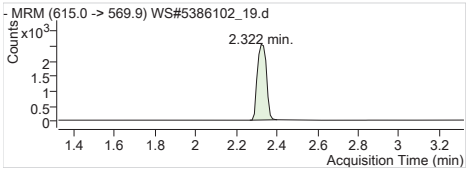



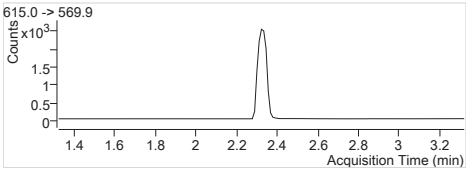

| | |
|---|---|
| **13C2-PFDA** | 515.0 -> 469.9 |
| RT (Exp. RT): | 2.146 (2.146) |
| Calc. conc. | 71.63 µg/L |
| Area ratio: | 0.12192 |
| Sample type: | Sample |



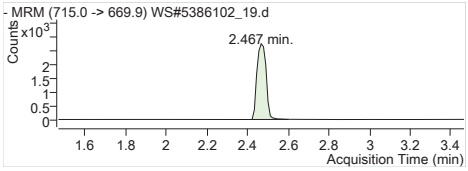



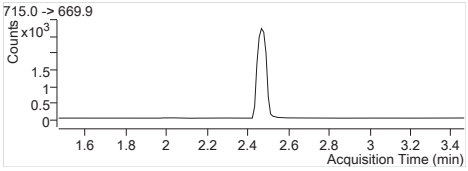

| | |
|---|---|
| **13C2-PFUnA** | 565.0 -> 519.9 |
| RT (Exp. RT): | 2.245 (2.245) |
| Calc. conc. | 67.24 µg/L |
| Area ratio: | 0.13572 |
| Sample type: | Sample |



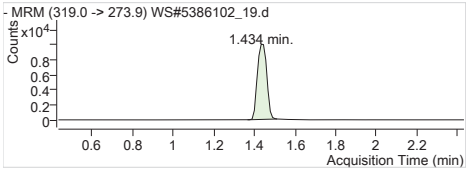



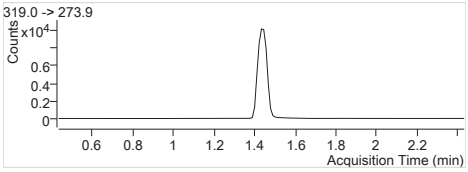

| | |
|---|---|
| **13C2-PFDoA** | 615.0 -> 569.9 |
| RT (Exp. RT): | 2.322 (2.322) |
| Calc. conc. | 68.30 µg/L |
| Area ratio: | 0.19138 |
| Sample type: | Sample |



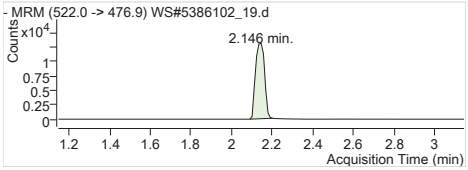



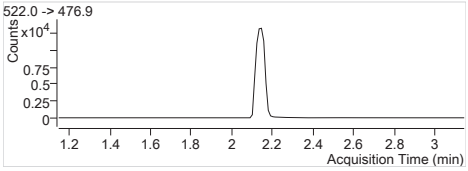

| | |
|---|---|
| **13C2-PFTeDA** | 715.0 -> 669.9 |
| RT (Exp. RT): | 2.467 (2.467) |
| Calc. conc. | 65.11 µg/L |
| Area ratio: | 0.20813 |
| Sample type: | Sample |




| | |
|---|---|
| **13C6-PFHxA** | 319.0 -> 273.9 |
| RT (Exp. RT): | 1.434 (1.434) |
| Calc. conc. | 2.44 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |



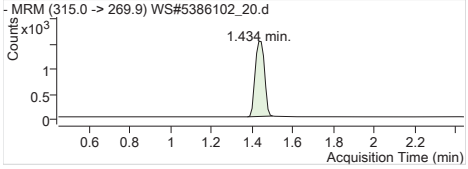

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 2.146 (2.146) |
| Calc. conc. | 2.41 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

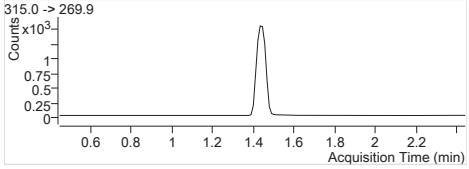
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:FZA805-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_20.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.025 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-E6 |
| **Acq. Date** | 2018/02/08 4:40:36 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

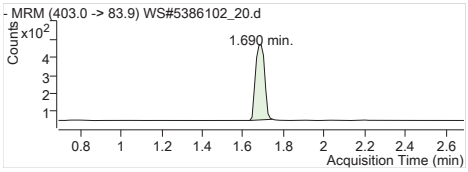
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 4767 | 1.43 | 1 µg/L | | |
| MPFHxS | 1311 | 1.69 | 1 µg/L | | |
| MPFHpA | 6592 | 1.70 | 1 µg/L | | |
| MPFOA | 6747 | 1.88 | 1 µg/L | | |
| MPFOS | 1499 | 1.98 | 1 µg/L | | |
| MPFNA | 6568 | 2.02 | 1 µg/L | | |
| MPFDA | 5228 | 2.15 | 1 µg/L | | |
| MPFUnA | 6058 | 2.25 | 1 µg/L | | |
| MPFDoA | 8182 | 2.32 | 1 µg/L | | |
| MPFTeDA | 8053 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 31057 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 40745 | 2.15 | 1 µg/L | | |

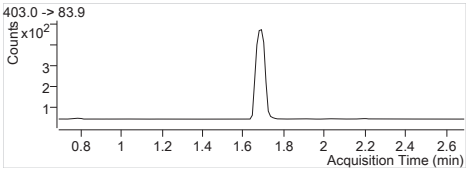
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 4767 | 1.43 | - | 78.99 µg/L | - |
| 18O2-PFHxS | 1311 | 1.69 | - | 84.90 µg/L | - |
| 13C4-PFHpA | 6592 | 1.70 | - | 83.41 µg/L | - |
| 13C4-PFOA | 6747 | 1.88 | - | 80.92 µg/L | - |
| 13C4-PFOS | 1499 | 1.98 | - | 79.71 µg/L | - |
| 13C5-PFNA | 6568 | 2.02 | - | 78.93 µg/L | - |
| 13C2-PFDA | 5169 | 2.15 | - | 74.53 µg/L | - |
| 13C2-PFUnA | 6058 | 2.25 | - | 73.66 µg/L | - |
| 13C2-PFDoA | 8182 | 2.32 | - | 71.66 µg/L | - |
| 13C2-PFTeDA | 8310 | 2.47 | - | 63.80 µg/L | - |
| 13C6-PFHxA | 31057 | 1.43 | - | 2.45 µg/L | - |
| 13C9-PFDA | 40745 | 2.15 | - | 2.51 µg/L | - |



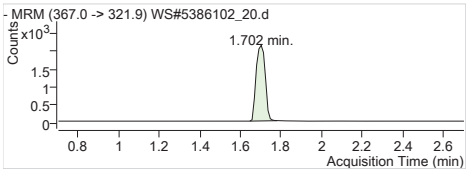



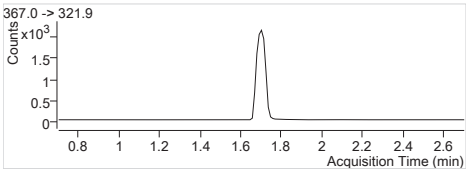

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.445)
Concentration: 1 µg/L
Sample type: Sample



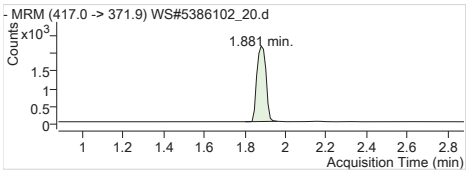



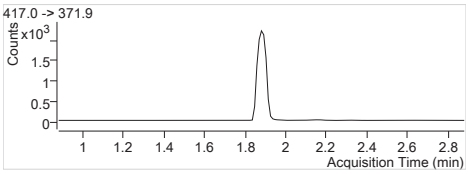

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



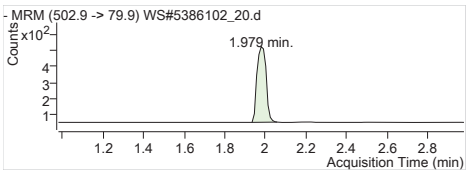



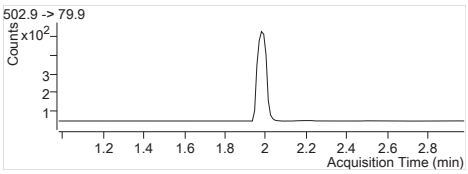

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: Sample



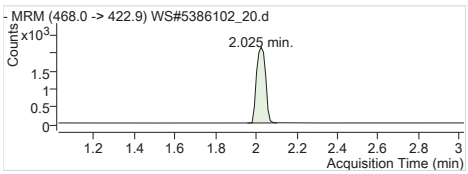



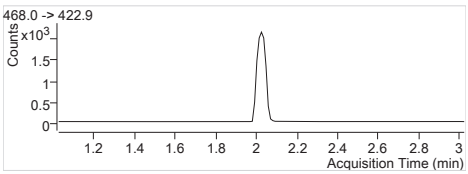

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



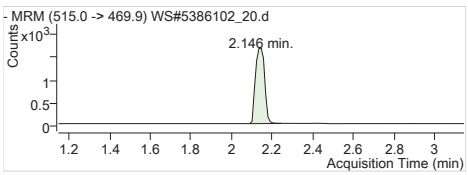



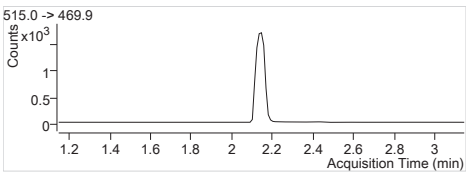

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



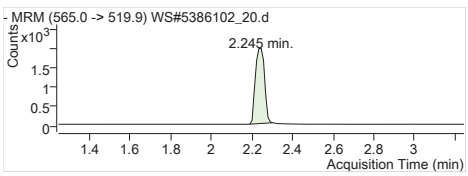



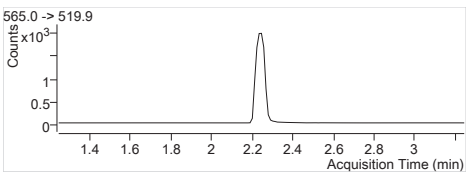

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: Sample



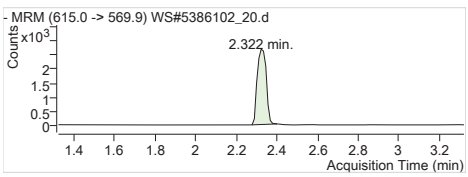



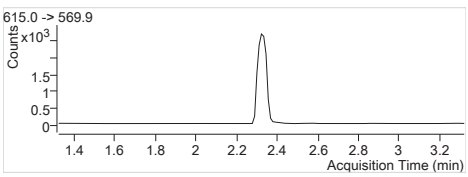

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



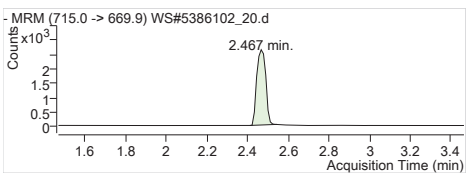



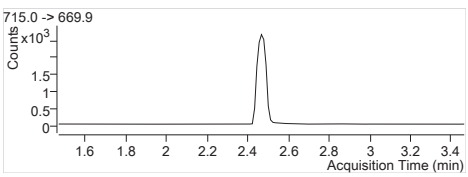

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



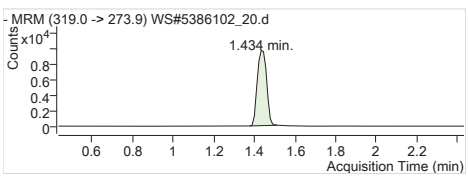



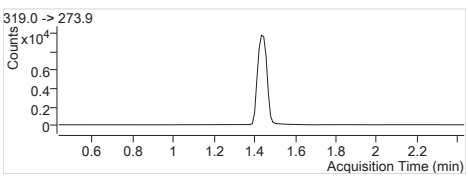

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



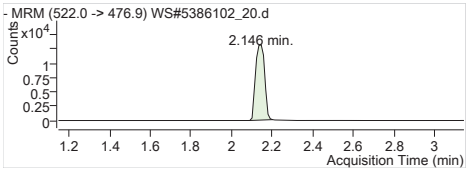



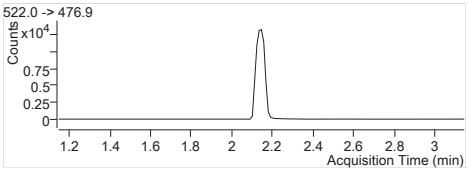

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



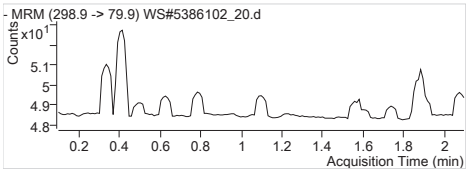



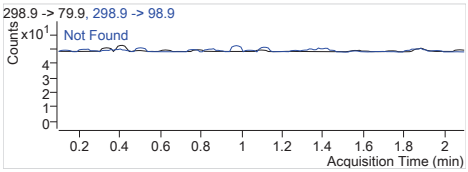

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



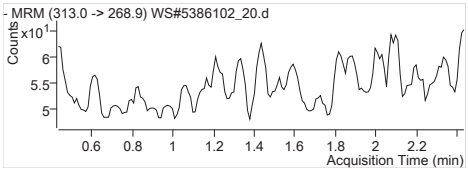



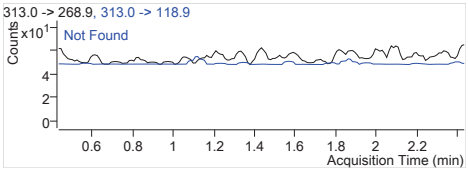

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



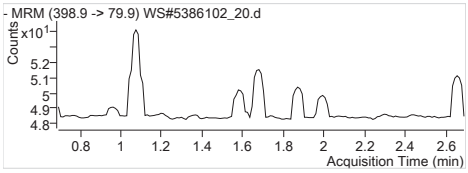



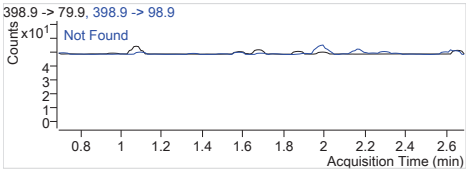

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.098)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



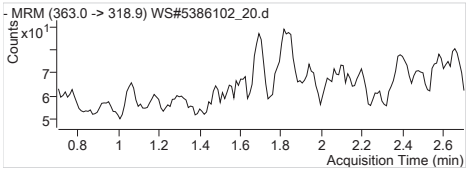



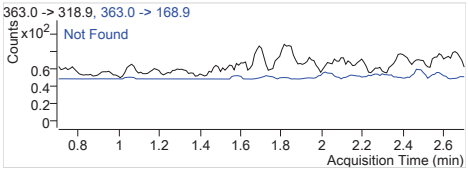

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



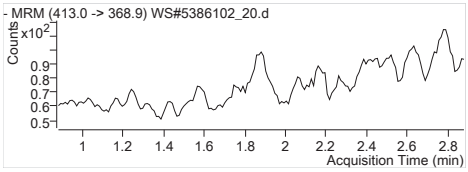



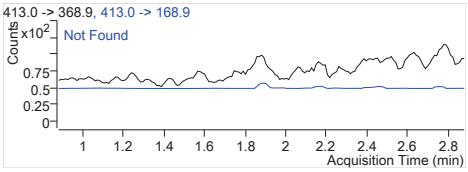

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



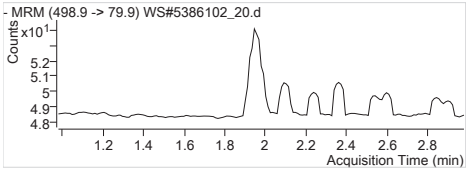



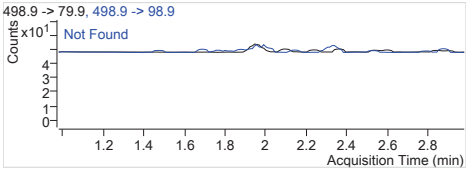

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.702)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



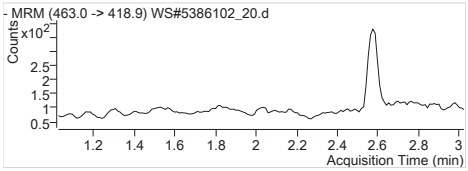



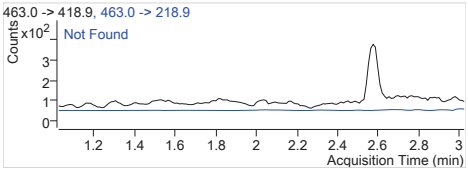

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



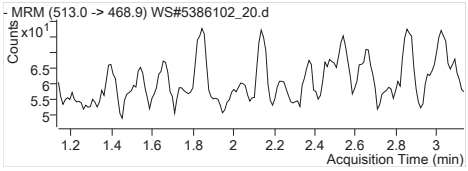



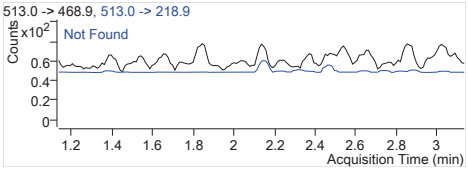

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



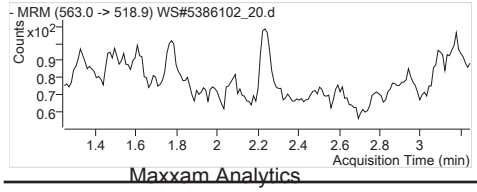



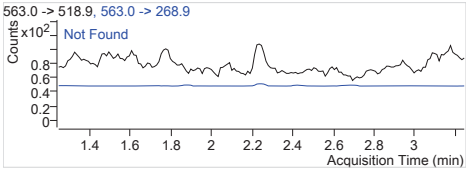

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.025)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



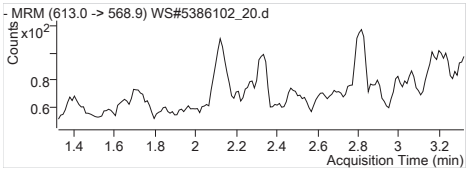



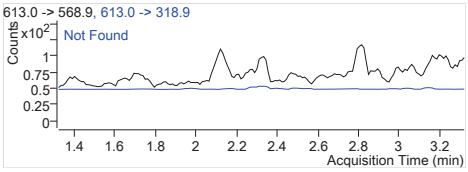

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



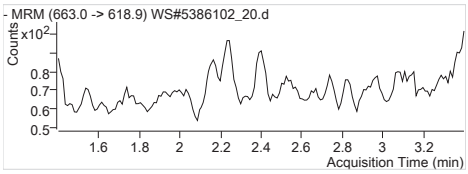



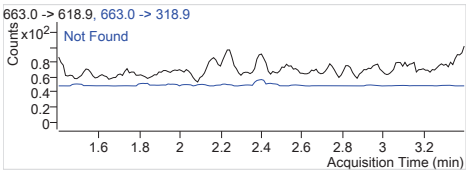

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



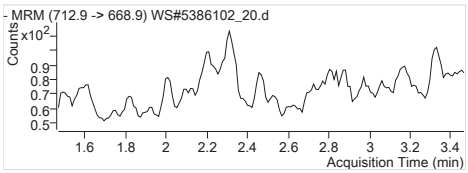



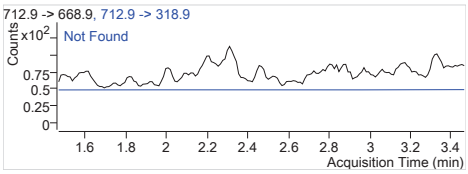

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



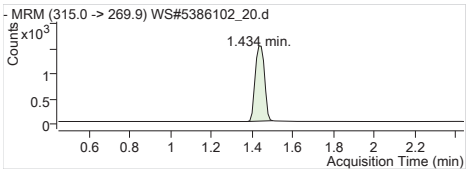



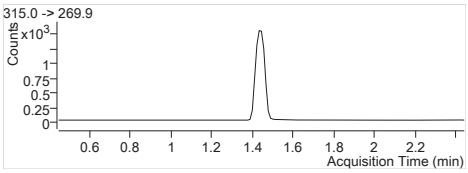

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



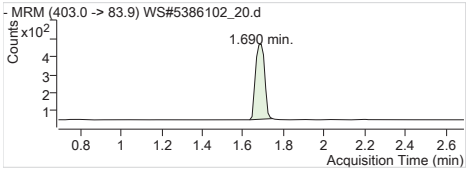



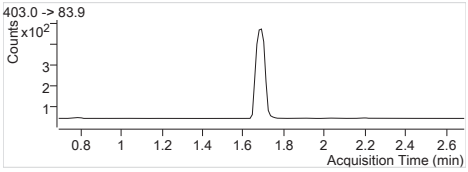

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



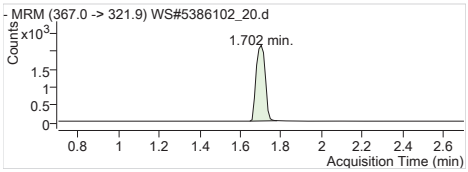



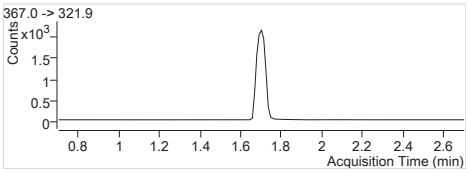

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 78.99 µg/L
Area ratio: 0.15349
Sample type: Sample



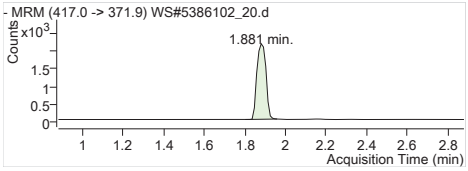



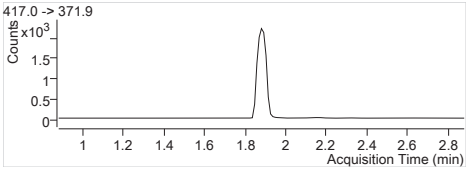

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 84.90 µg/L
Area ratio: 0.04221
Sample type: Sample



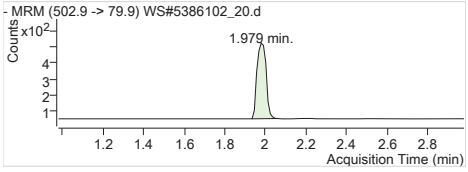



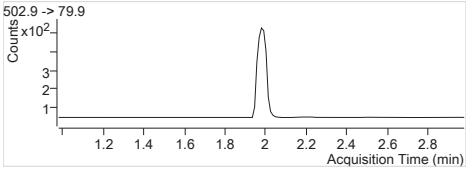

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 83.41 µg/L
Area ratio: 0.21225
Sample type: Sample



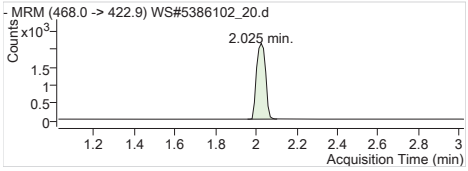



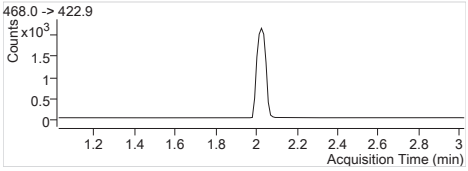

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 80.92 µg/L
Area ratio: 0.21725
Sample type: Sample



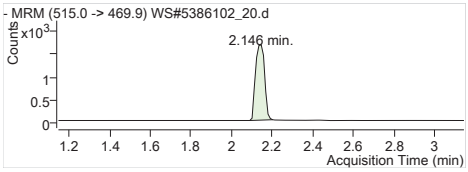



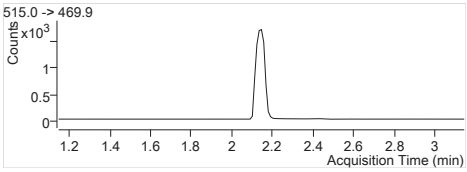

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 79.71 µg/L
Area ratio: 0.04827
Sample type: Sample



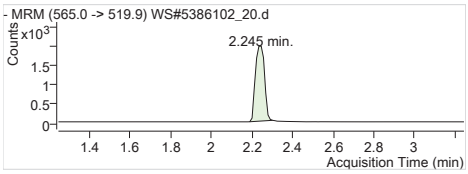



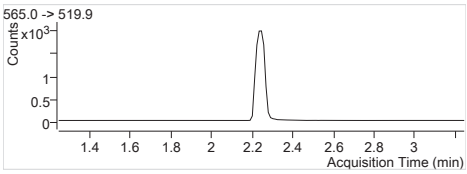

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 78.93 µg/L
Area ratio: 0.21148
Sample type: Sample



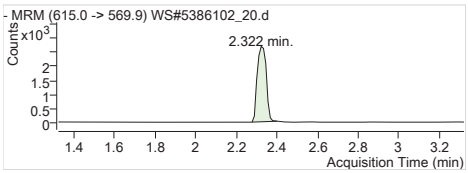



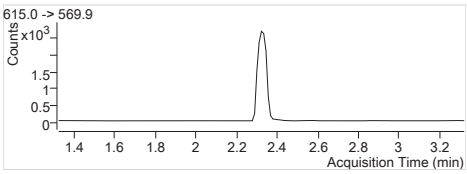

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 74.53 µg/L
Area ratio: 0.12686
Sample type: Sample



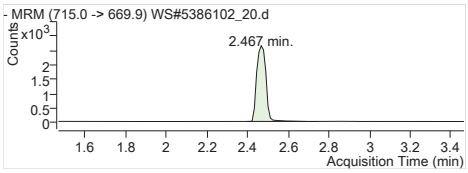



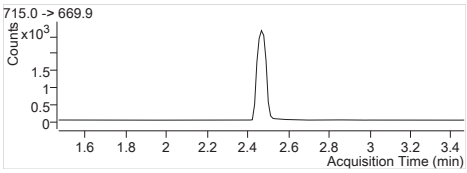

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 73.66 µg/L
Area ratio: 0.14868
Sample type: Sample



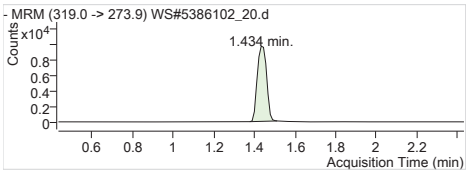



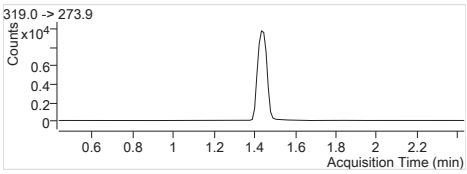

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 71.66 µg/L
Area ratio: 0.20081
Sample type: Sample



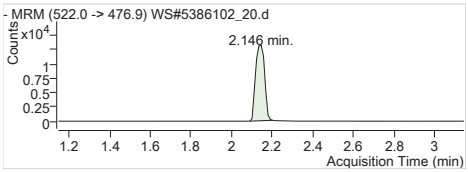



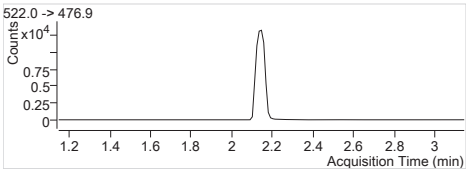

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 63.80 µg/L
Area ratio: 0.20395
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.45 µg/L
Area ratio: 0
Sample type: Sample



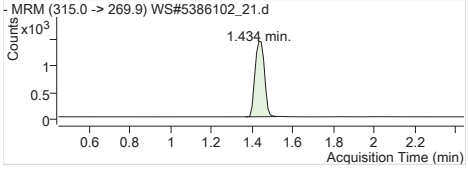

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.51 µg/L
Area ratio: 0
Sample type: Sample

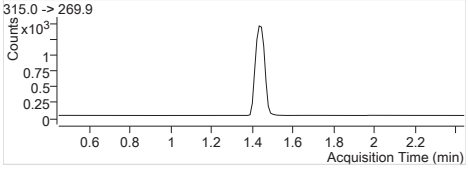
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:FZA806-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_21.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-E7 |
| **Acq. Date** | 2018/02/08 4:45:32 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

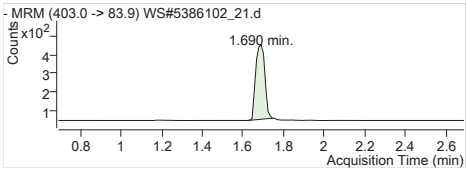
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 4540 | 1.43 | 1 µg/L | | |
| MPFHxS | 1253 | 1.69 | 1 µg/L | | |
| MPFHpA | 5382 | 1.70 | 1 µg/L | | |
| MPFOA | 5481 | 1.88 | 1 µg/L | | |
| MPFOS | 1530 | 1.98 | 1 µg/L | | |
| MPFNA | 6177 | 2.02 | 1 µg/L | | |
| MPFDA | 4258 | 2.15 | 1 µg/L | | |
| MPFUnA | 5279 | 2.25 | 1 µg/L | | |
| MPFDoA | 6663 | 2.32 | 1 µg/L | | |
| MPFTeDA | 7676 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 29544 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 38435 | 2.15 | 1 µg/L | | |

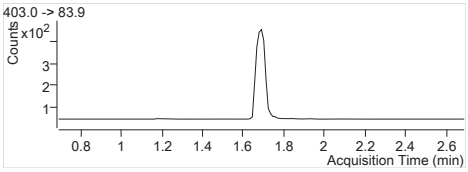
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 4540 | 1.43 | - | 79.08 µg/L | - |
| 18O2-PFHxS | 1253 | 1.69 | - | 85.30 µg/L | - |
| 13C4-PFHpA | 5382 | 1.70 | - | 71.59 µg/L | - |
| 13C4-PFOA | 5481 | 1.88 | - | 69.10 µg/L | - |
| 13C4-PFOS | 1530 | 1.98 | - | 85.53 µg/L | - |
| 13C5-PFNA | 6176 | 2.02 | - | 78.02 µg/L | - |
| 13C2-PFDA | 4219 | 2.15 | - | 64.49 µg/L | - |
| 13C2-PFUnA | 5279 | 2.25 | - | 68.05 µg/L | - |
| 13C2-PFDoA | 6663 | 2.32 | - | 61.87 µg/L | - |
| 13C2-PFTeDA | 7772 | 2.47 | - | 63.26 µg/L | - |
| 13C6-PFHxA | 29544 | 1.43 | - | 2.24 µg/L | - |
| 13C9-PFDA | 38435 | 2.15 | - | 2.27 µg/L | - |



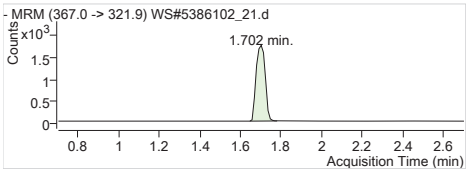



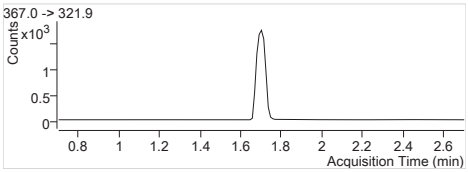

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.445) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



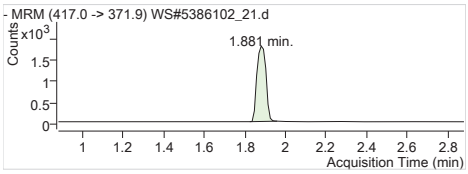



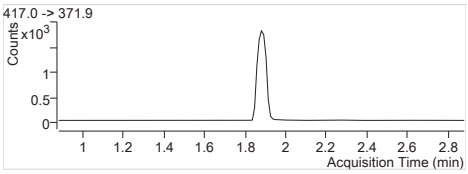

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



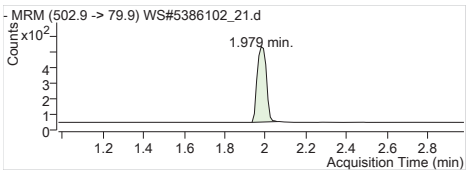



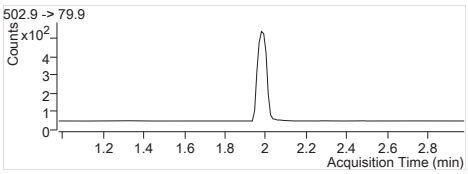

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: Sample



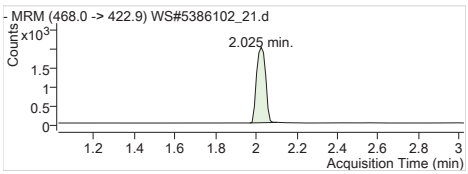



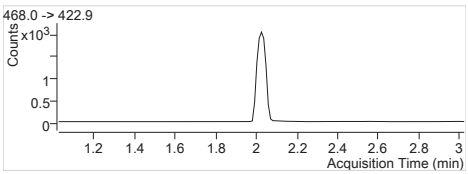

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



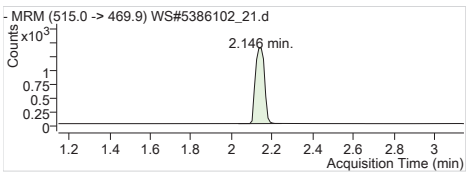



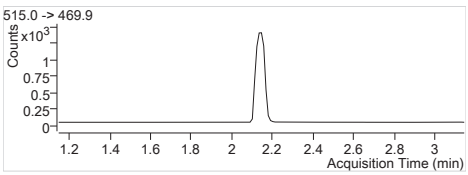

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



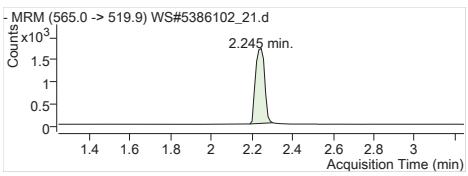



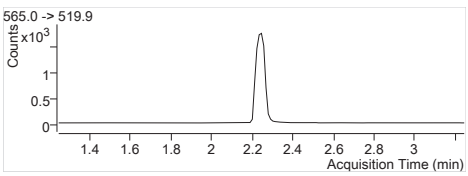

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: Sample



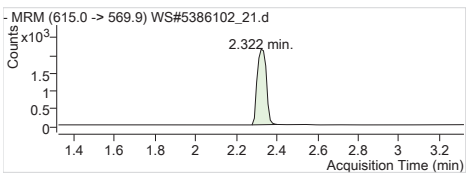



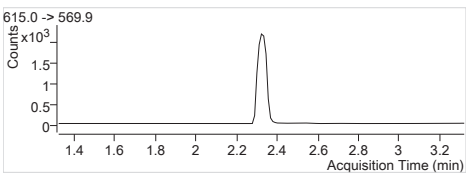

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



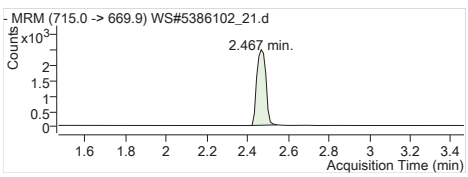



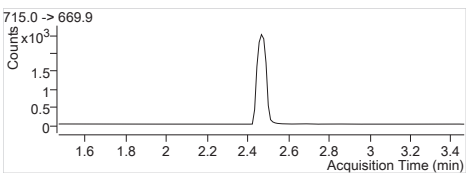

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



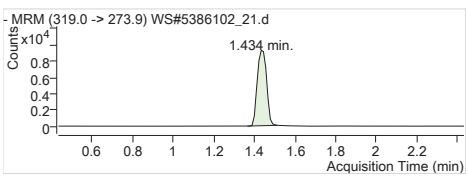



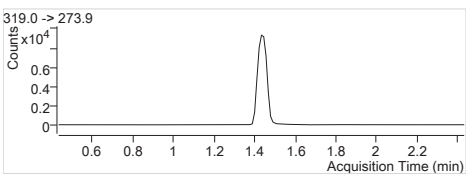

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



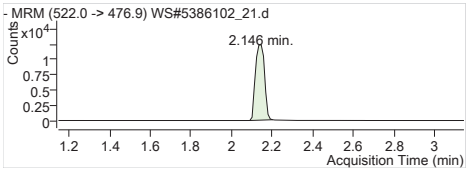



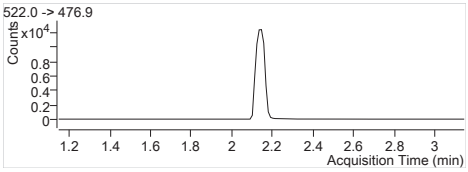

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



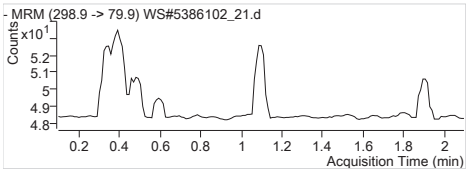



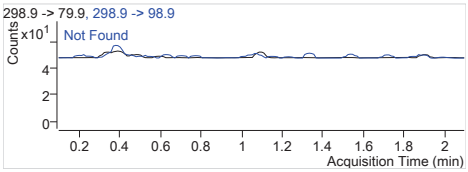

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



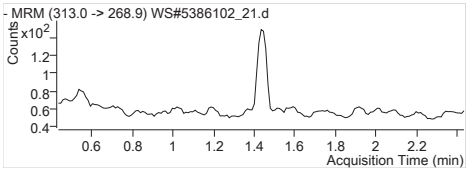



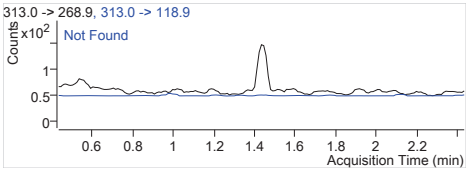

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



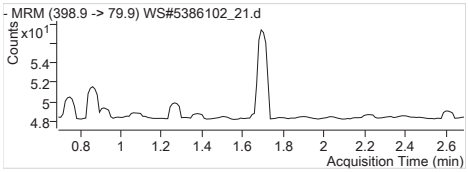



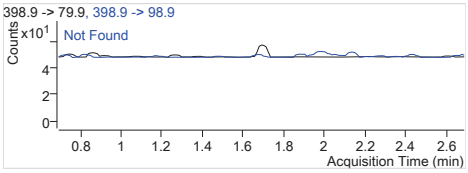

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.098)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



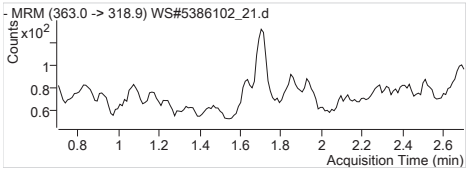



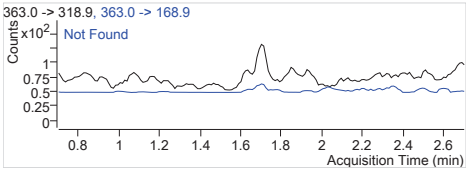

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



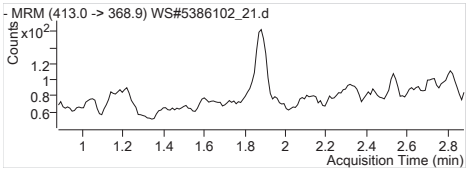



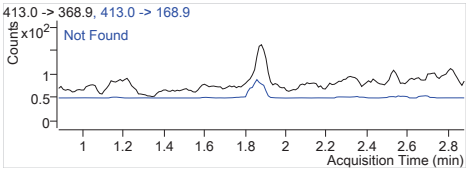

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



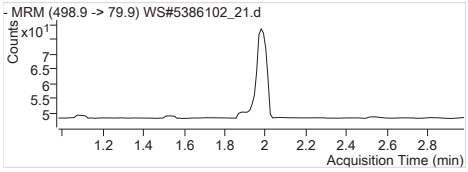



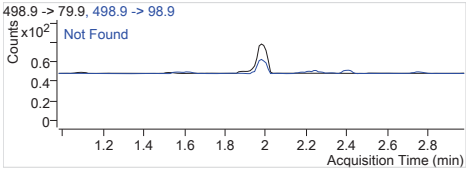

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.702)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



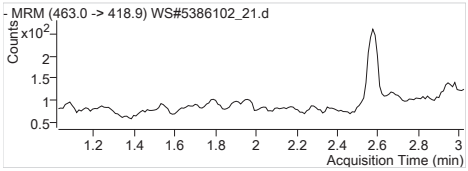



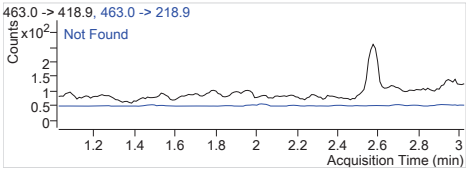

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



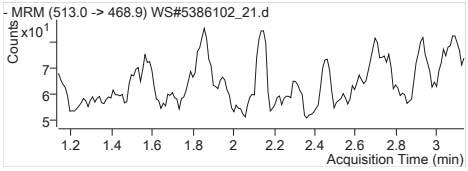



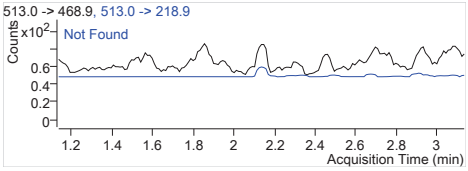

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



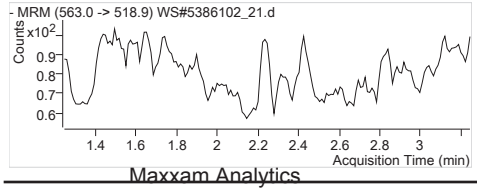



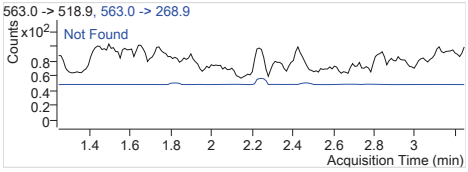

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.025)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



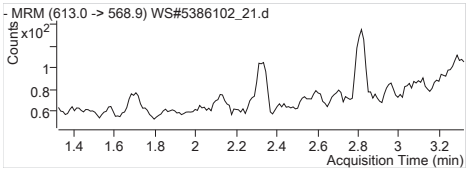



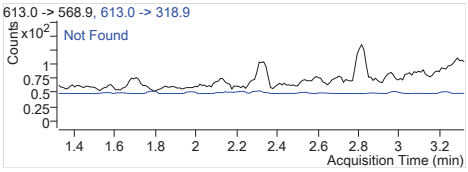

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



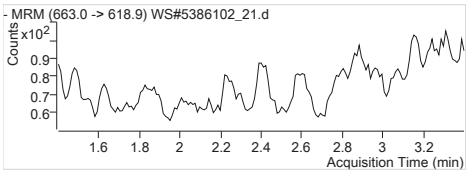



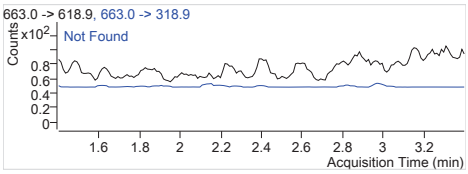

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



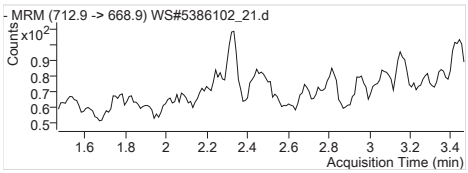



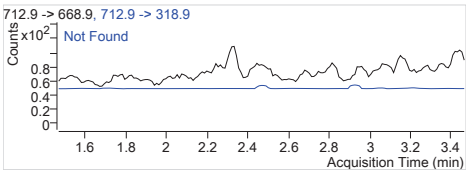

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



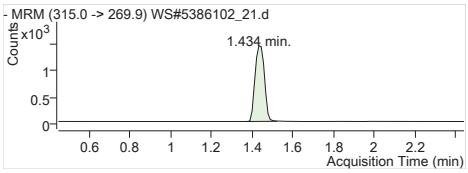



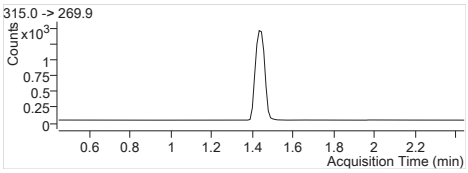

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



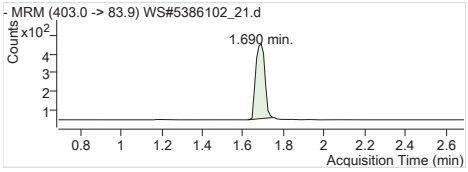



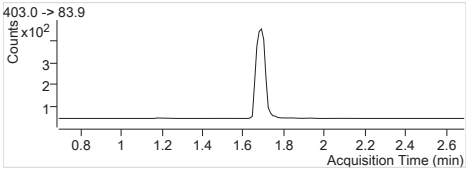

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



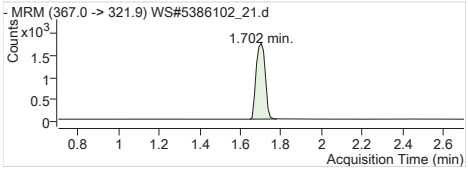



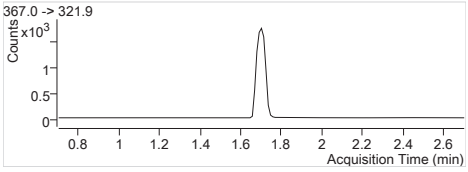

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 79.08 µg/L
Area ratio: 0.15367
Sample type: Sample



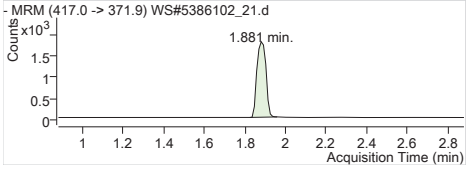



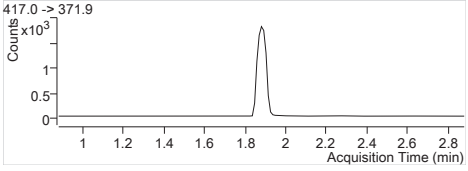

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 85.30 µg/L
Area ratio: 0.04241
Sample type: Sample



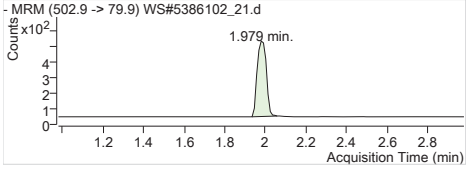



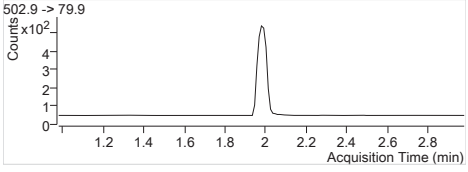

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 71.59 µg/L
Area ratio: 0.18217
Sample type: Sample



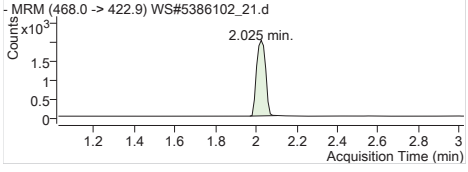



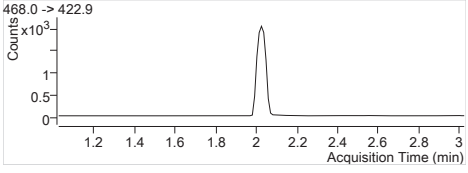

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 69.10 µg/L
Area ratio: 0.18552
Sample type: Sample



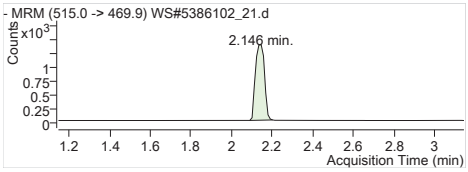



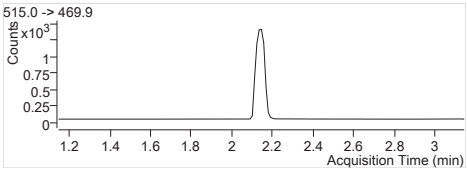

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 85.53 µg/L
Area ratio: 0.05179
Sample type: Sample



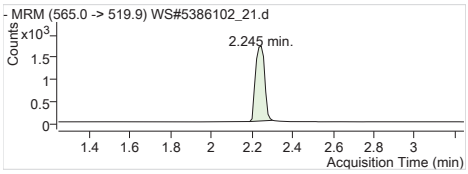



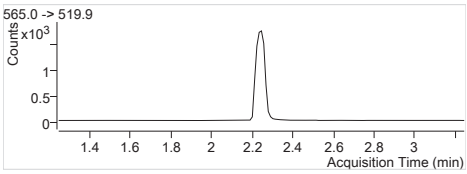

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 78.02 µg/L
Area ratio: 0.20904
Sample type: Sample



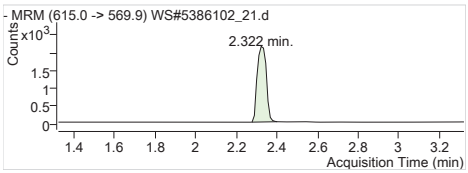



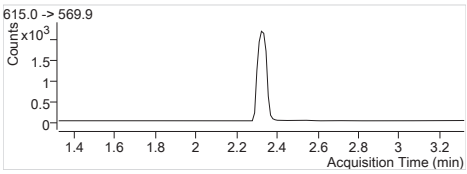

| | |
|---|---|
| **13C2-PFDA** | 515.0 -> 469.9 |
| RT (Exp. RT): | 2.146 (2.146) |
| Calc. conc. | 64.49 µg/L |
| Area ratio: | 0.10977 |
| Sample type: | Sample |



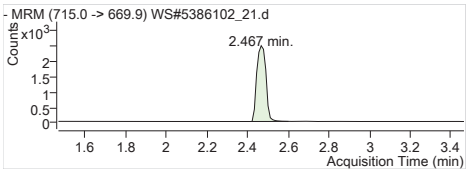



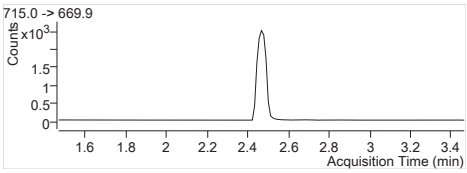

| | |
|---|---|
| **13C2-PFUnA** | 565.0 -> 519.9 |
| RT (Exp. RT): | 2.245 (2.245) |
| Calc. conc. | 68.05 µg/L |
| Area ratio: | 0.13735 |
| Sample type: | Sample |



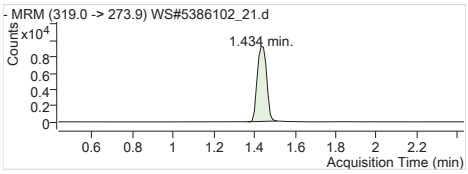



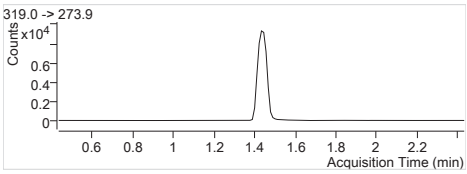

| | |
|---|---|
| **13C2-PFDoA** | 615.0 -> 569.9 |
| RT (Exp. RT): | 2.322 (2.322) |
| Calc. conc. | 61.87 µg/L |
| Area ratio: | 0.17336 |
| Sample type: | Sample |



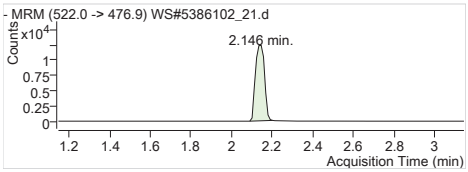



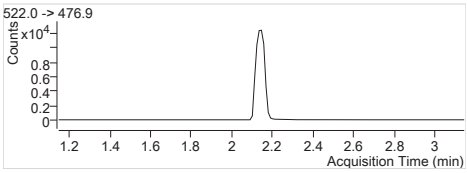

| | |
|---|---|
| **13C2-PFTeDA** | 715.0 -> 669.9 |
| RT (Exp. RT): | 2.467 (2.467) |
| Calc. conc. | 63.26 µg/L |
| Area ratio: | 0.20221 |
| Sample type: | Sample |




| | |
|---|---|
| **13C6-PFHxA** | 319.0 -> 273.9 |
| RT (Exp. RT): | 1.434 (1.434) |
| Calc. conc. | 2.24 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 2.146 (2.146) |
| Calc. conc. | 2.27 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

# Quantitation Results

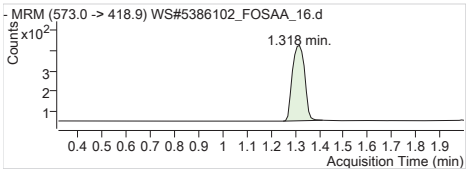
Agilent Technologies

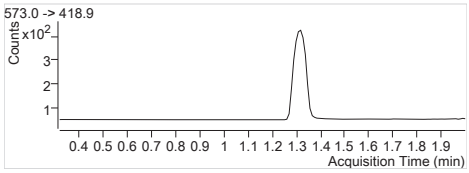
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:FZA801-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_16.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-E2 |
| **Acq. Date** | 2018/02/08 10:10:07 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

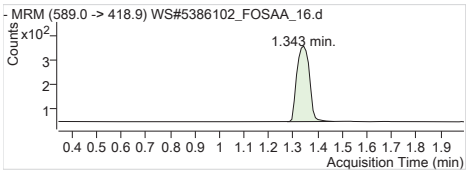
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1335 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1106 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 33971 | 0.89 | 1 µg/L | | |

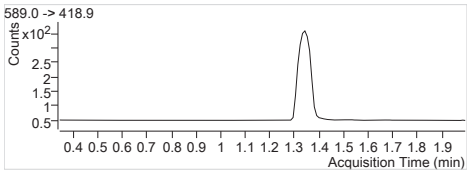
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1350 | 1.32 | - | 74.68 µg/L | - |
| D5-EtFOSAA | 1103 | 1.34 | - | 70.32 µg/L | - |
| 13C9-PFDA | 32722 | 0.89 | - | 2.35 µg/L | - |



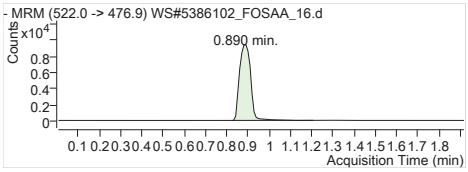



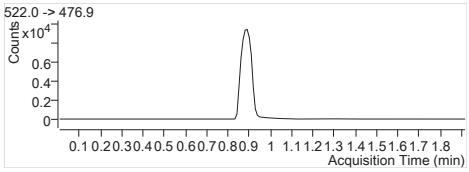

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Sample



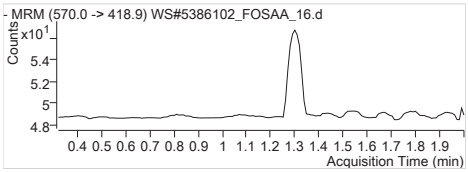



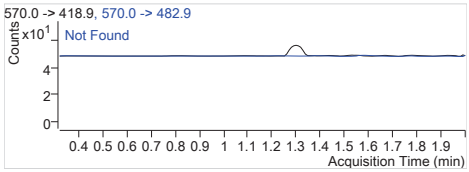

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



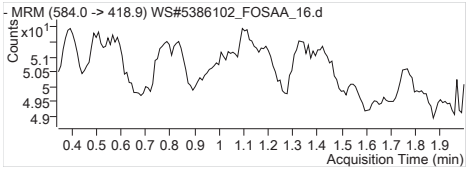



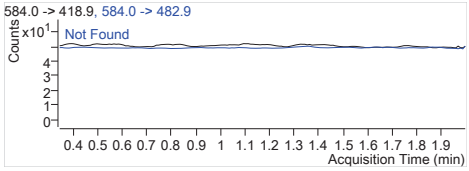

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.890 (0.919)
Concentration: 1 µg/L
Sample type: Sample



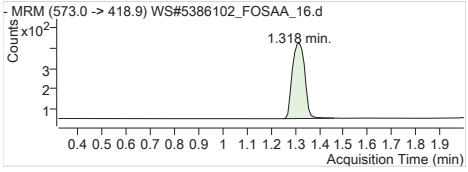



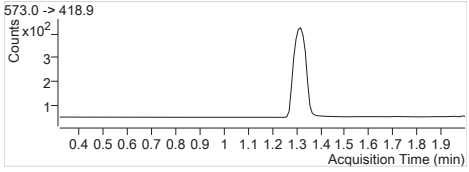

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.319)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



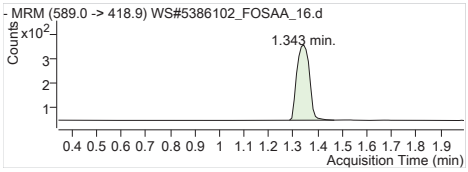



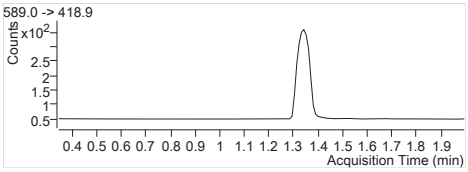

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



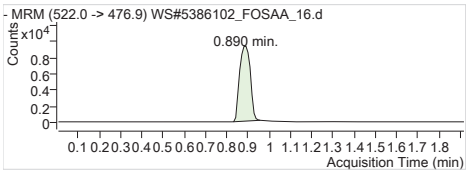



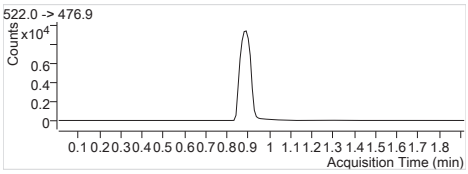

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 74.68 µg/L
Area ratio: 0.03974
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 70.32 µg/L |
| Area ratio: | 0.03247 |
| Sample type: | Sample |



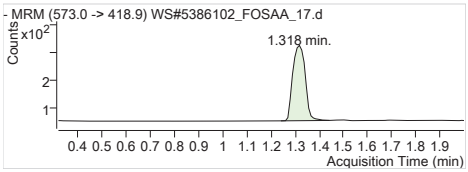

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.890 (0.919) |
| Calc. conc. | 2.35 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

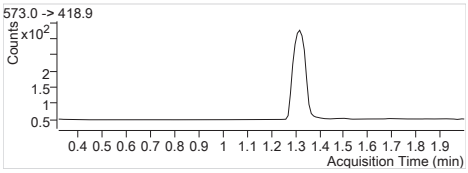
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:FZA802-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_17.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.033 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-E3 |
| **Acq. Date** | 2018/02/08 10:12:32 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

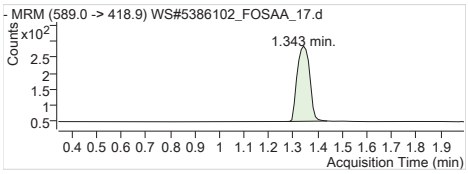
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 993 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 833 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 46757 | 0.90 | 1 µg/L | | |

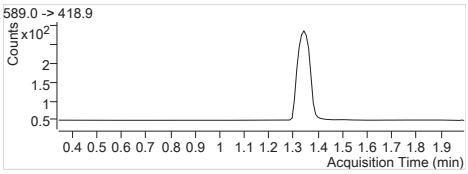
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 992 | 1.32 | - | 39.87 µg/L | - |
| D5-EtFOSAA | 837 | 1.34 | - | 38.77 µg/L | - |
| 13C9-PFDA | 45409 | 0.90 | - | 4.49 µg/L | - |



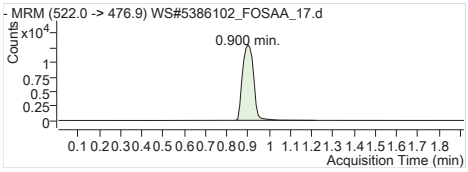



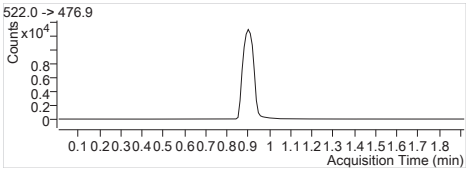

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Sample



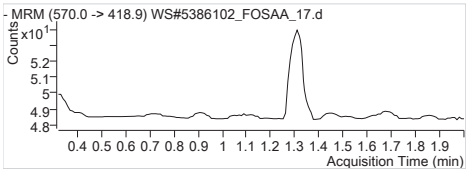



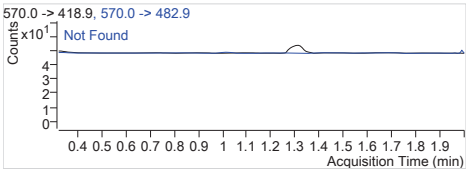

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



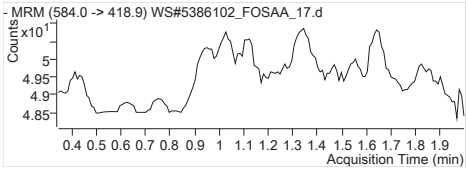



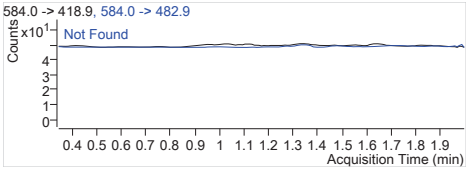

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.900 (0.919)
Concentration: 1 µg/L
Sample type: Sample



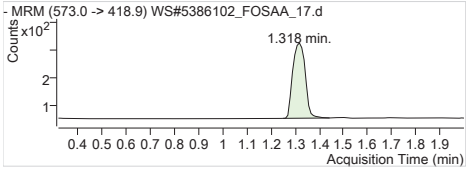



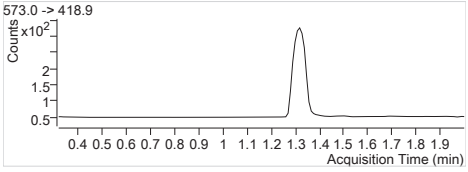

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.319)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



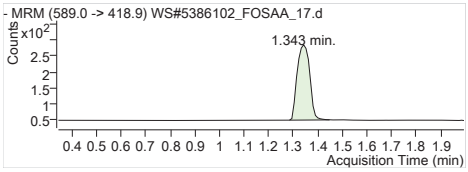



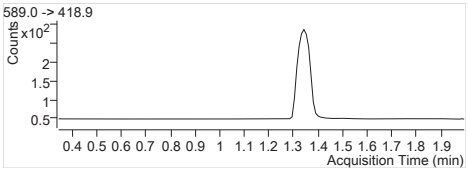

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



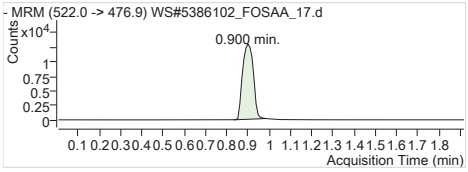



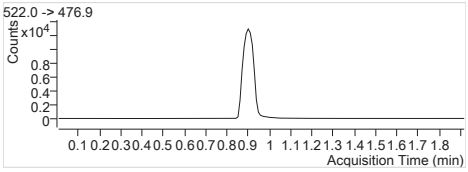

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 39.87 µg/L
Area ratio: 0.02122
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 38.77 µg/L |
| Area ratio: | 0.01790 |
| Sample type: | Sample |



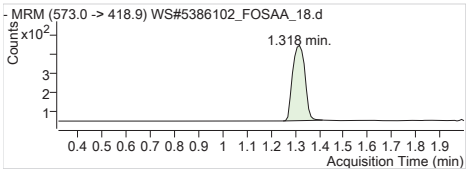

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.900 (0.919) |
| Calc. conc. | 4.49 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

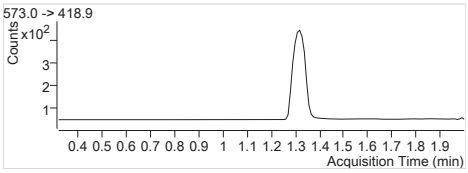
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:FZA803-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_18.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-E4 |
| **Acq. Date** | 2018/02/08 10:14:57 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

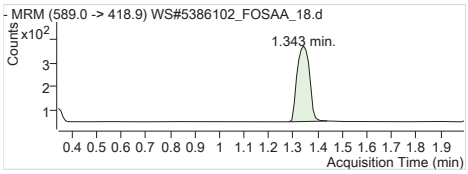
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1413 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1138 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 38697 | 0.90 | 1 µg/L | | |

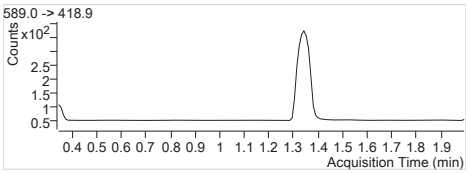
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1420 | 1.32 | - | 68.96 µg/L | - |
| D5-EtFOSAA | 1150 | 1.34 | - | 64.36 µg/L | - |
| 13C9-PFDA | 37497 | 0.90 | - | 2.69 µg/L | - |



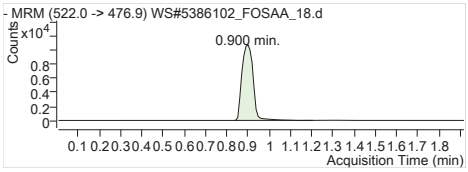



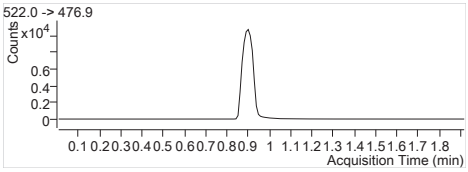

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Sample



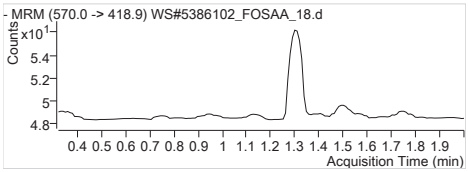



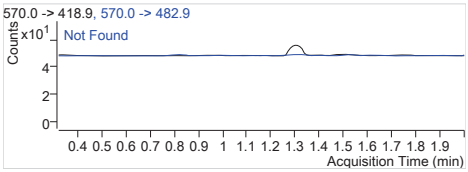

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



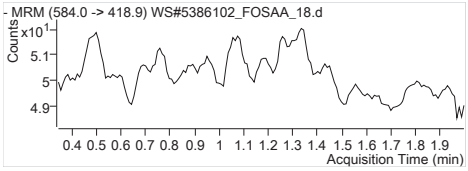



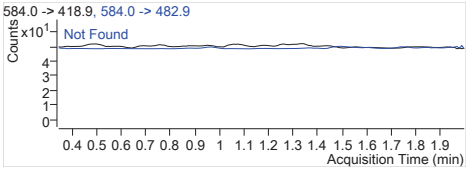

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.900 (0.919)
Concentration: 1 µg/L
Sample type: Sample



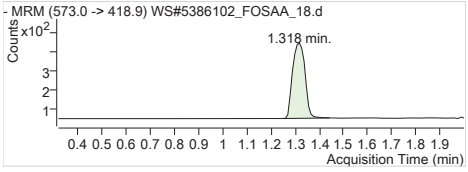



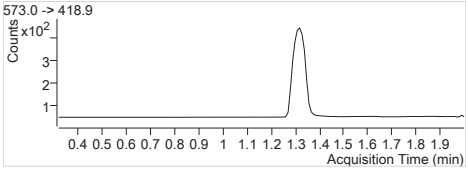

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.319)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



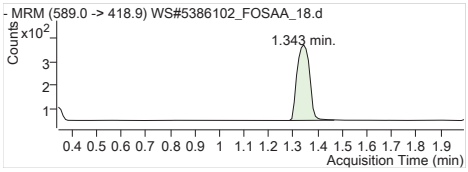



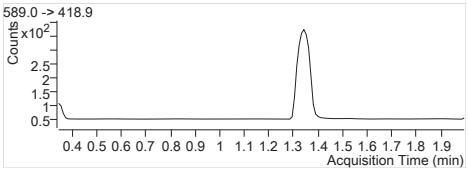

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



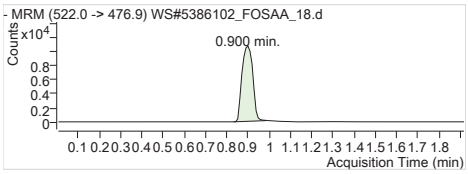



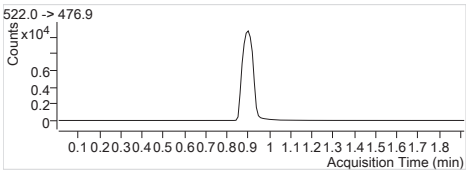

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 68.96 µg/L
Area ratio: 0.03670
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 64.36 µg/L |
| Area ratio: | 0.02972 |
| Sample type: | Sample |



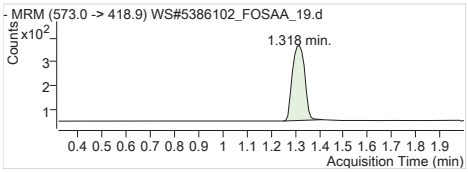

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.900 (0.919) |
| Calc. conc. | 2.69 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

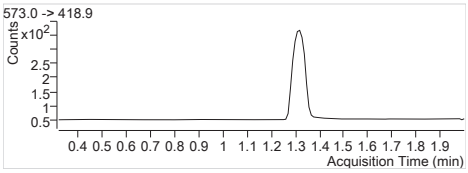
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:FZA804-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_19.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-E5 |
| **Acq. Date** | 2018/02/08 10:17:20 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

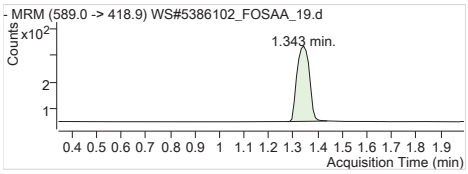
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1131 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1007 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 34683 | 0.89 | 1 µg/L | | |

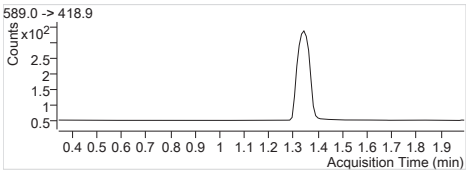
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1154 | 1.32 | - | 62.53 µg/L | - |
| D5-EtFOSAA | 1006 | 1.34 | - | 62.82 µg/L | - |
| 13C9-PFDA | 33884 | 0.89 | - | 2.43 µg/L | - |



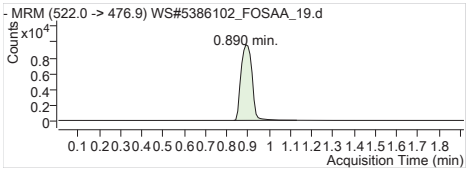



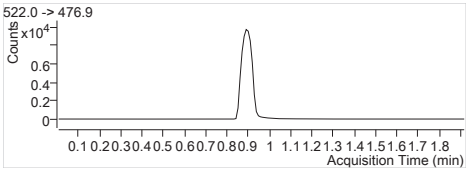

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Sample



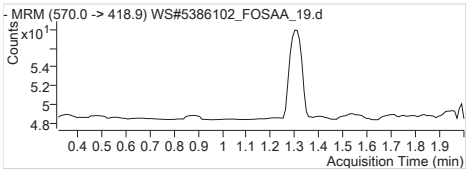



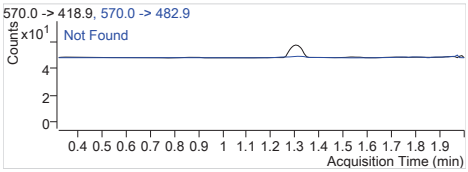

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



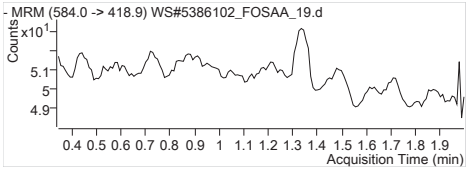



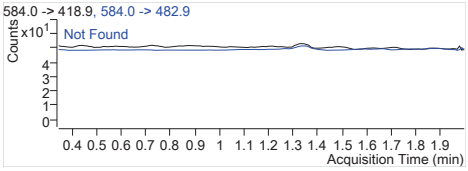

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.890 (0.919)
Concentration: 1 µg/L
Sample type: Sample



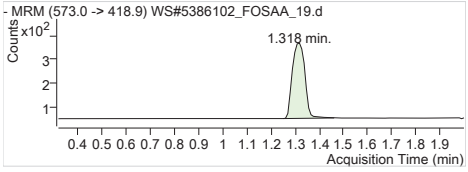



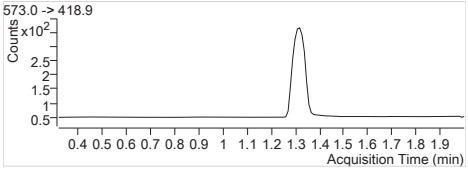

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.319)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



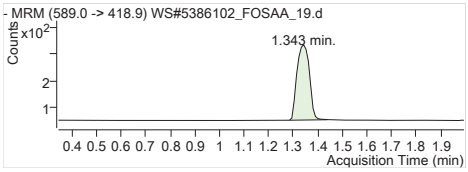



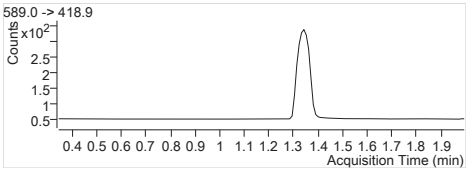

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



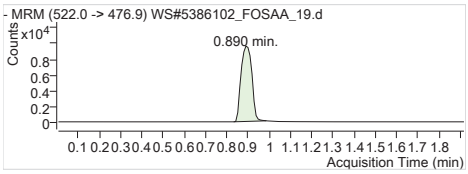



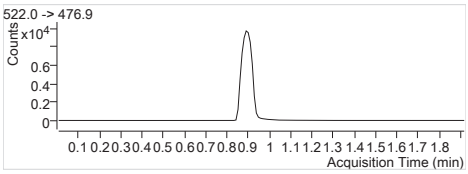

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 62.53 µg/L
Area ratio: 0.03327
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 62.82 µg/L |
| Area ratio: | 0.02901 |
| Sample type: | Sample |



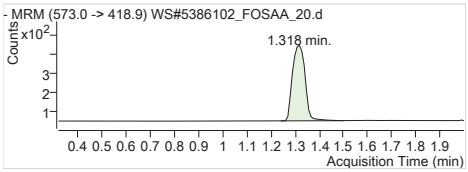

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.890 (0.919) |
| Calc. conc. | 2.43 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

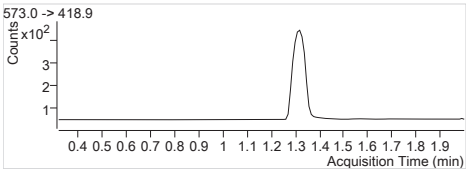
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:FZA805-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_20.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.025 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-E6 |
| **Acq. Date** | 2018/02/08 10:19:45 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

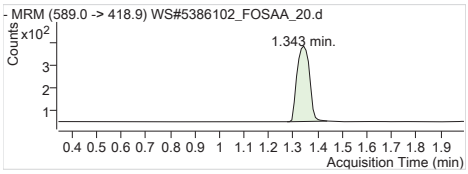
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1426 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1189 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 33579 | 0.90 | 1 µg/L | | |

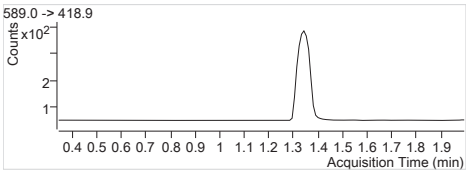
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1425 | 1.32 | - | 79.75 µg/L | - |
| D5-EtFOSAA | 1202 | 1.34 | - | 77.53 µg/L | - |
| 13C9-PFDA | 32429 | 0.90 | - | 2.43 µg/L | - |



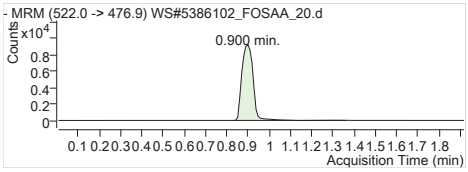



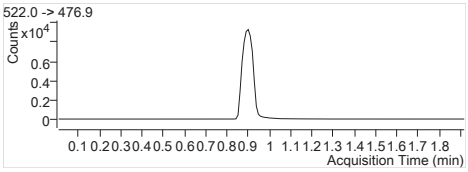

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Sample



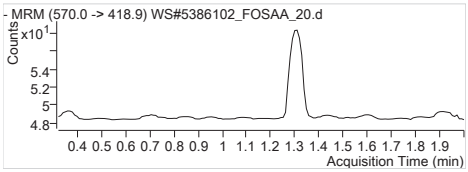



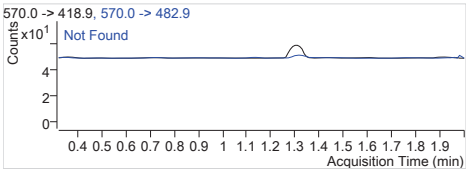

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



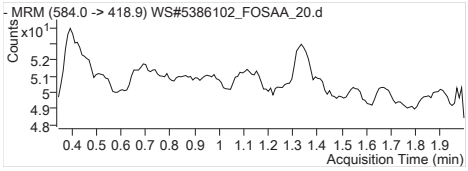



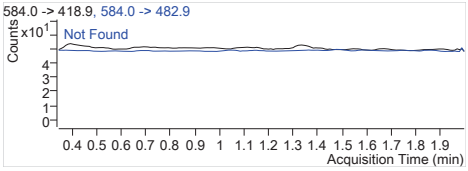

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.900 (0.919)
Concentration: 1 µg/L
Sample type: Sample



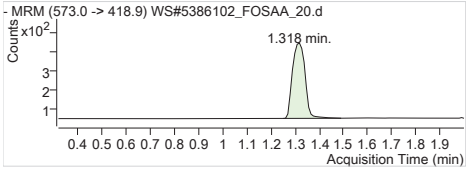



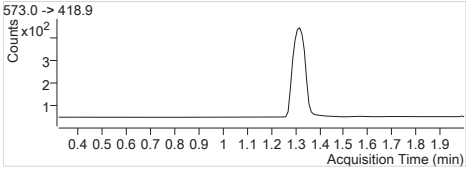

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.319)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



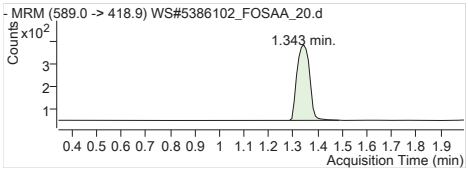



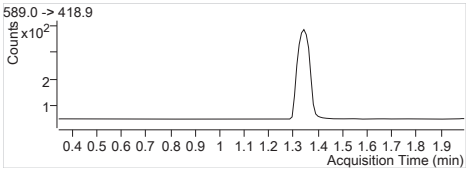

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



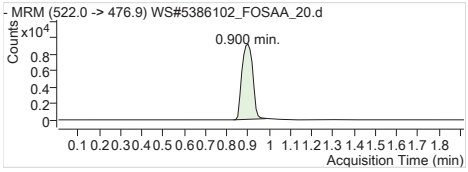



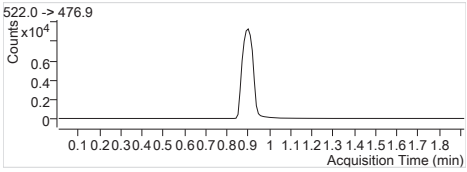

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 79.75 µg/L
Area ratio: 0.04244
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 77.53 µg/L |
| Area ratio: | 0.03580 |
| Sample type: | Sample |



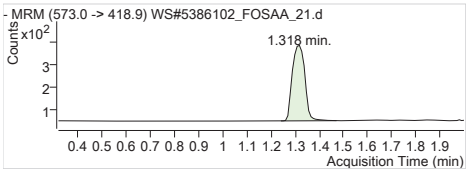

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.900 (0.919) |
| Calc. conc. | 2.43 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

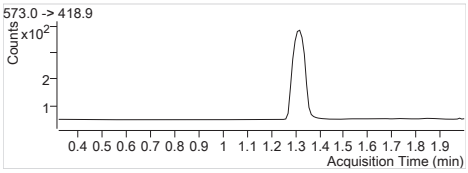
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:FZA806-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_21.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-E7 |
| **Acq. Date** | 2018/02/08 10:22:10 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

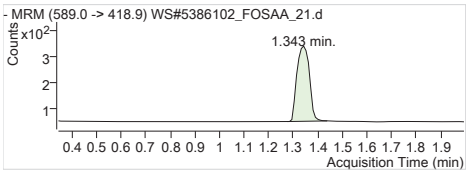
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1207 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1023 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 30990 | 0.88 | 1 µg/L | | |

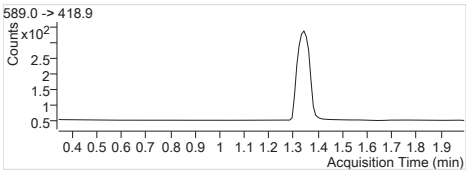
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1203 | 1.32 | - | 72.95 µg/L | - |
| D5-EtFOSAA | 1036 | 1.34 | - | 72.40 µg/L | - |
| 13C9-PFDA | 29837 | 0.88 | - | 2.14 µg/L | - |



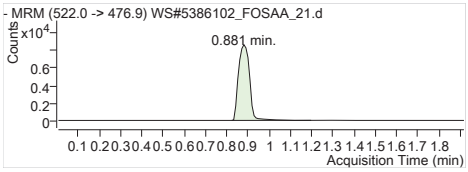



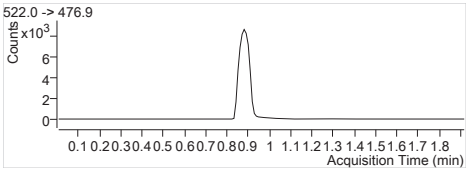

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Sample



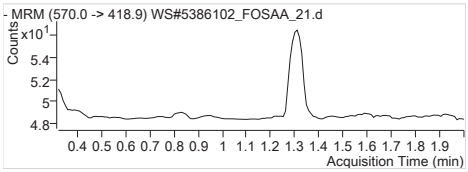



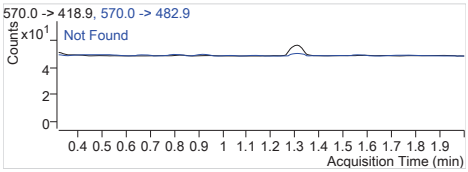

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



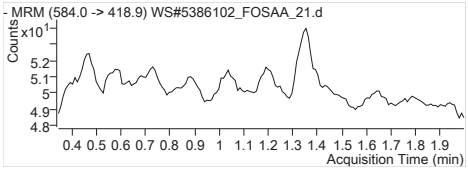



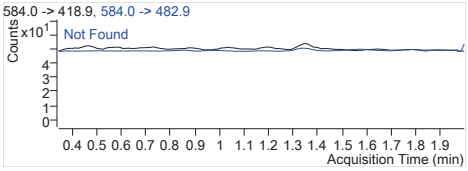

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.881 (0.919)
Concentration: 1 µg/L
Sample type: Sample



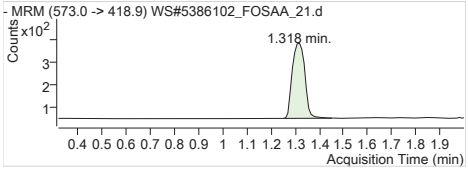



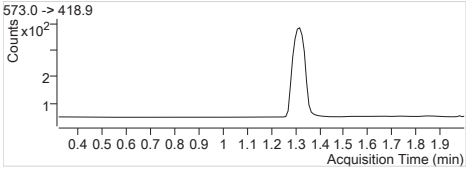

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.319)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



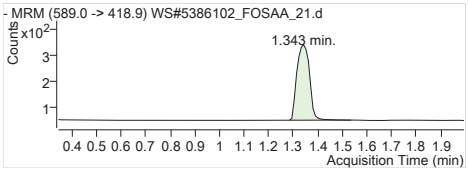



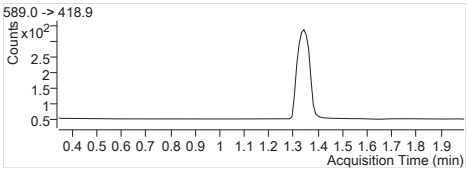

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



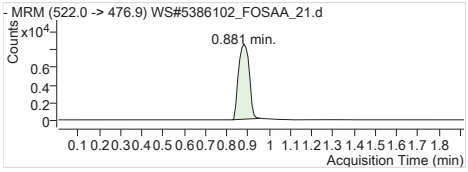



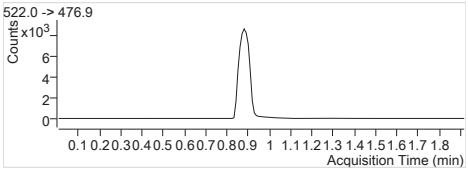

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 72.95 µg/L
Area ratio: 0.03882
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 72.40 µg/L |
| Area ratio: | 0.03343 |
| Sample type: | Sample |



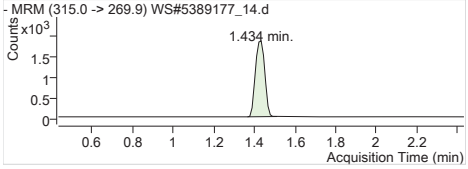

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.881 (0.919) |
| Calc. conc. | 2.14 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

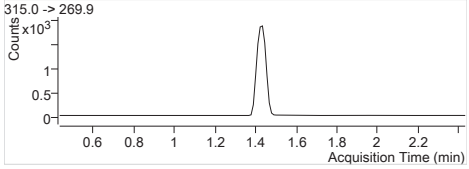
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5389177:FZA807-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_14.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.0261 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-B4 |
| **Acq. Date** | 2018/02/09 1:01:33 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

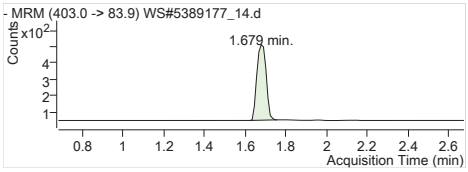
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5883 | 1.43 | 1 µg/L | | |
| MPFHxS | 1471 | 1.68 | 1 µg/L | | |
| MPFHpA | 8348 | 1.69 | 1 µg/L | | |
| MPFOA | 8285 | 1.88 | 1 µg/L | | |
| MPFOS | 1841 | 1.98 | 1 µg/L | | |
| MPFNA | 8301 | 2.02 | 1 µg/L | | |
| MPFDA | 6611 | 2.14 | 1 µg/L | | |
| MPFUnA | 8260 | 2.23 | 1 µg/L | | |
| MPFDoA | 10336 | 2.32 | 1 µg/L | | |
| MPFTeDA | 10962 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 22530 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 29719 | 2.13 | 1 µg/L | | |

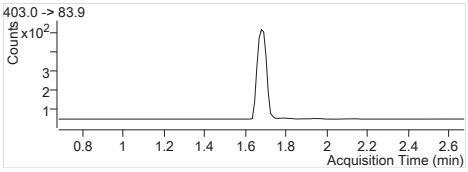
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 5883 | 1.43 | - | 93.13 µg/L | - |
| 18O2-PFHxS | 1471 | 1.68 | - | 90.39 µg/L | - |
| 13C4-PFHpA | 8348 | 1.69 | - | 99.36 µg/L | - |
| 13C4-PFOA | 8285 | 1.88 | - | 92.16 µg/L | - |
| 13C4-PFOS | 1841 | 1.98 | - | 92.26 µg/L | - |
| 13C5-PFNA | 8301 | 2.02 | - | 91.59 µg/L | - |
| 13C2-PFDA | 6511 | 2.14 | - | 86.98 µg/L | - |
| 13C2-PFUnA | 8260 | 2.23 | - | 92.52 µg/L | - |
| 13C2-PFDoA | 10336 | 2.32 | - | 87.76 µg/L | - |
| 13C2-PFTeDA | 11163 | 2.47 | - | 79.19 µg/L | - |
| 13C6-PFHxA | 22530 | 1.43 | - | 2.75 µg/L | - |
| 13C9-PFDA | 29719 | 2.13 | - | 2.71 µg/L | - |



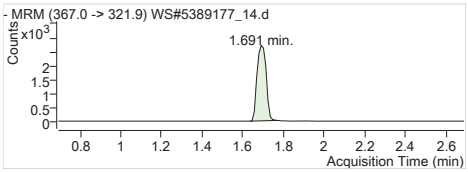



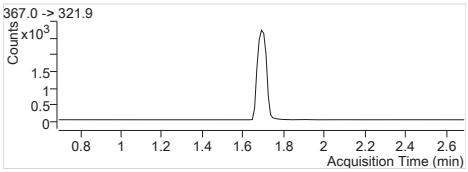

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.434) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



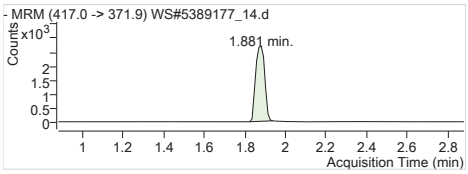



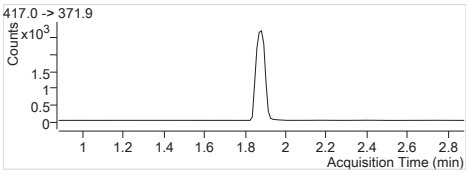

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



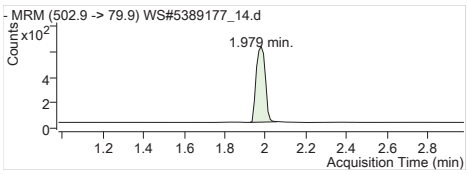



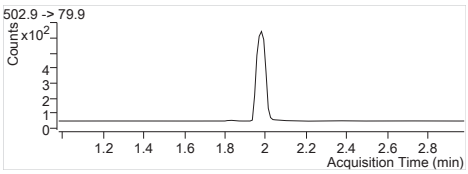

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



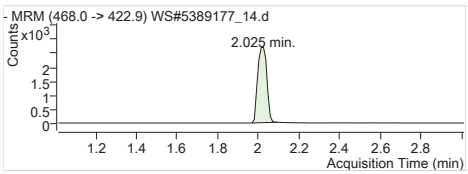



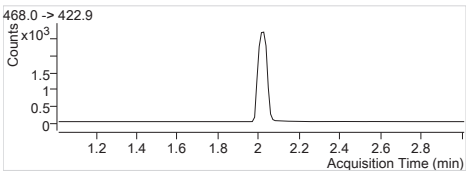

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



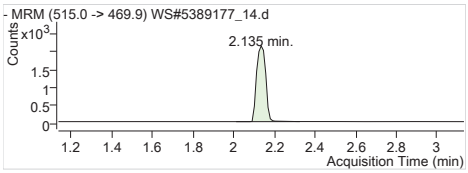



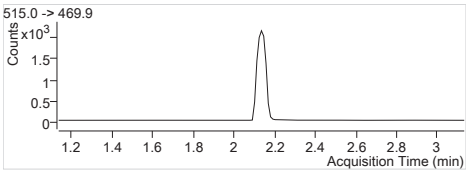

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



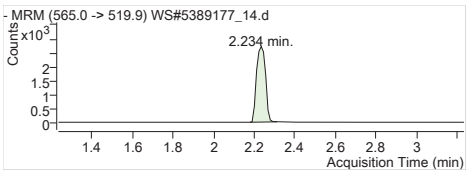



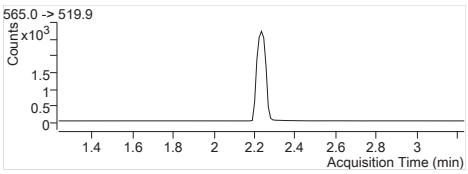

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.014)
Concentration: 1 µg/L
Sample type: Sample



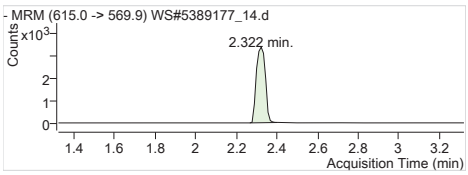



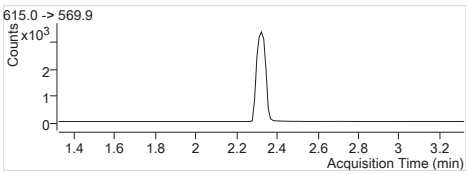

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



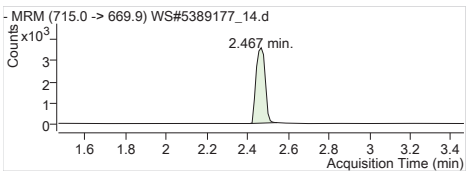



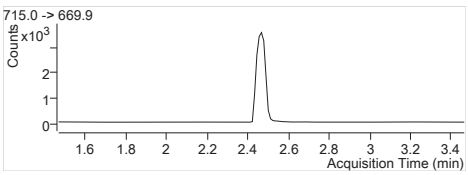

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



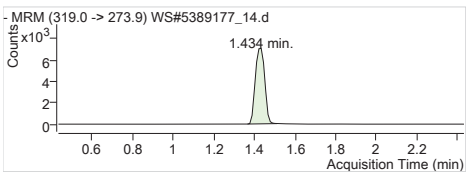



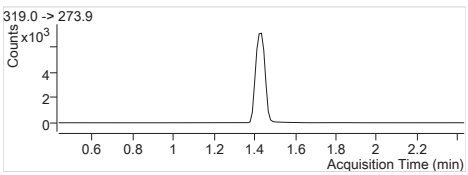

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



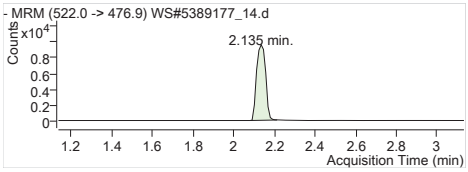



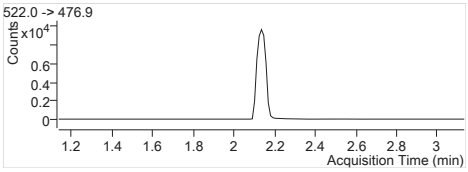

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



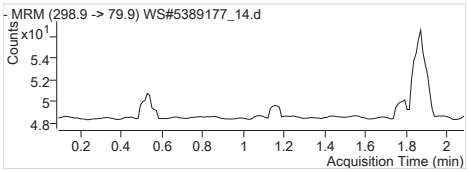



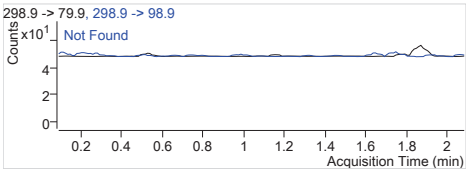

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



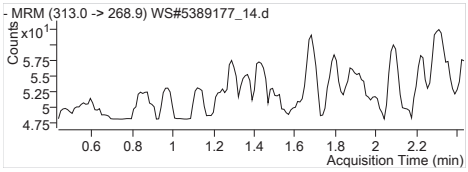



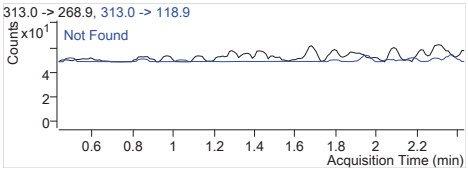

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



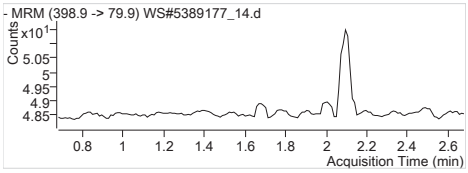



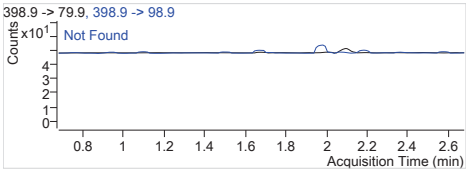

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



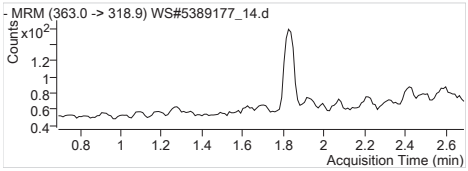



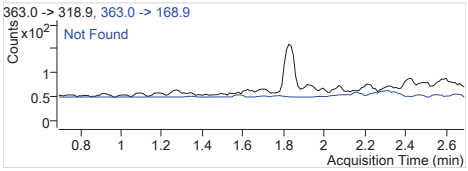

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



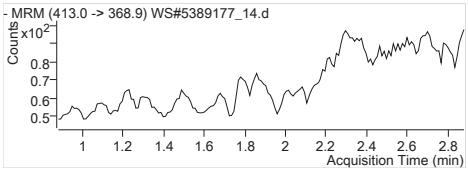



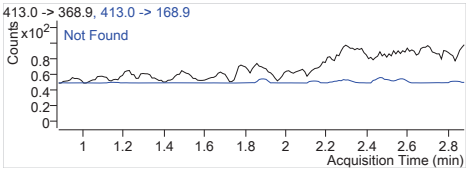

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.679)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



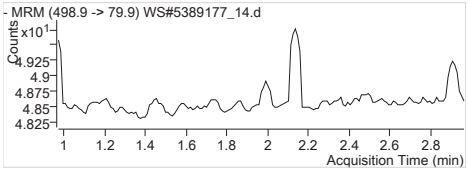



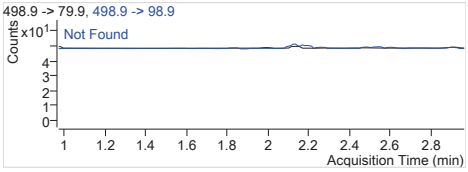

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



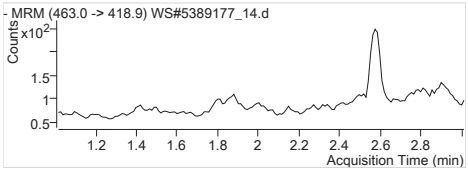



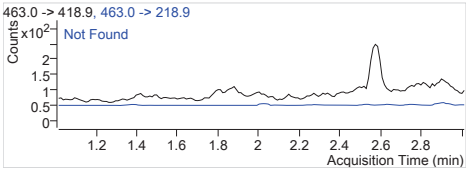

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



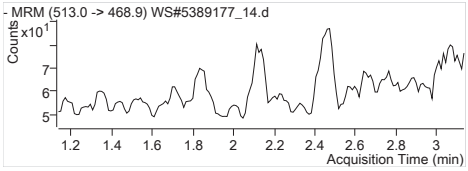



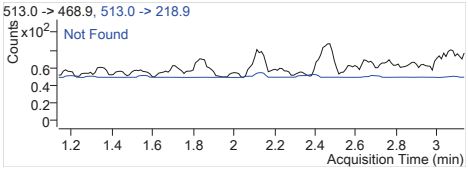

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.968)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



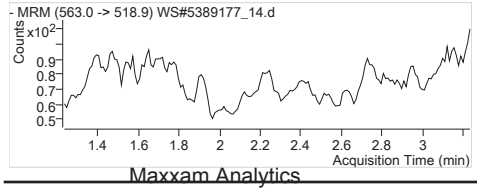



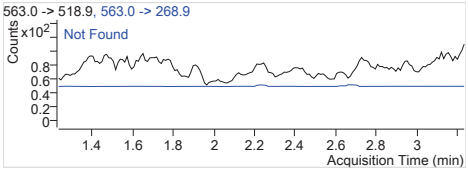

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



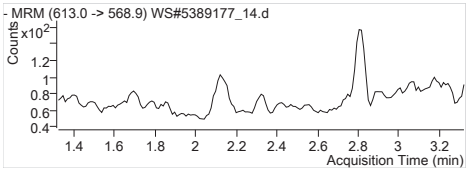



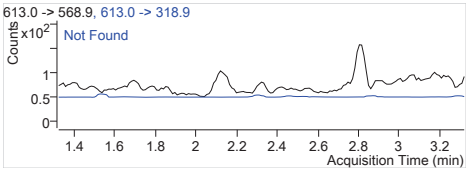

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



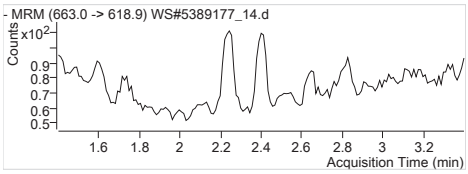



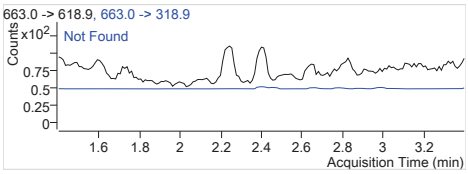

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



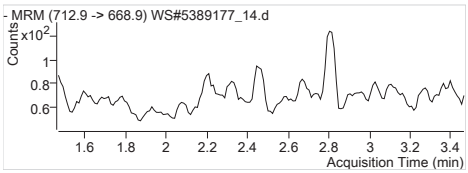



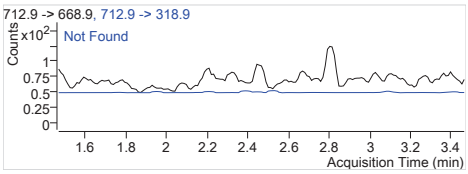

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



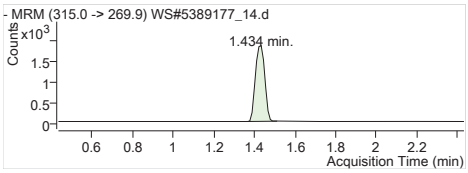



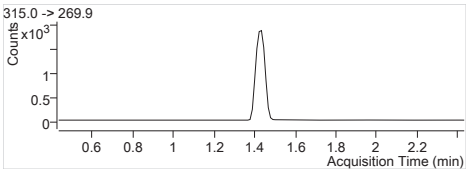

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



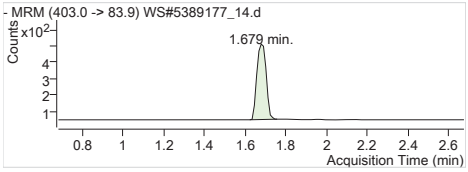



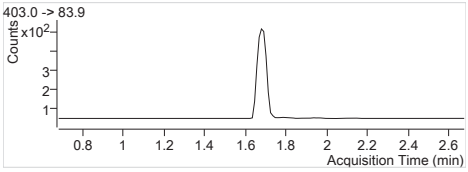

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



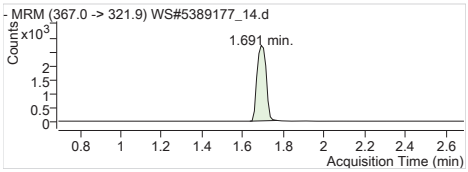



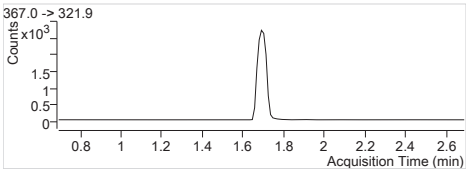

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 93.13 µg/L
Area ratio: 0.26112
Sample type: Sample



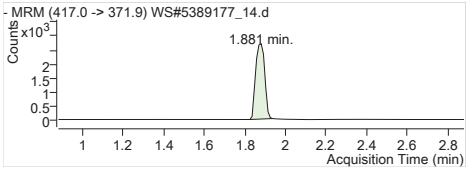



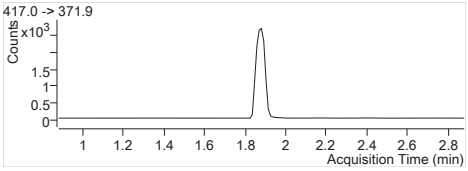

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 90.39 µg/L
Area ratio: 0.06529
Sample type: Sample



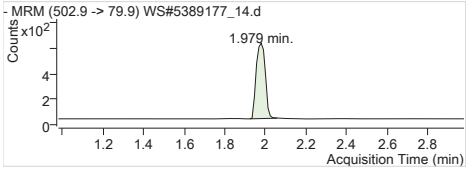



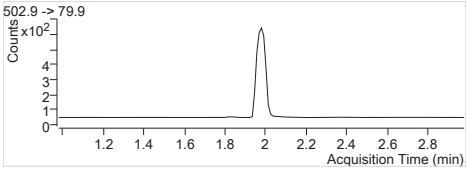

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 99.36 µg/L
Area ratio: 0.37053
Sample type: Sample



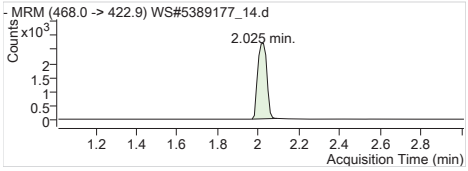



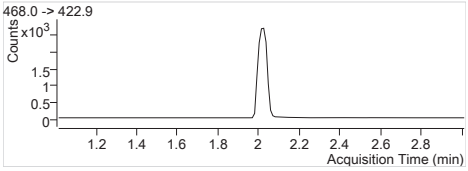

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 92.16 µg/L
Area ratio: 0.36773
Sample type: Sample



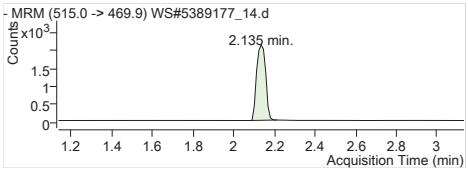



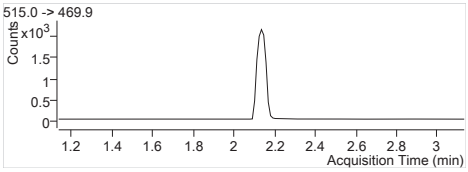

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 92.26 µg/L
Area ratio: 0.08171
Sample type: Sample



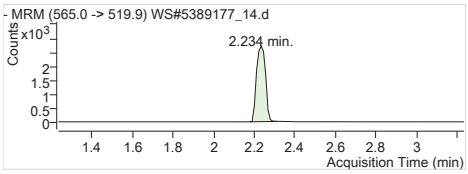



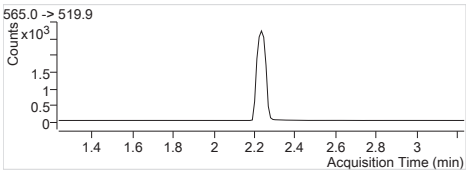

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.014)
Calc. conc. 91.59 µg/L
Area ratio: 0.36844
Sample type: Sample



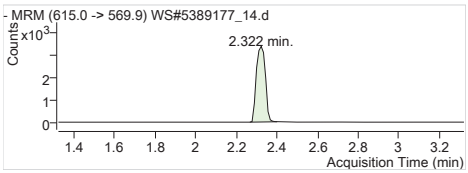



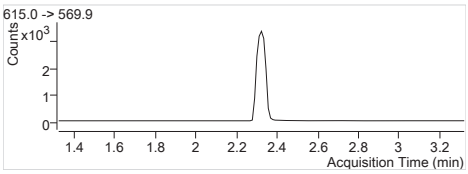

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 86.98 µg/L
Area ratio: 0.21909
Sample type: Sample



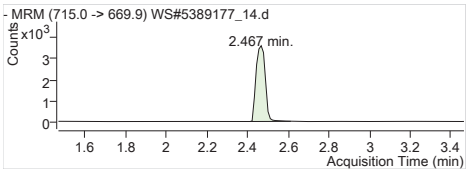



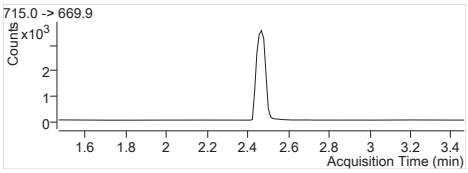

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 92.52 µg/L
Area ratio: 0.27794
Sample type: Sample



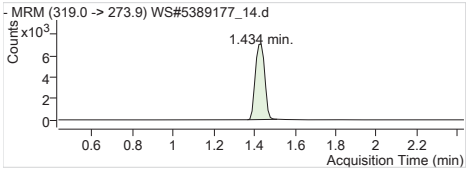



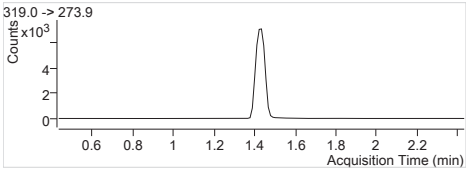

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 87.76 µg/L
Area ratio: 0.34779
Sample type: Sample



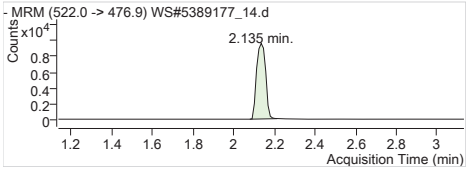



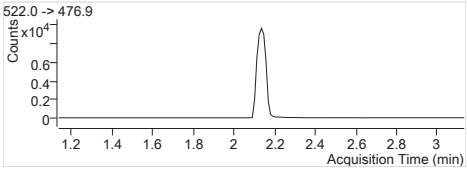

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 79.19 µg/L
Area ratio: 0.37562
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.75 µg/L
Area ratio: 0
Sample type: Sample



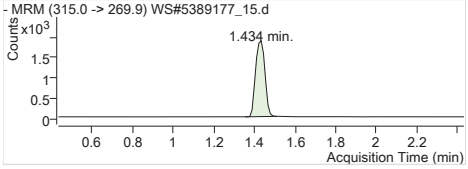

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 2.71 µg/L
Area ratio: 0
Sample type: Sample

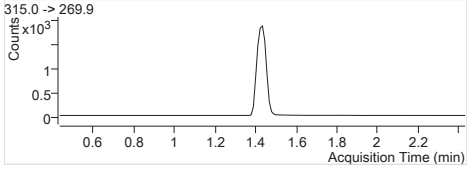
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5389177:FZA808-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_15.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.0261 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-B5 |
| **Acq. Date** | 2018/02/09 1:06:29 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

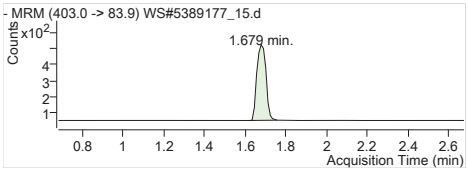
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5943 | 1.43 | 1 µg/L | | |
| MPFHxS | 1493 | 1.68 | 1 µg/L | | |
| MPFHpA | 7908 | 1.69 | 1 µg/L | | |
| MPFOA | 7959 | 1.88 | 1 µg/L | | |
| MPFOS | 1764 | 1.98 | 1 µg/L | | |
| MPFNA | 8413 | 2.01 | 1 µg/L | | |
| MPFDA | 6781 | 2.14 | 1 µg/L | | |
| MPFUnA | 7136 | 2.23 | 1 µg/L | | |
| MPFDoA | 9154 | 2.32 | 1 µg/L | | |
| MPFTeDA | 9611 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 22142 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 29462 | 2.13 | 1 µg/L | | |

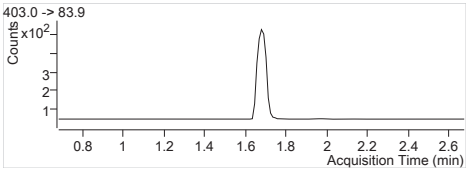
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 5943 | 1.43 | - | 95.73 µg/L | - |
| 18O2-PFHxS | 1493 | 1.68 | - | 93.35 µg/L | - |
| 13C4-PFHpA | 7908 | 1.69 | - | 95.77 µg/L | - |
| 13C4-PFOA | 7959 | 1.88 | - | 90.09 µg/L | - |
| 13C4-PFOS | 1764 | 1.98 | - | 89.95 µg/L | - |
| 13C5-PFNA | 8412 | 2.01 | - | 94.45 µg/L | - |
| 13C2-PFDA | 6705 | 2.14 | - | 90.35 µg/L | - |
| 13C2-PFUnA | 7136 | 2.23 | - | 80.63 µg/L | - |
| 13C2-PFDoA | 9154 | 2.32 | - | 78.40 µg/L | - |
| 13C2-PFTeDA | 9945 | 2.47 | - | 71.17 µg/L | - |
| 13C6-PFHxA | 22142 | 1.43 | - | 2.70 µg/L | - |
| 13C9-PFDA | 29462 | 2.13 | - | 2.69 µg/L | - |



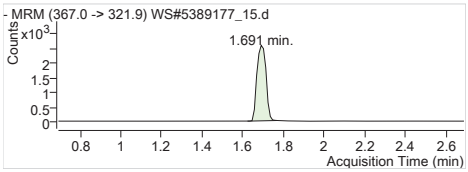



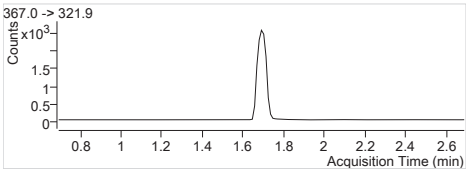

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.434) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



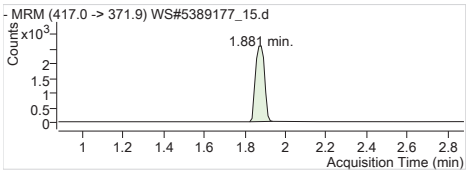



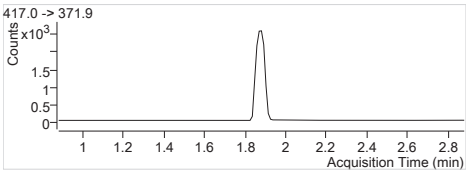

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



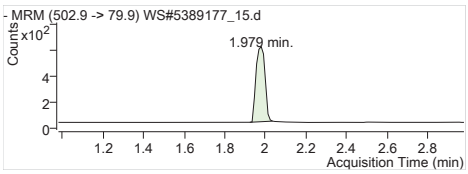



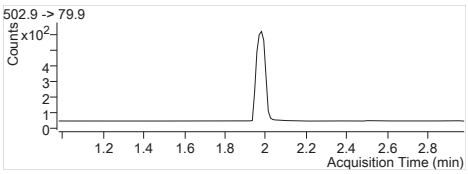

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



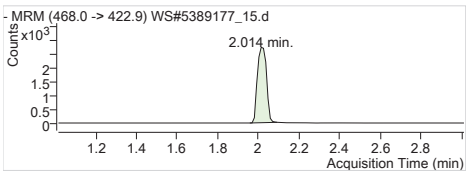



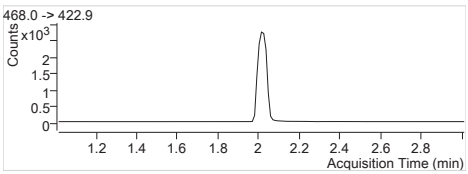

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



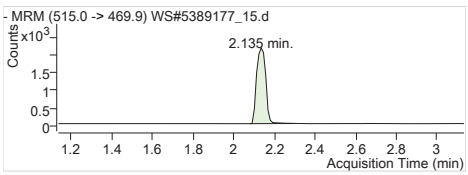



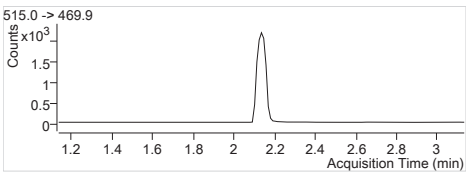

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



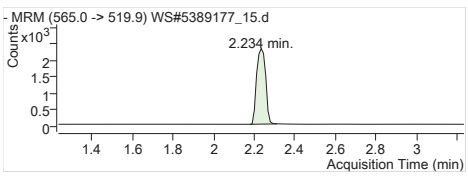



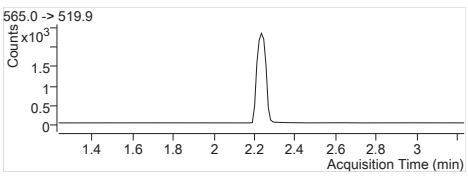

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



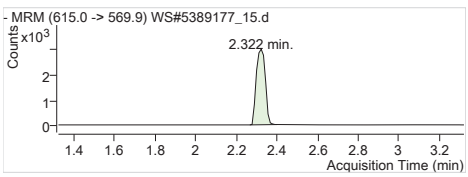



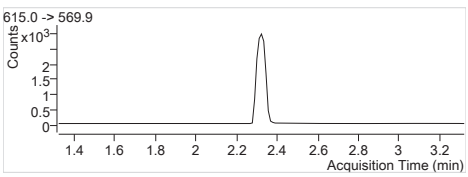

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



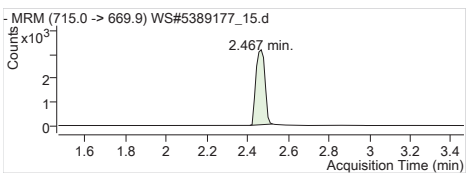



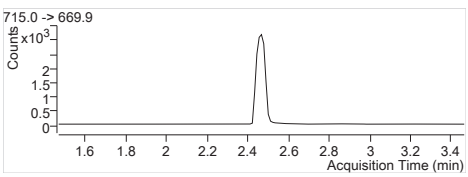

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



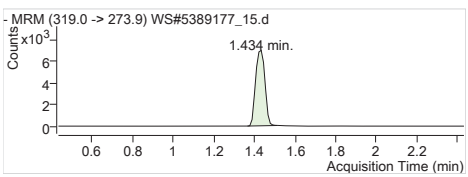



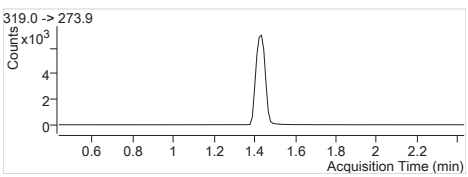

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



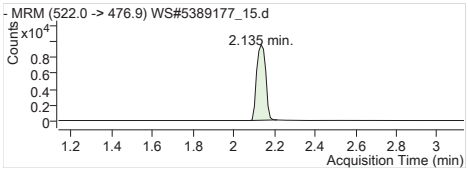



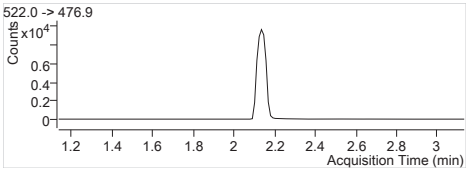

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



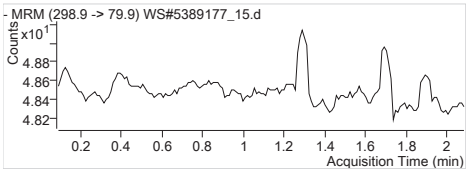



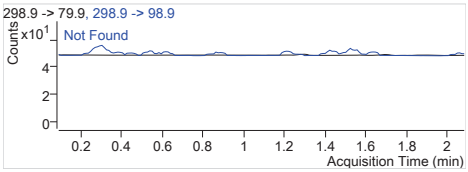

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



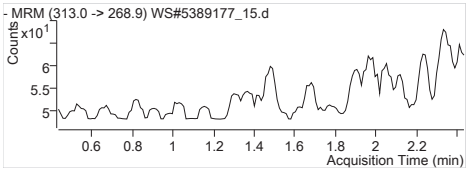



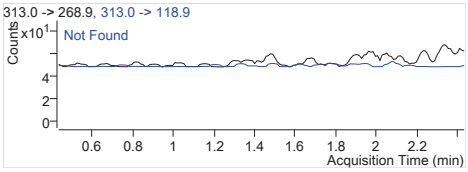

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



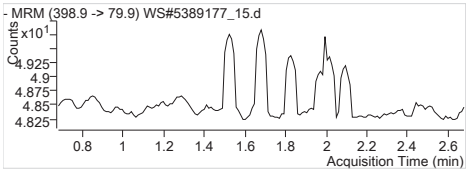



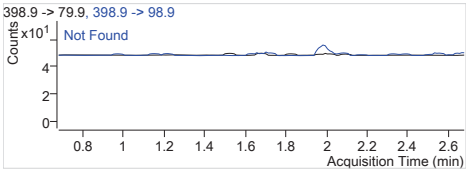

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



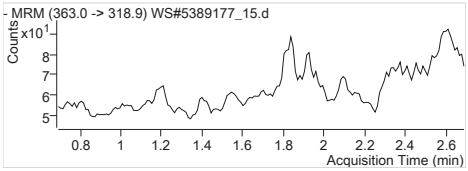



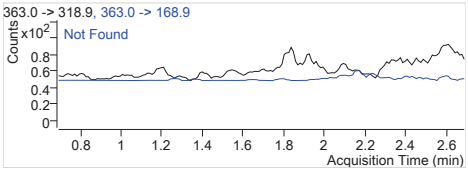

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



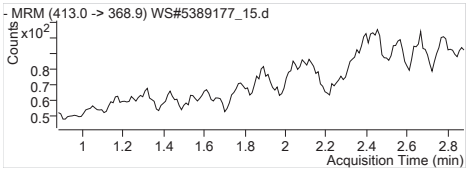



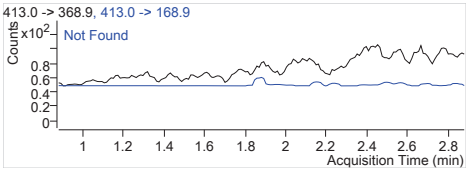

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.679)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



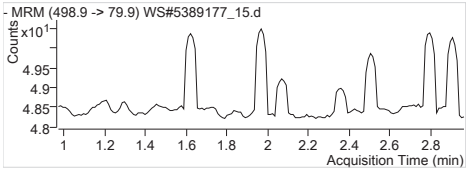



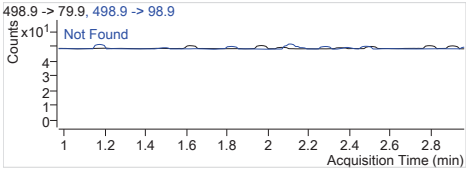

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



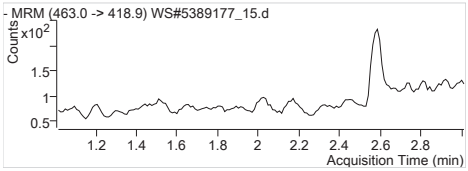



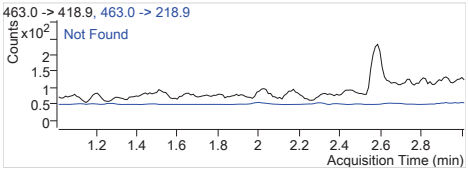

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



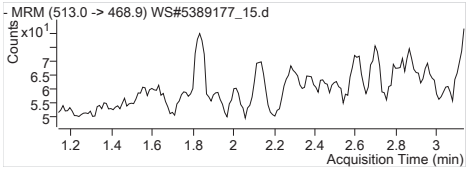



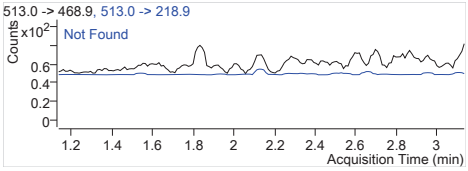

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.968)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



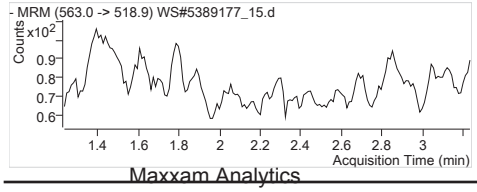



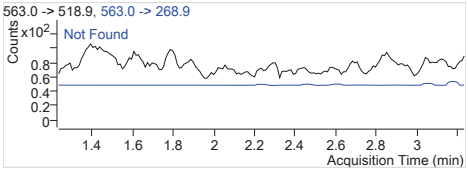

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



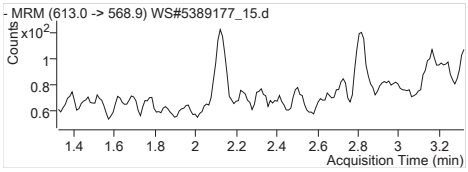



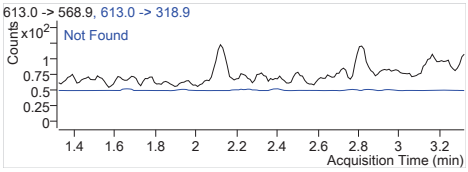

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



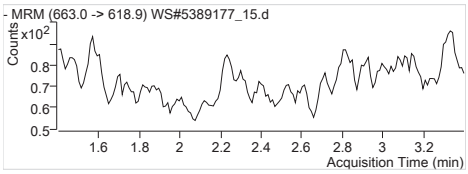



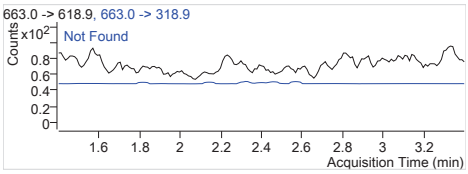

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



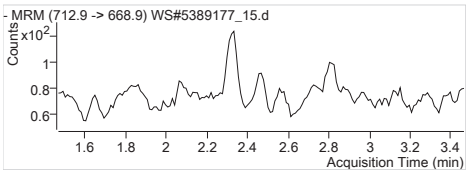



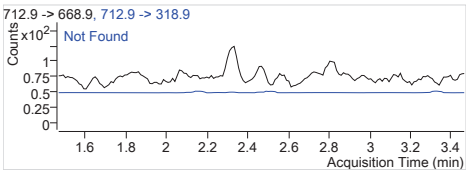

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



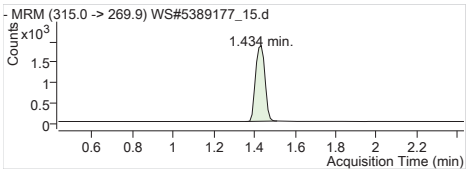



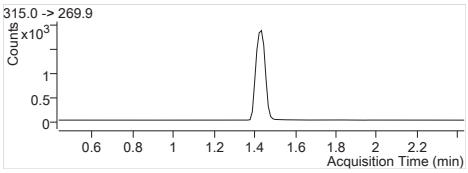

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



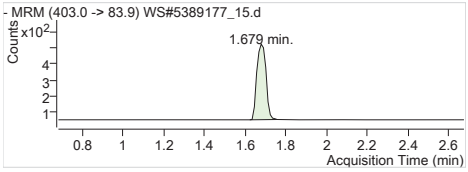



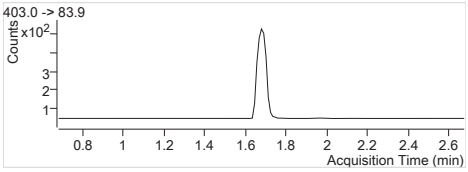

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



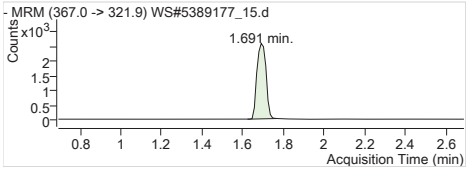



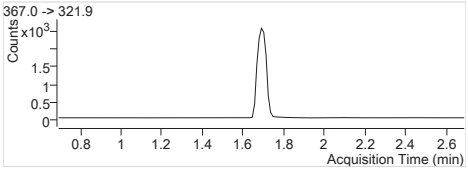

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 95.73 µg/L
Area ratio: 0.26840
Sample type: Sample



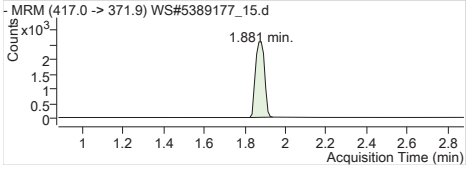



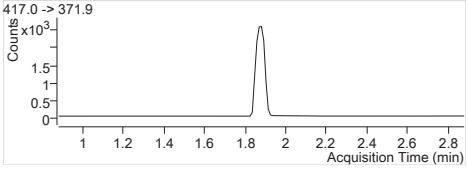

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 93.35 µg/L
Area ratio: 0.06743
Sample type: Sample



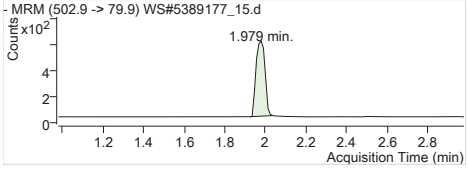



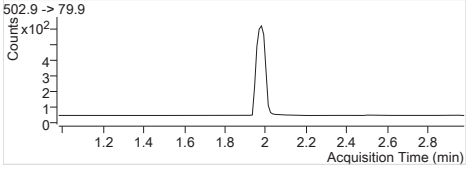

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 95.77 µg/L
Area ratio: 0.35715
Sample type: Sample



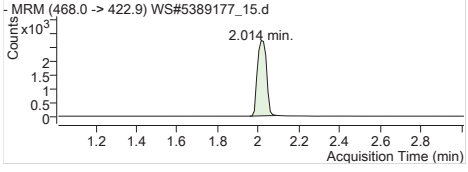



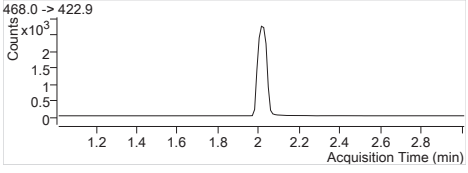

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 90.09 µg/L
Area ratio: 0.35945
Sample type: Sample



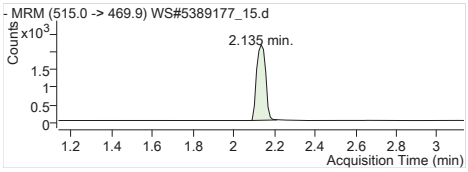



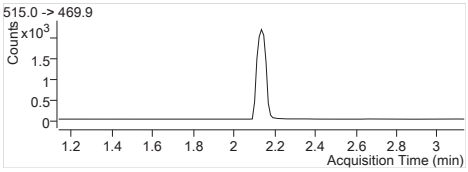

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 89.95 µg/L
Area ratio: 0.07967
Sample type: Sample



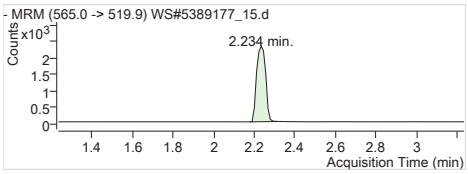



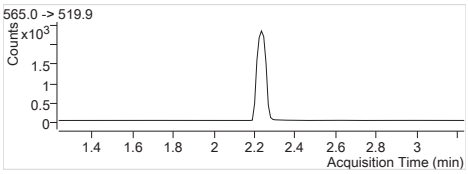

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 94.45 µg/L
Area ratio: 0.37991
Sample type: Sample



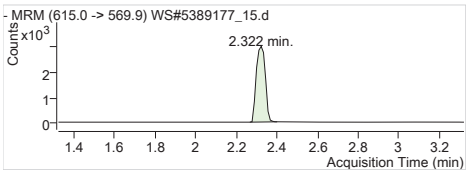



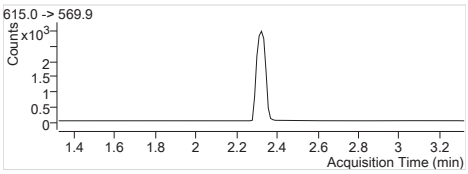

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 90.35 µg/L
Area ratio: 0.22758
Sample type: Sample



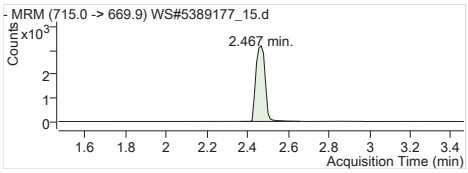



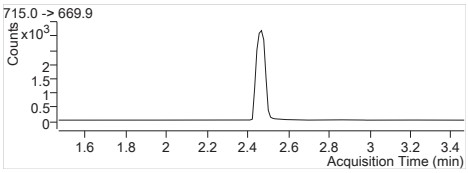

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 80.63 µg/L
Area ratio: 0.24221
Sample type: Sample



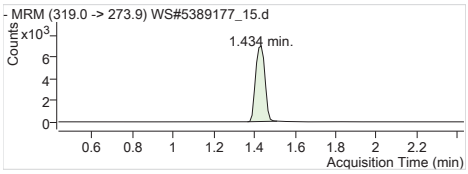



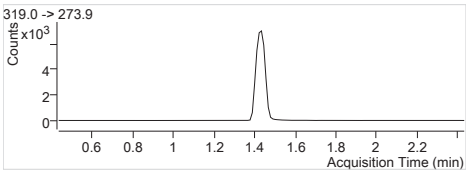

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 78.40 µg/L
Area ratio: 0.31071
Sample type: Sample



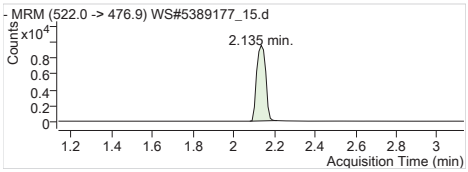



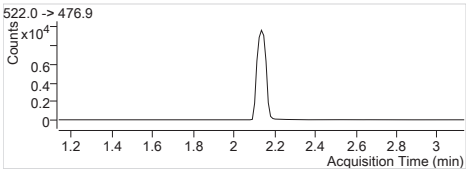

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 71.17 µg/L
Area ratio: 0.33755
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.70 µg/L
Area ratio: 0
Sample type: Sample



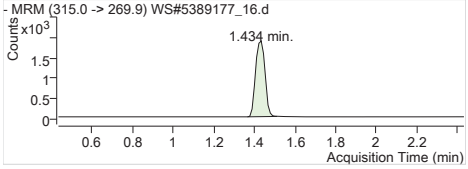

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 2.69 µg/L
Area ratio: 0
Sample type: Sample

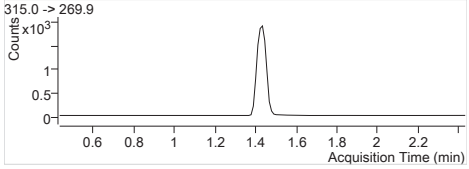
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5389177:FZA809-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_16.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-B6 |
| **Acq. Date** | 2018/02/09 1:11:25 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

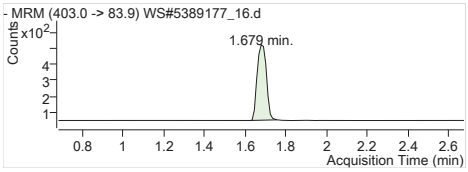
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6022 | 1.43 | 1 µg/L | | |
| MPFHxS | 1496 | 1.68 | 1 µg/L | | |
| MPFHpA | 7955 | 1.69 | 1 µg/L | | |
| MPFOA | 8186 | 1.88 | 1 µg/L | | |
| MPFOS | 1989 | 1.98 | 1 µg/L | | |
| MPFNA | 8298 | 2.01 | 1 µg/L | | |
| MPFDA | 6919 | 2.14 | 1 µg/L | | |
| MPFUnA | 7523 | 2.23 | 1 µg/L | | |
| MPFDoA | 9653 | 2.32 | 1 µg/L | | |
| MPFTeDA | 10256 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 21360 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 26718 | 2.13 | 1 µg/L | | |

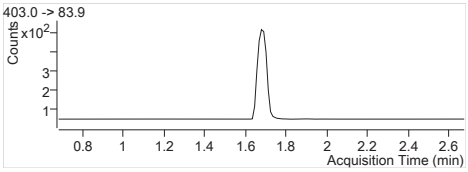
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6022 | 1.43 | - | 100.56 µg/L | - |
| 18O2-PFHxS | 1496 | 1.68 | - | 96.96 µg/L | - |
| 13C4-PFHpA | 7955 | 1.69 | - | 99.87 µg/L | - |
| 13C4-PFOA | 8186 | 1.88 | - | 96.05 µg/L | - |
| 13C4-PFOS | 1989 | 1.98 | - | 105.13 µg/L | - |
| 13C5-PFNA | 8297 | 2.01 | - | 96.57 µg/L | - |
| 13C2-PFDA | 6830 | 2.14 | - | 101.49 µg/L | - |
| 13C2-PFUnA | 7523 | 2.23 | - | 93.73 µg/L | - |
| 13C2-PFDoA | 9653 | 2.32 | - | 91.17 µg/L | - |
| 13C2-PFTeDA | 10532 | 2.47 | - | 83.11 µg/L | - |
| 13C6-PFHxA | 21360 | 1.43 | - | 2.39 µg/L | - |
| 13C9-PFDA | 26718 | 2.13 | - | 2.24 µg/L | - |



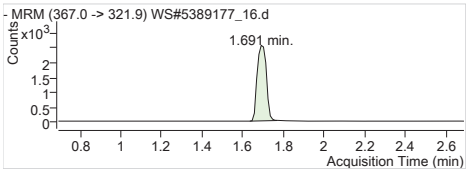



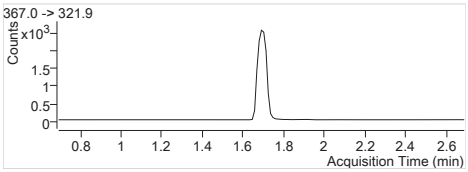

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.434) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



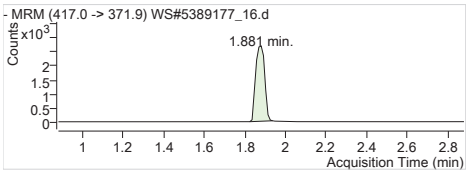



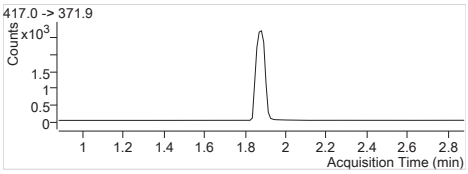

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



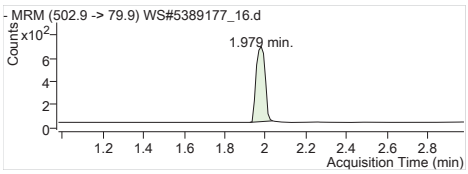



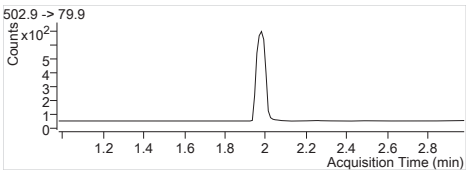

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



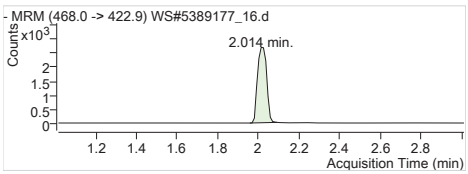



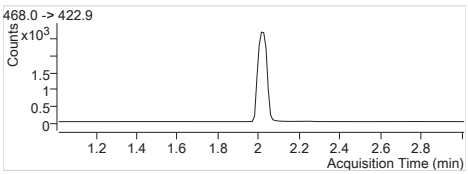

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



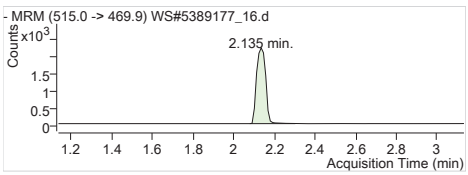



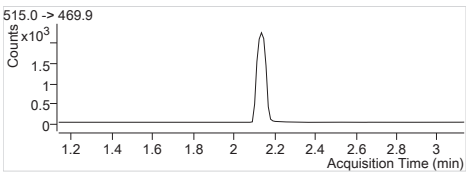

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



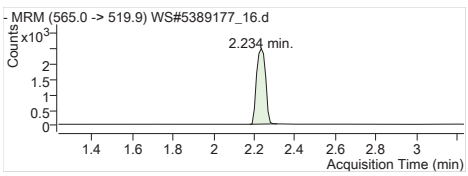



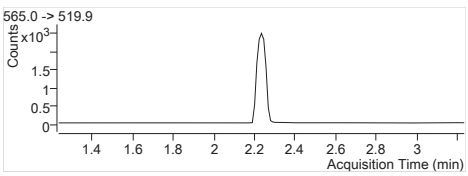

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



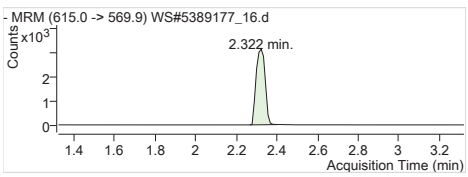



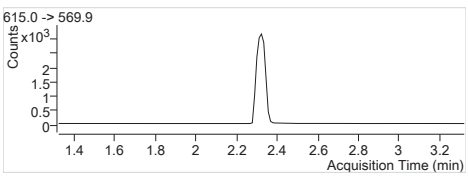

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



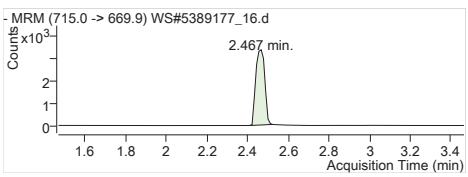



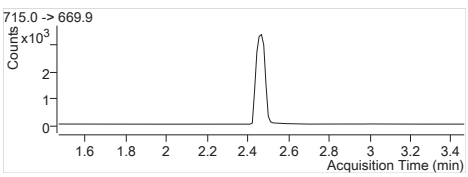

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



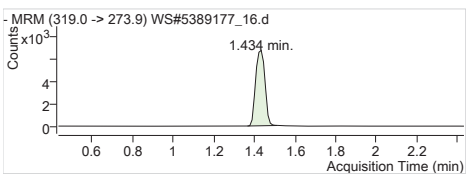



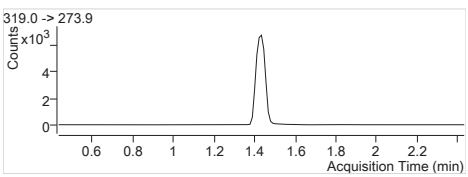

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



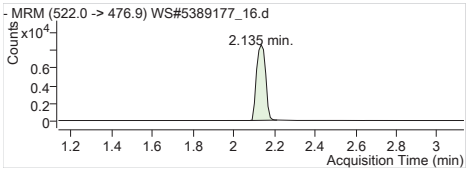



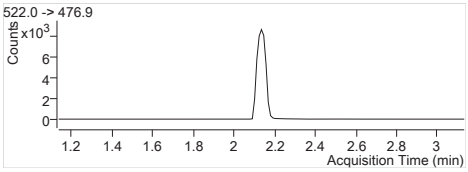

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



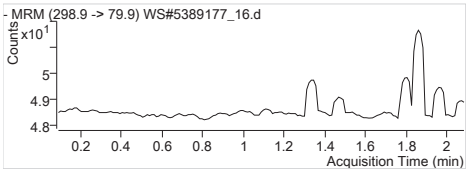



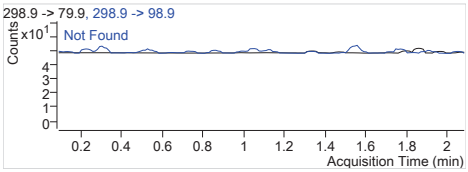

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



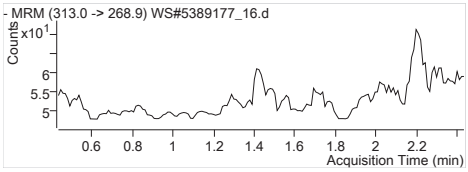



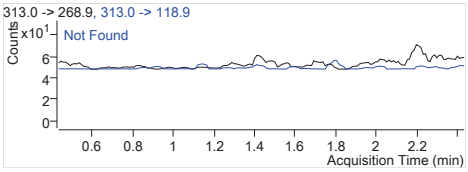

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



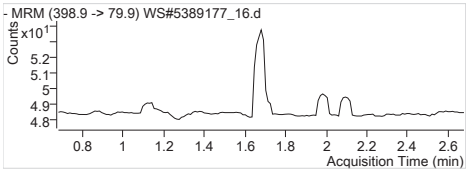



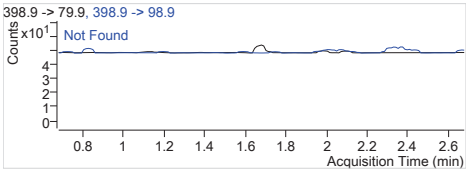

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



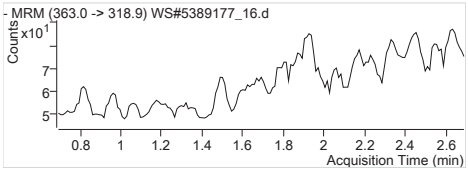



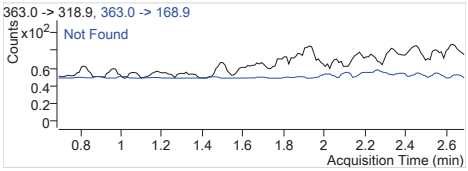

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



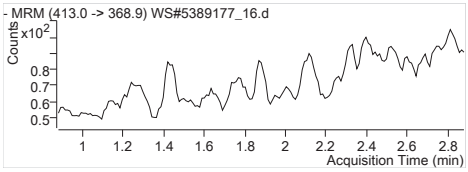



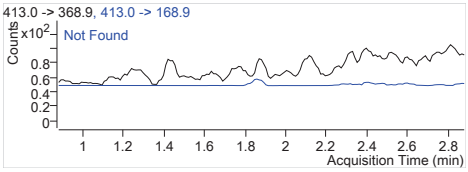

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.679)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



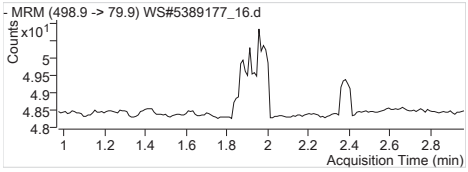



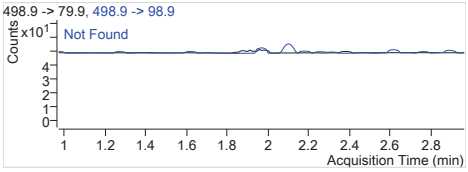

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



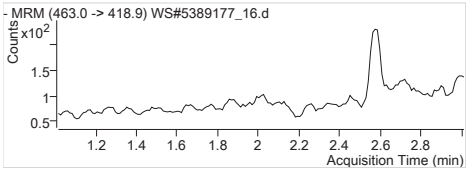



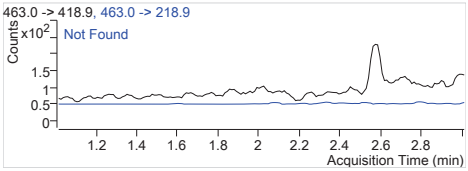

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



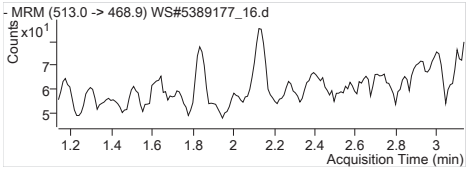



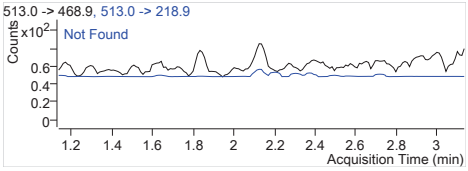

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.968)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



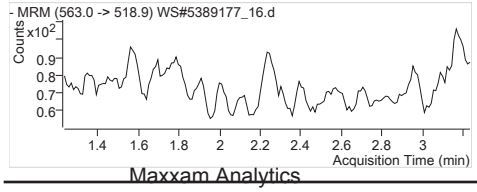



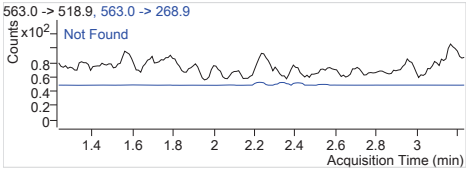

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



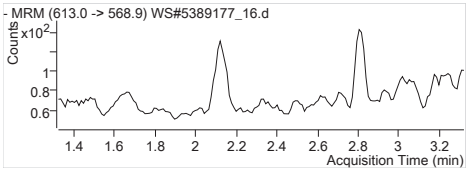



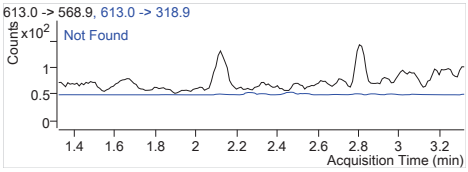

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



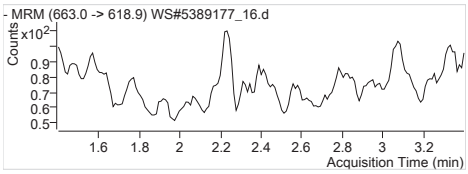



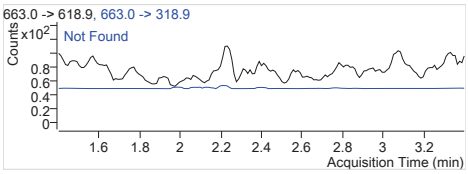

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



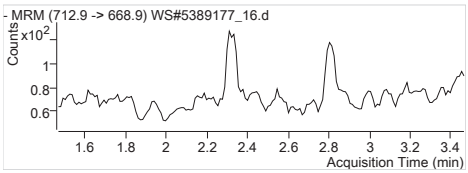



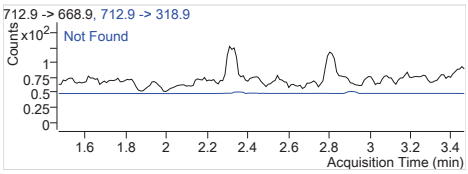

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



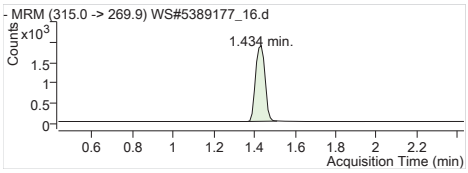



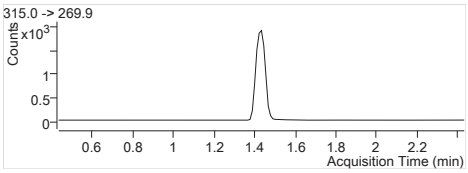

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



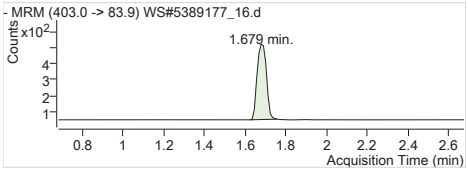



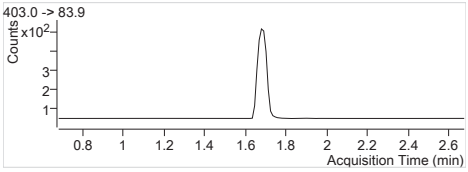

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



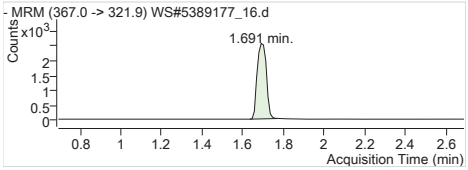



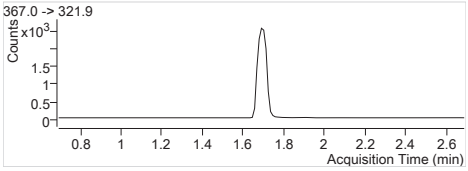

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 100.56 µg/L
Area ratio: 0.28193
Sample type: Sample



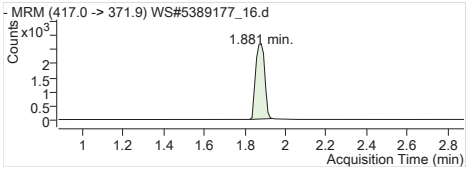



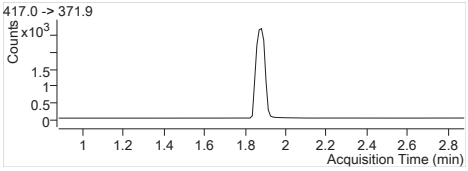

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 96.96 µg/L
Area ratio: 0.07004
Sample type: Sample



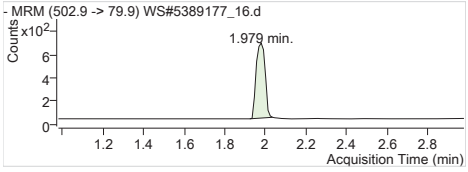



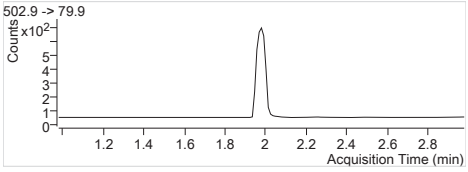

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 99.87 µg/L
Area ratio: 0.37243
Sample type: Sample



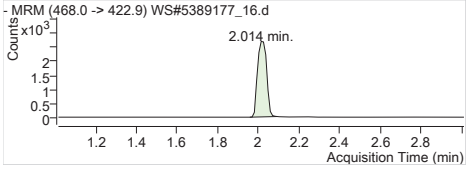



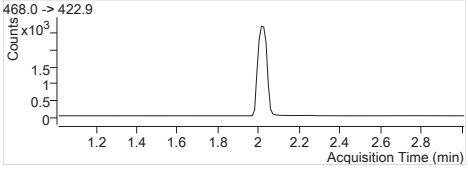

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 96.05 µg/L
Area ratio: 0.38324
Sample type: Sample



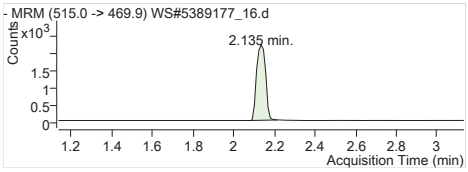



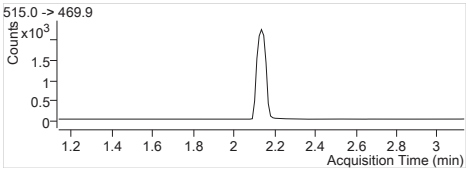

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 105.13 µg/L
Area ratio: 0.09312
Sample type: Sample



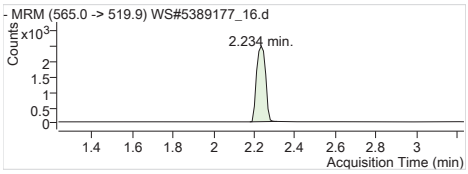



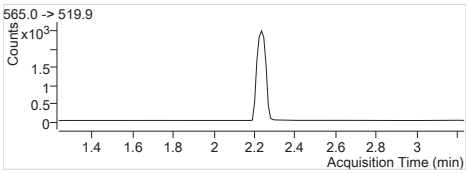

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 96.57 µg/L
Area ratio: 0.38844
Sample type: Sample



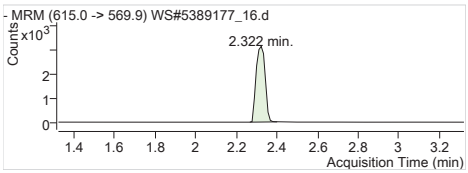



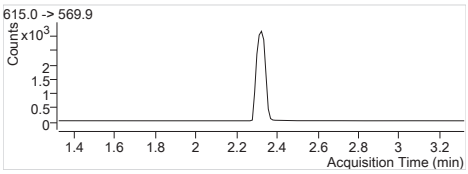

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 101.49 µg/L
Area ratio: 0.25563
Sample type: Sample



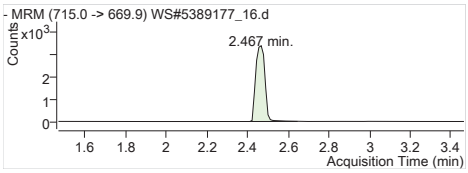



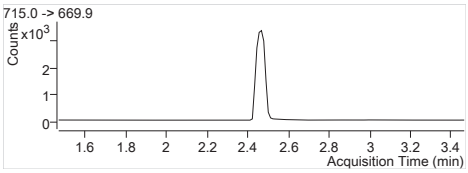

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 93.73 µg/L
Area ratio: 0.28157
Sample type: Sample



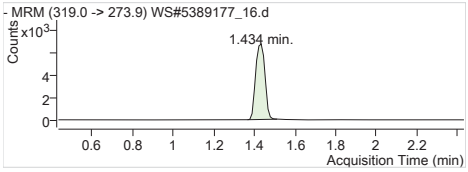



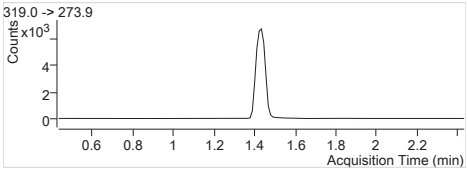

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 91.17 µg/L
Area ratio: 0.36129
Sample type: Sample



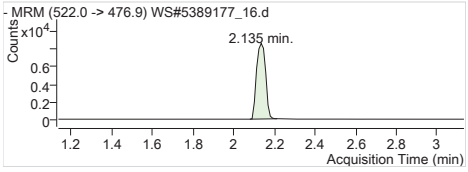



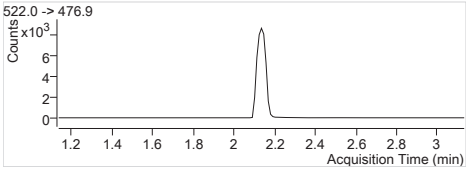

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 83.11 µg/L
Area ratio: 0.39419
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.39 µg/L
Area ratio: 0
Sample type: Sample



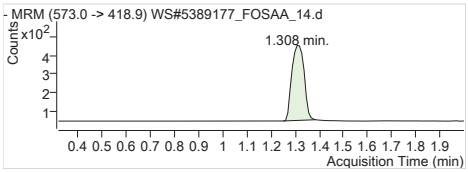

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 2.24 µg/L
Area ratio: 0
Sample type: Sample

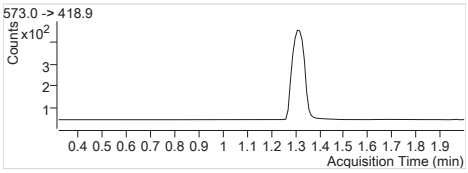
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5389177:FZA807-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_14.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.0261 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-B4 |
| **Acq. Date** | 2018/02/08 6:32:49 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

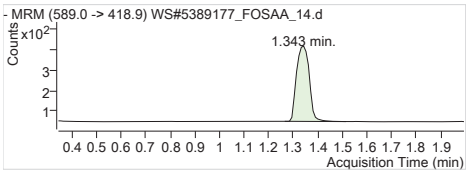
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1420 | 1.31 | 1 µg/L | | |
| D5-EtFOSAA IS | 1317 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 22315 | 0.88 | 1 µg/L | | |

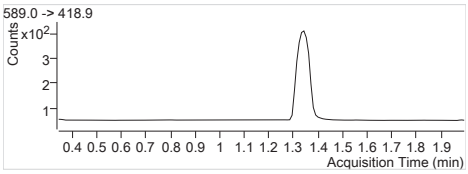
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1461 | 1.31 | - | 78.59 µg/L | - |
| D5-EtFOSAA | 1319 | 1.34 | - | 77.89 µg/L | - |
| 13C9-PFDA | 21641 | 0.88 | - | 2.61 µg/L | - |



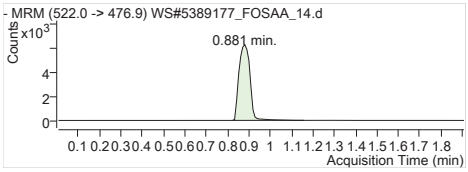



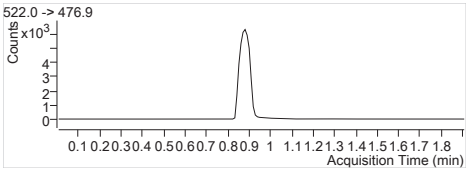

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.308 (1.318)
Concentration: 1 µg/L
Sample type: Sample



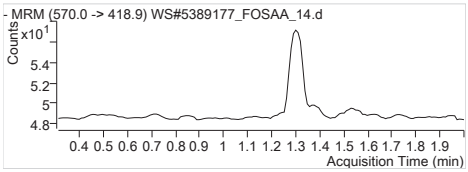



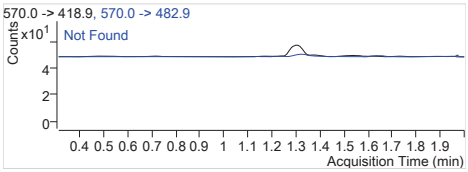

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



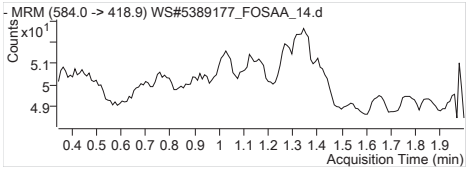



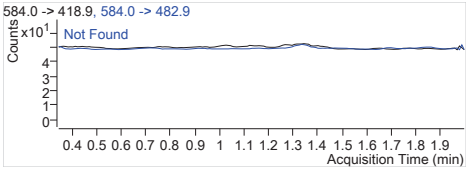

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.881 (0.910)
Concentration: 1 µg/L
Sample type: Sample



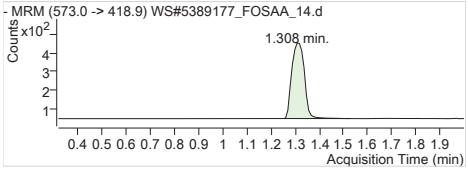



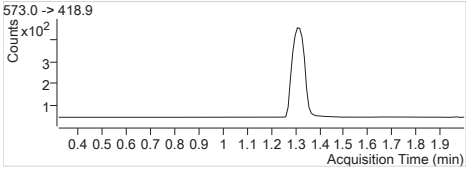

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



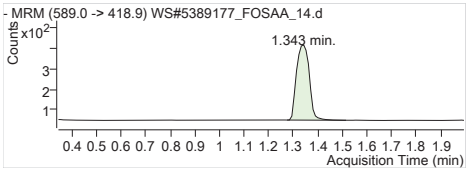



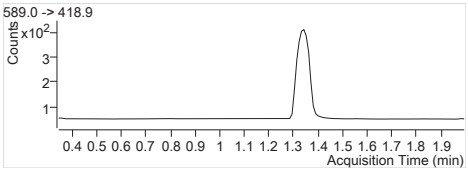

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



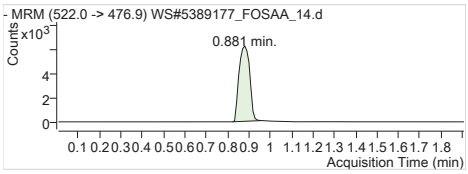



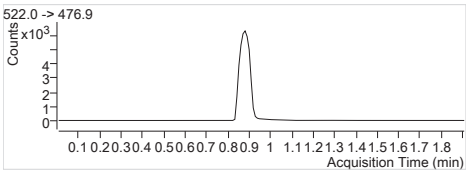

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.318)
Calc. conc. 78.59 µg/L
Area ratio: 0.06547
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 77.89 µg/L |
| Area ratio: | 0.05911 |
| Sample type: | Sample |



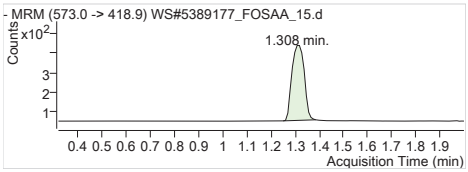

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.881 (0.910) |
| Calc. conc. | 2.61 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

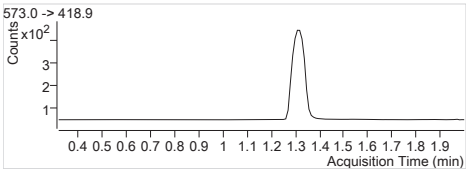
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5389177:FZA808-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_15.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.0261 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-B5 |
| **Acq. Date** | 2018/02/08 6:35:14 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

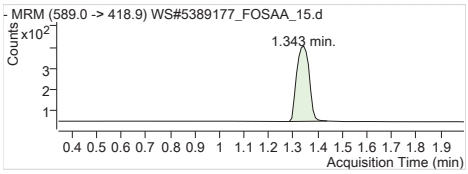
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1389 | 1.31 | 1 µg/L | | |
| D5-EtFOSAA IS | 1263 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 22445 | 0.88 | 1 µg/L | | |

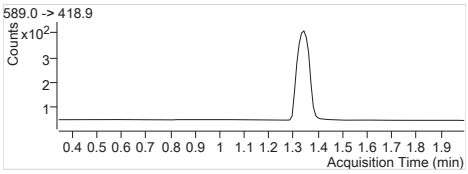
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1413 | 1.31 | - | 75.57 µg/L | - |
| D5-EtFOSAA | 1273 | 1.34 | - | 74.74 µg/L | - |
| 13C9-PFDA | 21706 | 0.88 | - | 2.62 µg/L | - |



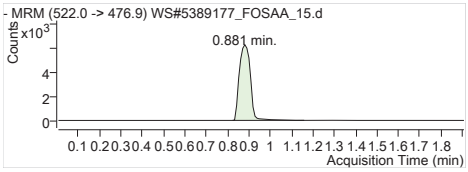



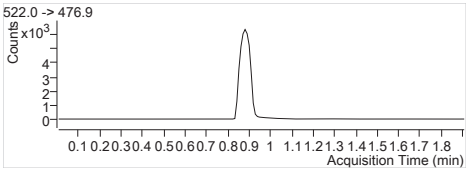

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.308 (1.318)
Concentration: 1 µg/L
Sample type: Sample



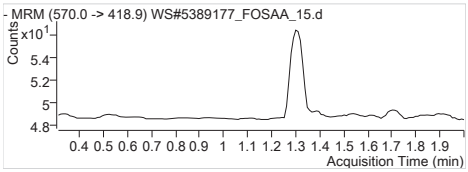



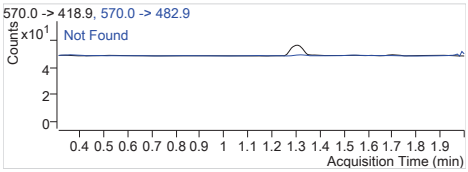

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



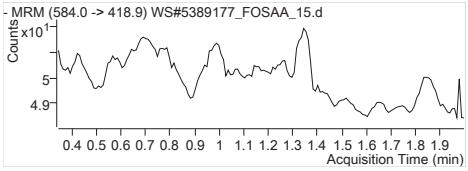



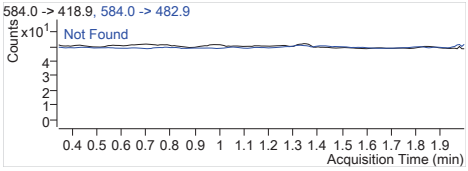

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.881 (0.910)
Concentration: 1 µg/L
Sample type: Sample



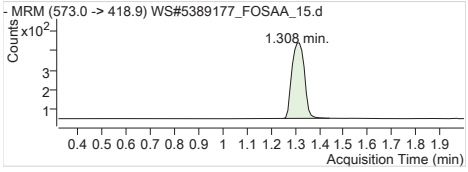



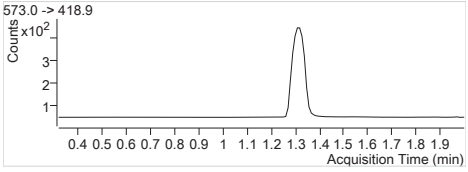

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



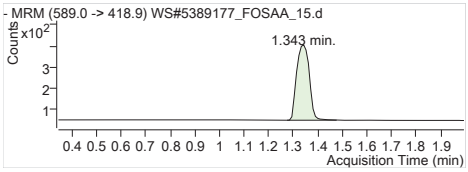



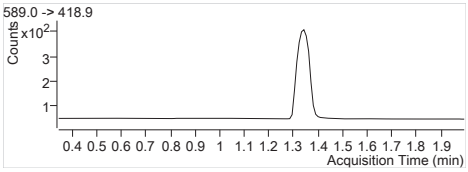

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



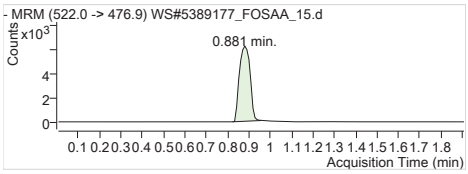



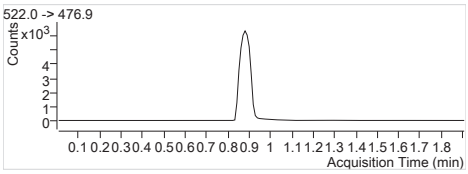

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.318)
Calc. conc. 75.57 µg/L
Area ratio: 0.06295
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 74.74 µg/L |
| Area ratio: | 0.05672 |
| Sample type: | Sample |



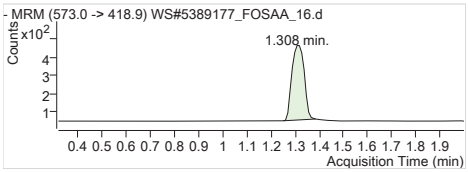

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.881 (0.910) |
| Calc. conc. | 2.62 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

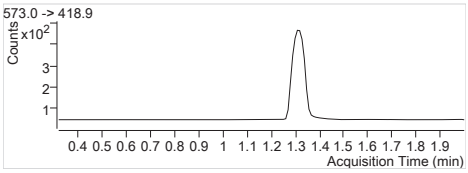
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5389177:FZA809-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_16.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-B6 |
| **Acq. Date** | 2018/02/08 6:37:39 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

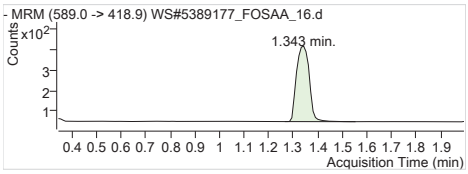
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1458 | 1.31 | 1 µg/L | | |
| D5-EtFOSAA IS | 1319 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 20946 | 0.89 | 1 µg/L | | |

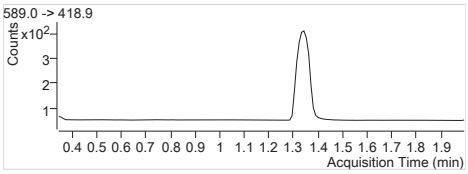
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1514 | 1.31 | - | 86.76 µg/L | - |
| D5-EtFOSAA | 1319 | 1.34 | - | 82.98 µg/L | - |
| 13C9-PFDA | 20265 | 0.89 | - | 2.25 µg/L | - |



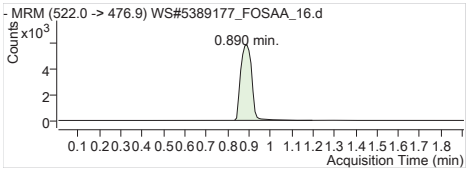



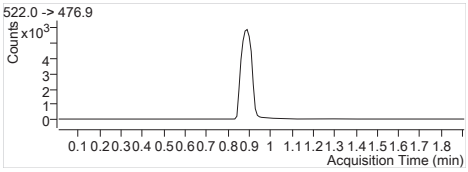

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.308 (1.318)
Concentration: 1 µg/L
Sample type: Sample



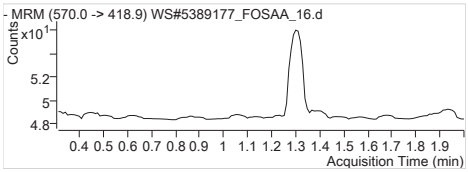



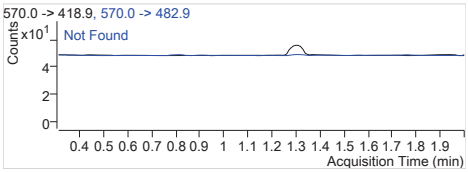

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



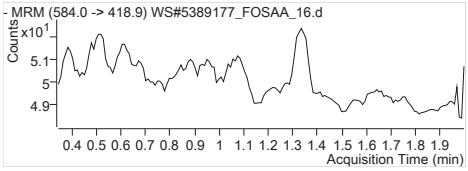



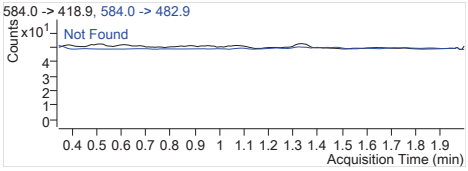

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.890 (0.910)
Concentration: 1 µg/L
Sample type: Sample



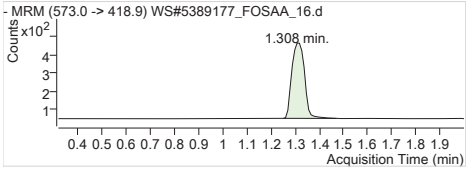



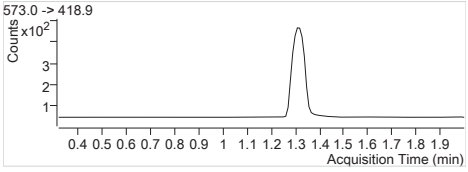

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



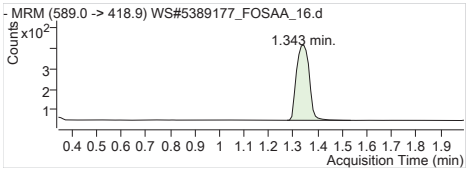



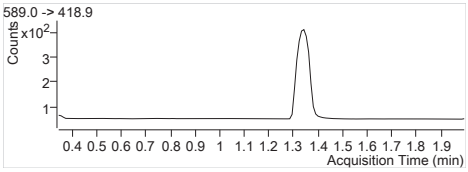

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



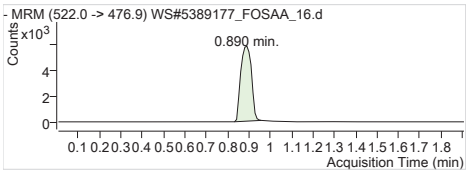



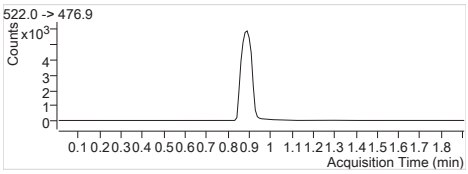

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.318)
Calc. conc. 86.76 µg/L
Area ratio: 0.07228
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 82.98 µg/L |
| Area ratio: | 0.06297 |
| Sample type: | Sample |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.890 (0.910) |
| Calc. conc. | 2.25 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

# Quantitation Results

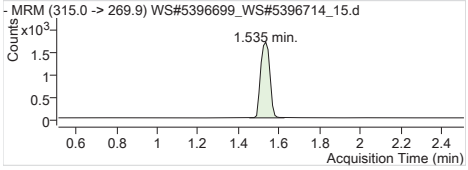
Agilent Technologies

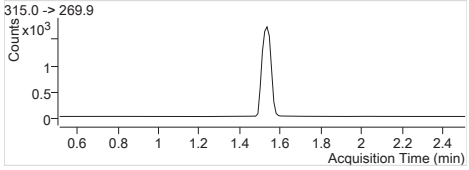
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5396699:FZA783-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_15.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B5 |
| **Acq. Date** | 2018/02/15 5:19:59 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | Reported for PFDoA, PFUnA , PFTeDA only. | | |

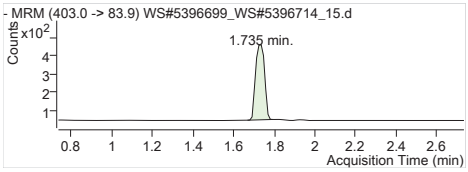
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5299 | 1.53 | 1 µg/L | | |
| MPFHxS | 1268 | 1.74 | 1 µg/L | | |
| MPFHpA | 6521 | 1.78 | 1 µg/L | | |
| MPFOA | 5870 | 1.95 | 1 µg/L | | |
| MPFOS | 1497 | 2.01 | 1 µg/L | | |
| MPFNA | 5618 | 2.09 | 1 µg/L | | |
| MPFDA | 4382 | 2.20 | 1 µg/L | | |
| MPFUnA | 5018 | 2.29 | 1 µg/L | | |
| MPFDoA | 6616 | 2.38 | 1 µg/L | | |
| MPFTeDA | 5820 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 19505 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 20364 | 2.20 | 1 µg/L | | |

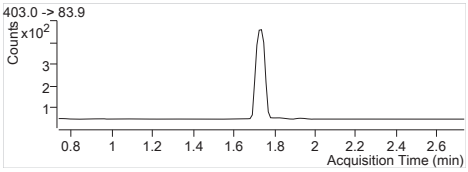
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 5260 | 1.53 | - | 114.50 µg/L | - |
| 18O2-PFHxS | 1268 | 1.74 | - | 118.41 µg/L | - |
| 13C4-PFHpA | 6521 | 1.78 | - | 118.97 µg/L | - |
| 13C4-PFOA | 5870 | 1.95 | - | 112.81 µg/L | - |
| 13C4-PFOS | 1497 | 2.01 | - | 124.48 µg/L | - |
| 13C5-PFNA | 5618 | 2.09 | - | 115.72 µg/L | - |
| 13C2-PFDA | 4376 | 2.20 | - | 118.34 µg/L | - |
| 13C2-PFUnA | 5018 | 2.29 | - | 104.81 µg/L | - |
| 13C2-PFDoA | 6616 | 2.38 | - | 106.16 µg/L | - |
| 13C2-PFTeDA | 5935 | 2.51 | - | 107.73 µg/L | - |
| 13C6-PFHxA | 19505 | 1.53 | - | 1.91 µg/L | - |
| 13C9-PFDA | 20364 | 2.20 | - | 2.01 µg/L | - |



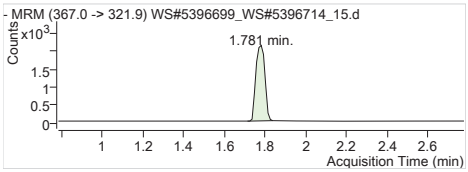



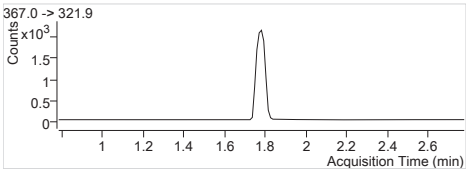

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



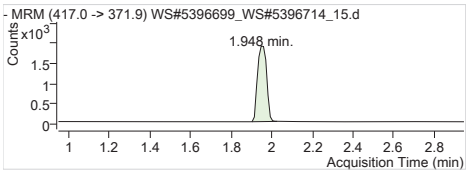



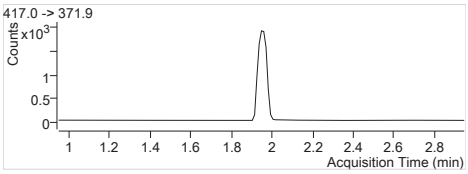

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: Sample



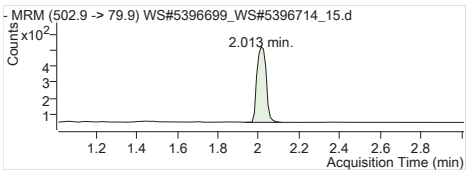



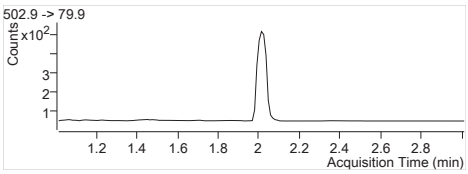

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Sample



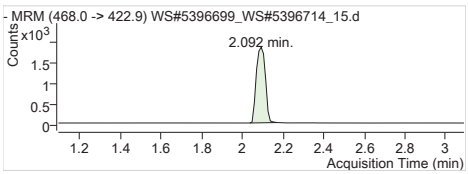



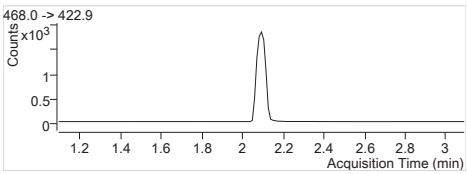

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: Sample



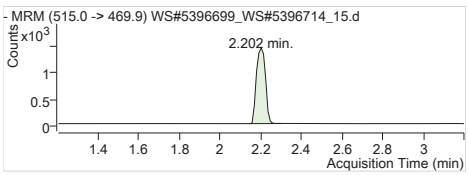



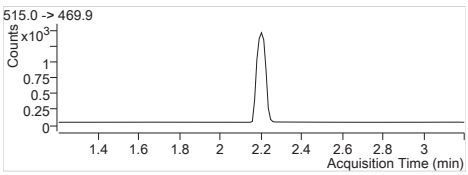

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Sample



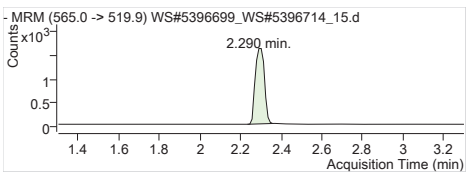



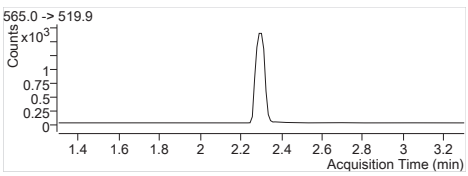

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Sample



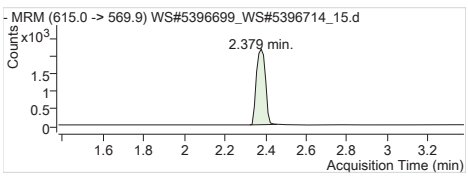



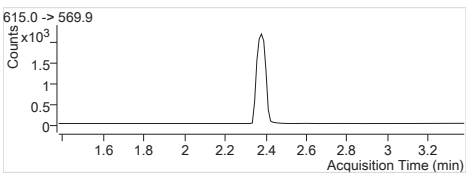

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



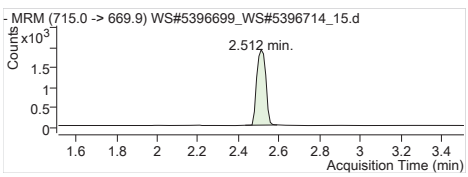



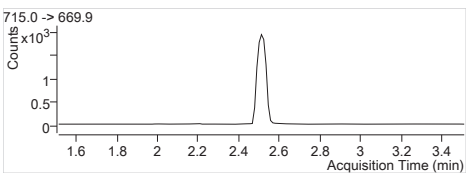

**MPFUnA** Internal Standard
RT (Exp. RT): 2.290 (2.302)
Concentration: 1 µg/L
Sample type: Sample



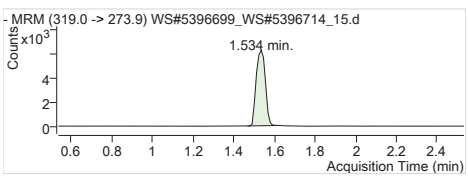



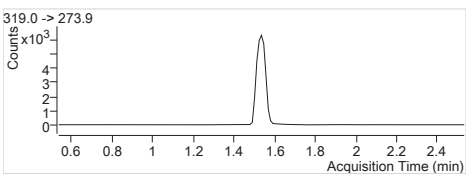

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Sample



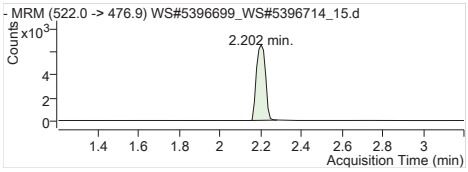



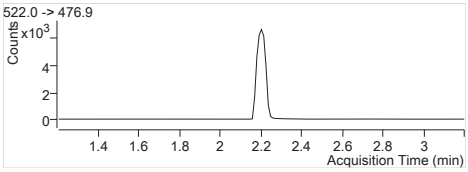

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Sample



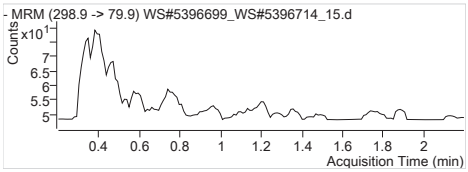



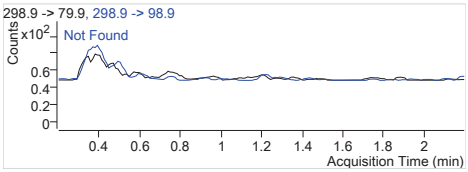

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Sample



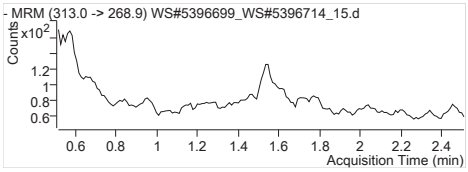



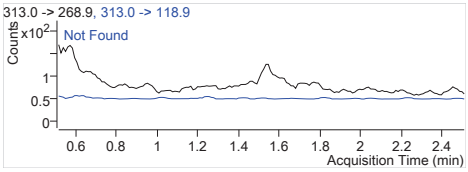

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



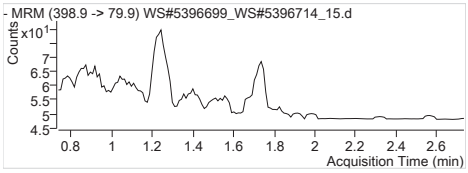



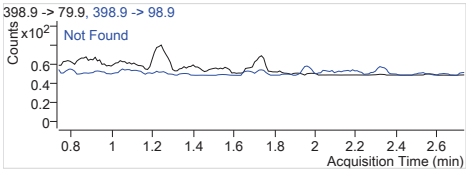

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.199)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



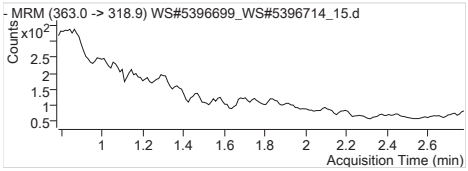



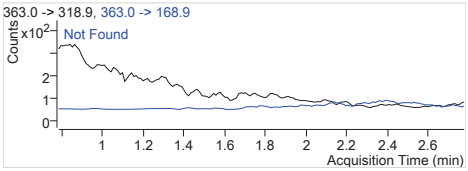

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.512)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



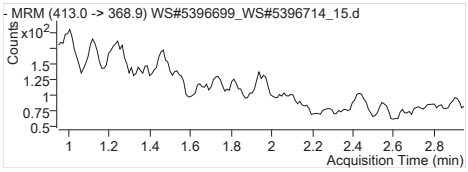



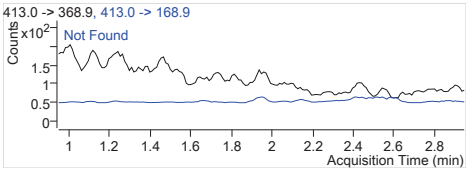

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.735)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



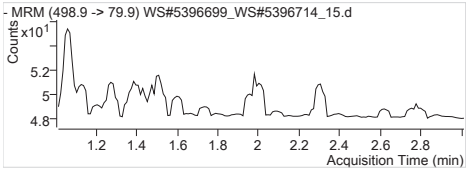



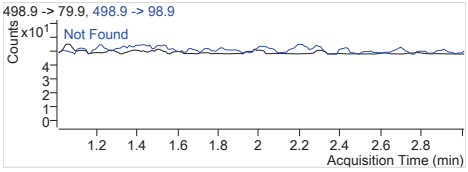

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.781)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



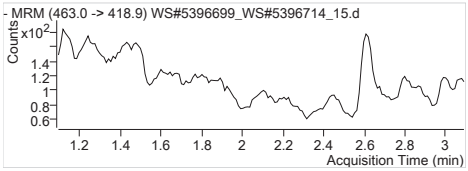



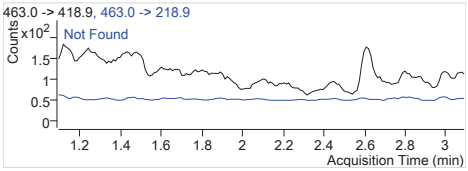

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.948)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



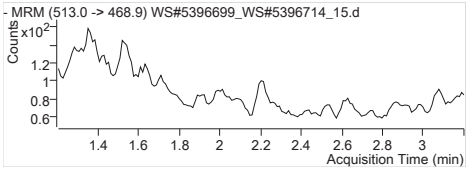



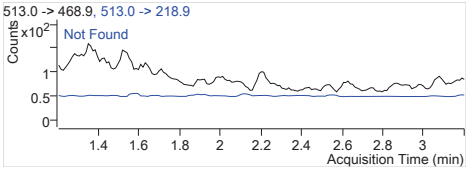

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (2.013)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



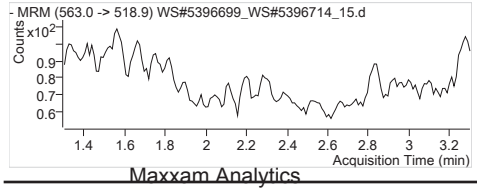



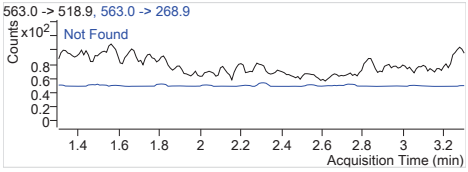

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.092)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



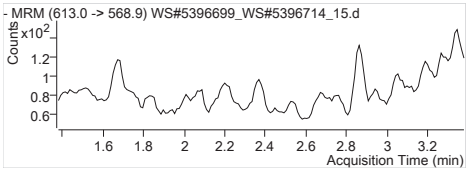



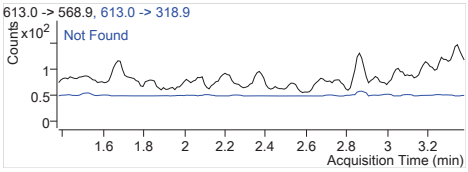

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.203)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



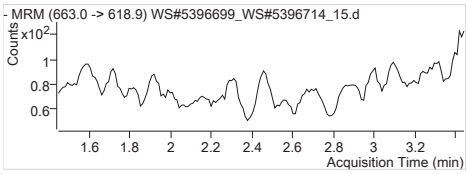



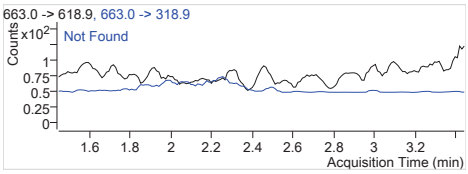

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.302)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



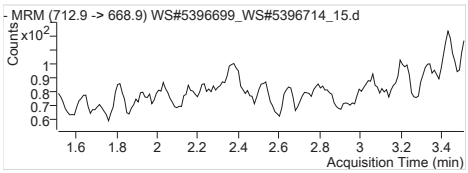



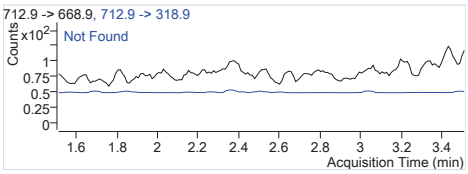

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.379) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



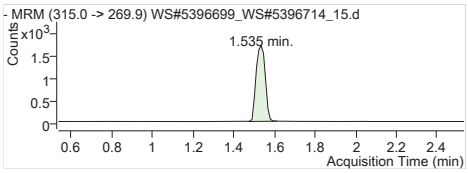



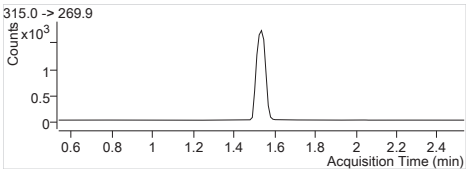

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.445) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



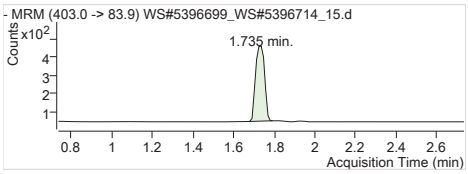



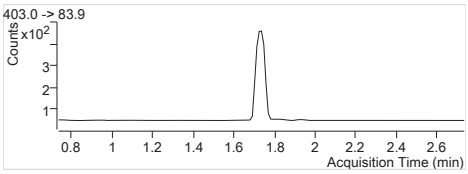

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.512) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



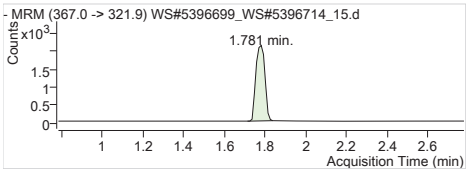



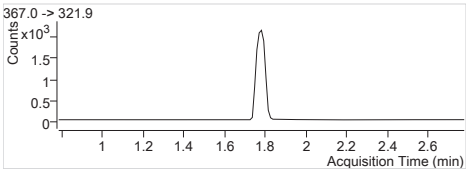

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 114.50 µg/L |
| Area ratio: | 0.26967 |
| Sample type: | Sample |



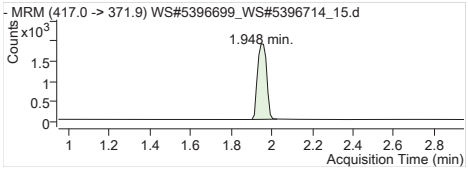



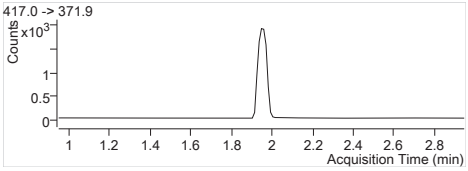

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 118.41 µg/L |
| Area ratio: | 0.06501 |
| Sample type: | Sample |



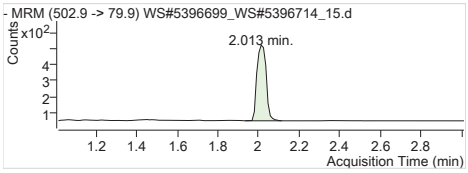



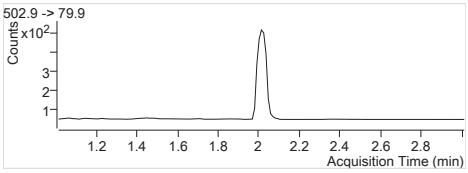

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 118.97 µg/L |
| Area ratio: | 0.33432 |
| Sample type: | Sample |



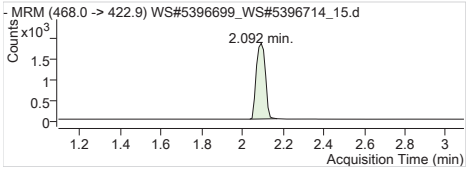



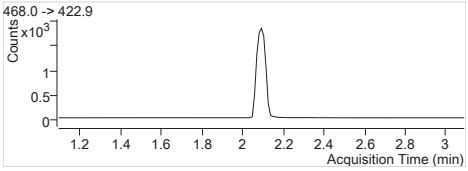

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.948 (1.948) |
| Calc. conc. | 112.81 µg/L |
| Area ratio: | 0.30095 |
| Sample type: | Sample |



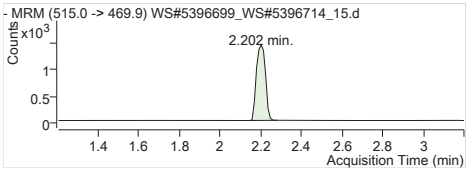



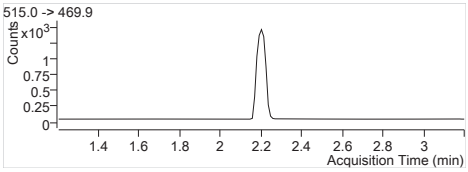

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 124.48 µg/L |
| Area ratio: | 0.07675 |
| Sample type: | Sample |



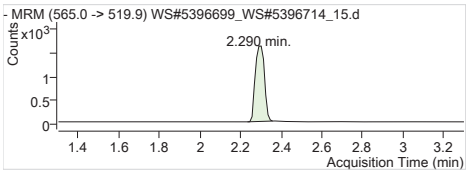



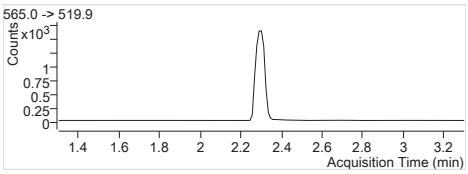

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 115.72 µg/L |
| Area ratio: | 0.28803 |
| Sample type: | Sample |



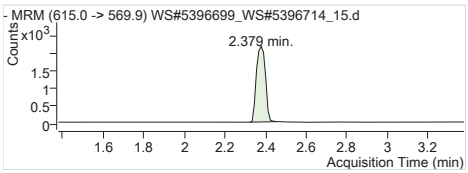



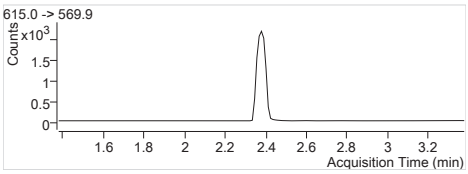

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 118.34 µg/L
Area ratio: 0.21489
Sample type: Sample



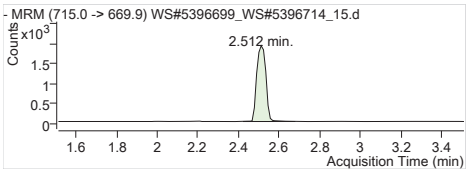



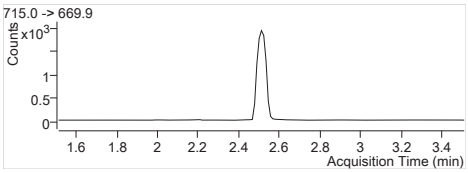

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.290 (2.302)
Calc. conc. 104.81 µg/L
Area ratio: 0.24642
Sample type: Sample



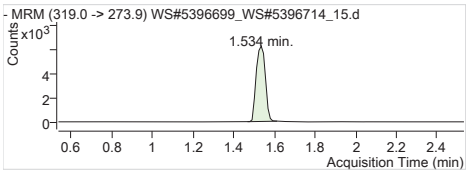



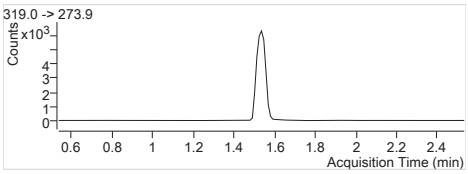

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 106.16 µg/L
Area ratio: 0.32489
Sample type: Sample



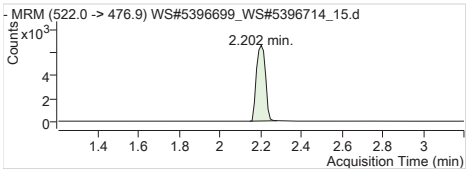



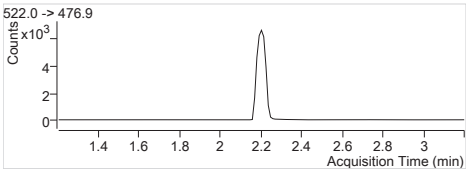

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 107.73 µg/L
Area ratio: 0.29145
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 1.91 µg/L
Area ratio: 0
Sample type: Sample



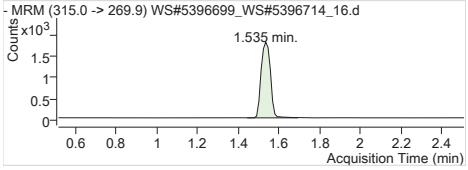

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 2.01 µg/L
Area ratio: 0
Sample type: Sample

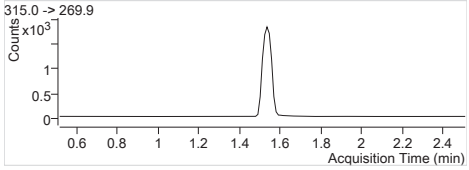
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5396699:FZA784-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_16.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B6 |
| **Acq. Date** | 2018/02/15 5:24:54 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | Reported for PFDoA, PFUnA , PFTeDA only. | | |

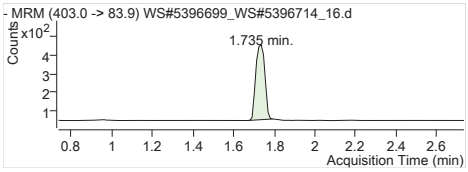
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5716 | 1.53 | 1 µg/L | | |
| MPFHxS | 1254 | 1.74 | 1 µg/L | | |
| MPFHpA | 6651 | 1.78 | 1 µg/L | | |
| MPFOA | 6518 | 1.96 | 1 µg/L | | |
| MPFOS | 1545 | 2.01 | 1 µg/L | | |
| MPFNA | 5802 | 2.09 | 1 µg/L | | |
| MPFDA | 4075 | 2.20 | 1 µg/L | | |
| MPFUnA | 5070 | 2.29 | 1 µg/L | | |
| MPFDoA | 6045 | 2.38 | 1 µg/L | | |
| MPFTeDA | 5875 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 20959 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 21739 | 2.20 | 1 µg/L | | |

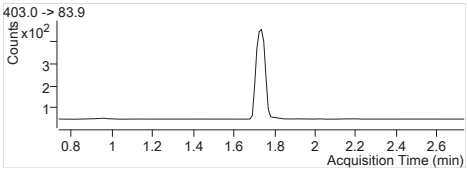
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 5594 | 1.53 | - | 113.32 µg/L | - |
| 18O2-PFHxS | 1254 | 1.74 | - | 108.98 µg/L | - |
| 13C4-PFHpA | 6651 | 1.78 | - | 112.92 µg/L | - |
| 13C4-PFOA | 6518 | 1.96 | - | 116.58 µg/L | - |
| 13C4-PFOS | 1545 | 2.01 | - | 119.55 µg/L | - |
| 13C5-PFNA | 5802 | 2.09 | - | 111.22 µg/L | - |
| 13C2-PFDA | 3981 | 2.20 | - | 100.85 µg/L | - |
| 13C2-PFUnA | 5070 | 2.29 | - | 99.20 µg/L | - |
| 13C2-PFDoA | 6045 | 2.38 | - | 90.86 µg/L | - |
| 13C2-PFTeDA | 5990 | 2.51 | - | 101.86 µg/L | - |
| 13C6-PFHxA | 20959 | 1.53 | - | 2.05 µg/L | - |
| 13C9-PFDA | 21739 | 2.20 | - | 2.14 µg/L | - |



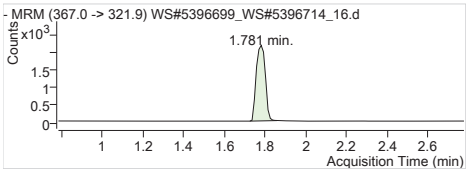



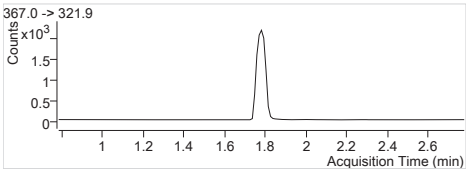

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



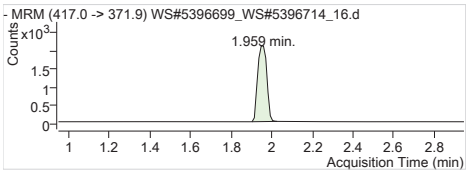



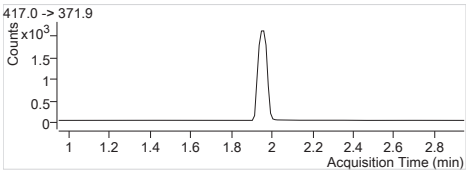

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: Sample



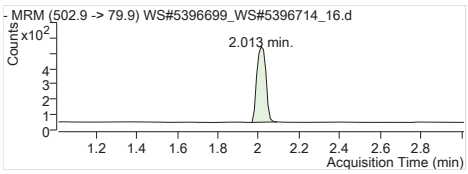



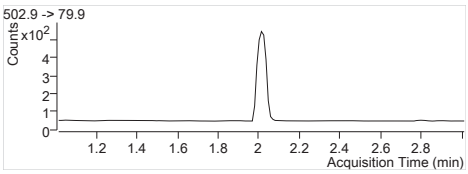

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Sample



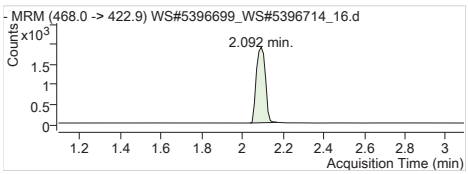



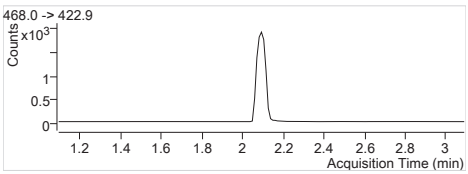

**MPFOA** Internal Standard
RT (Exp. RT): 1.959 (1.948)
Concentration: 1 µg/L
Sample type: Sample



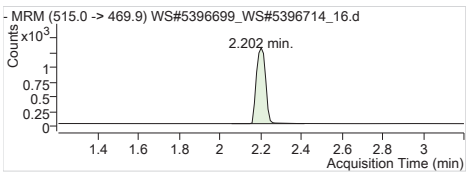



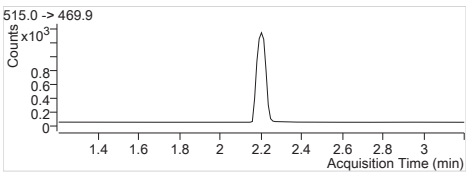

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Sample



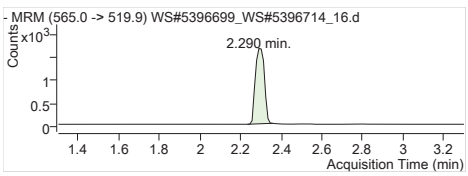



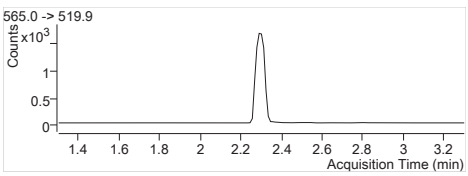

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Sample



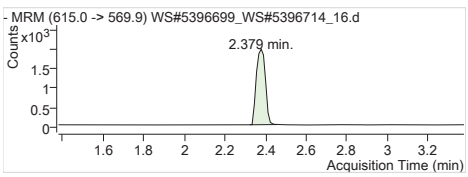



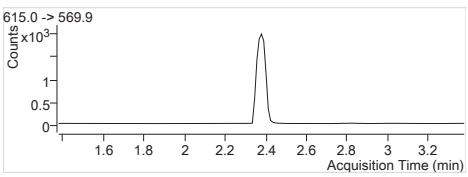

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



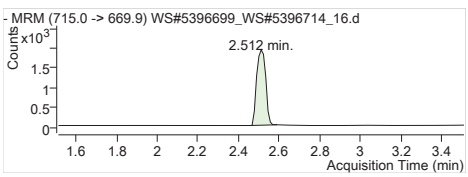



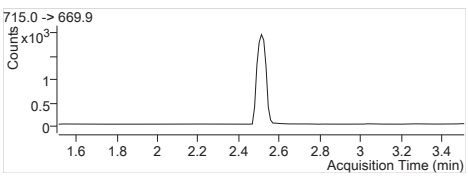

**MPFUnA** Internal Standard
RT (Exp. RT): 2.290 (2.302)
Concentration: 1 µg/L
Sample type: Sample



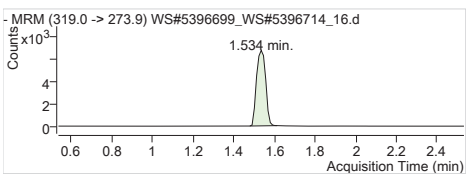



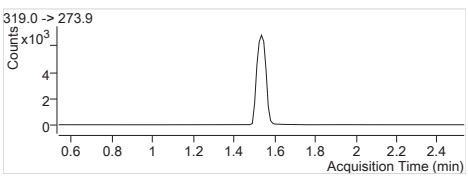

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Sample



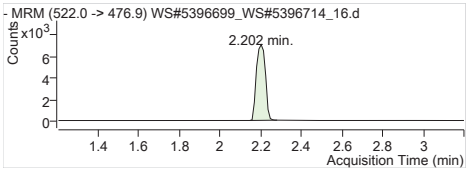



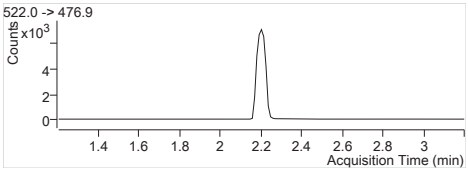

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Sample



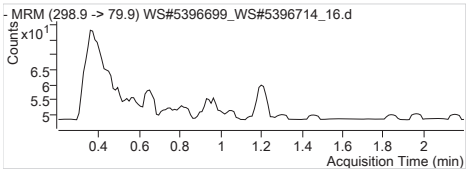



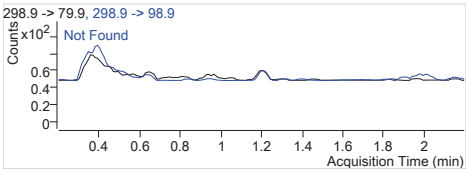

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Sample



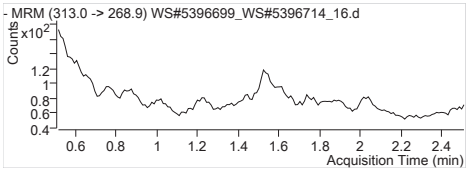



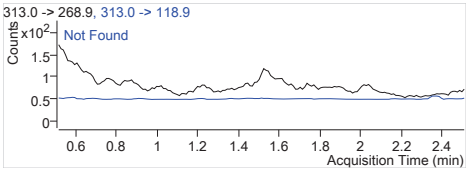

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



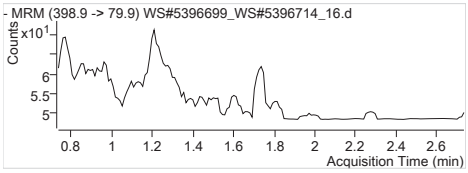



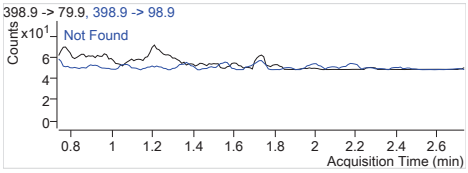

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.199)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



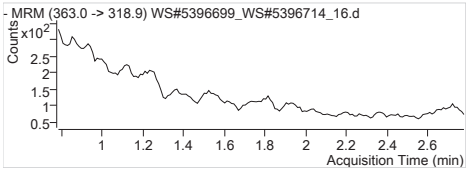



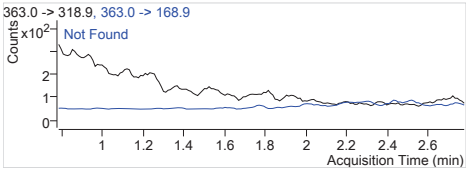

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.512)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



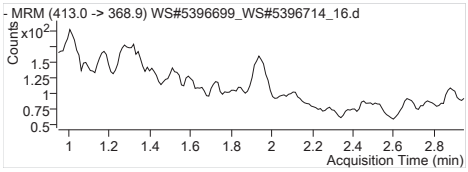



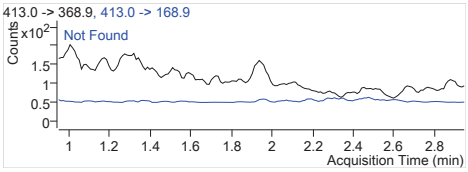

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.735)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



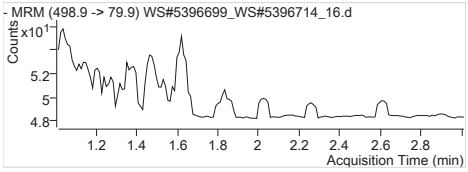



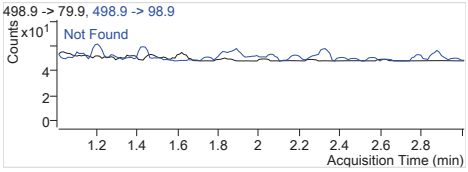

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.781)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



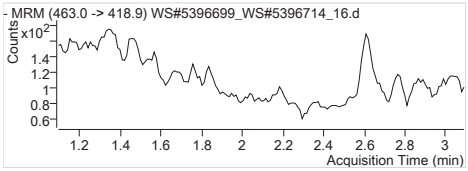



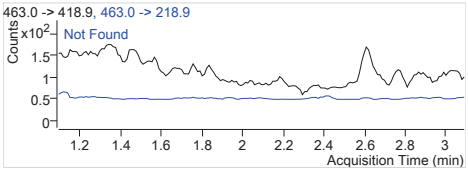

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.948)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



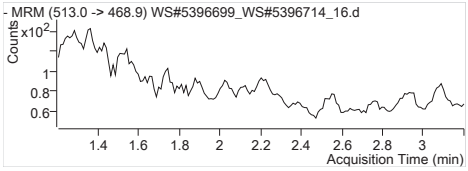



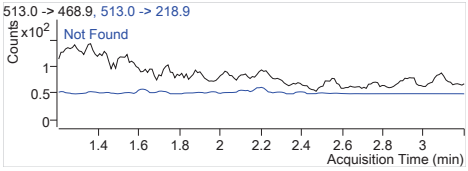

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (2.013)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



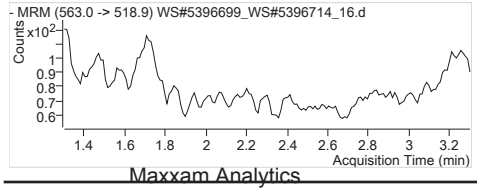



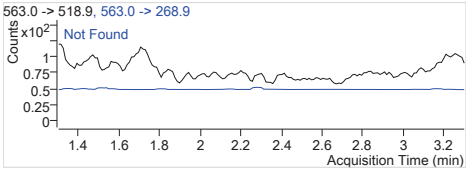

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.092)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



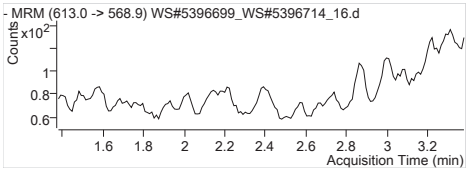



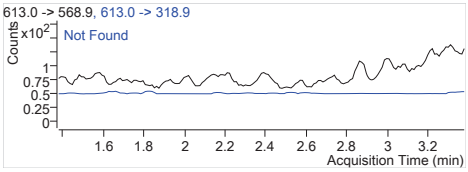

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.203)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



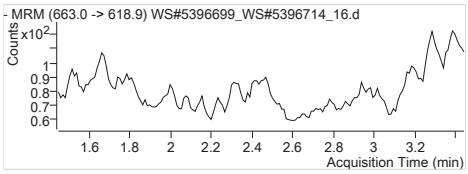



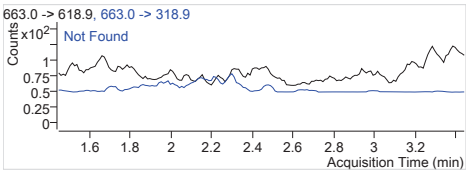

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.302)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



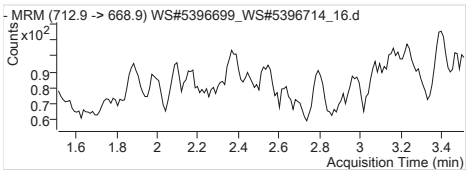



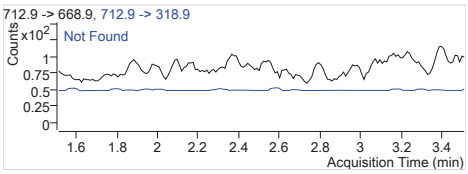

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.379) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



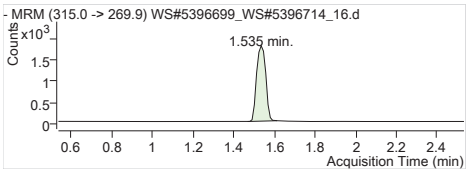



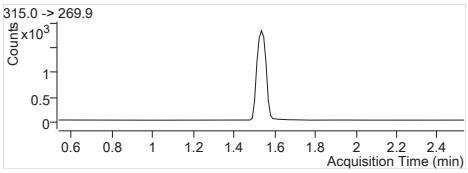

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.445) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



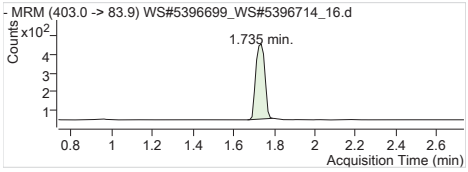



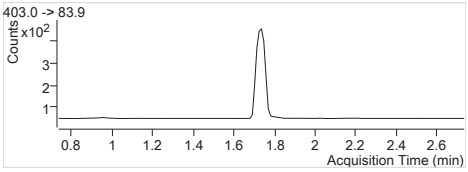

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.512) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



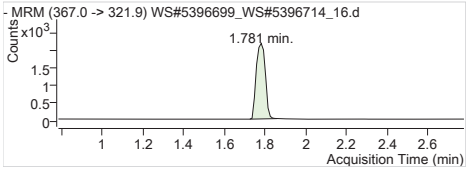



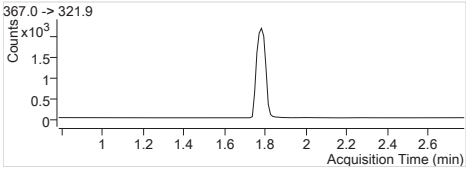

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 113.32 µg/L |
| Area ratio: | 0.26690 |
| Sample type: | Sample |



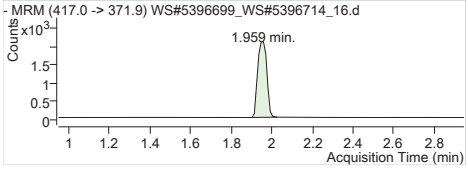



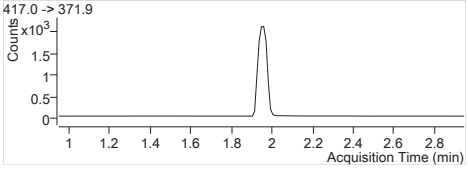

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 108.98 µg/L |
| Area ratio: | 0.05983 |
| Sample type: | Sample |



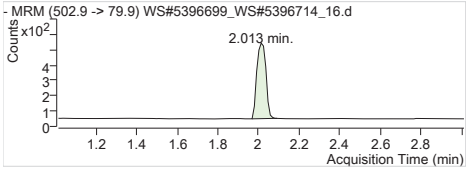



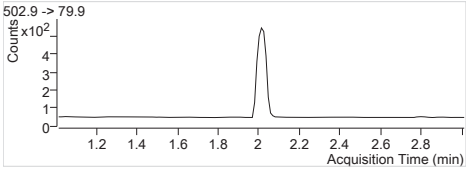

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 112.92 µg/L |
| Area ratio: | 0.31733 |
| Sample type: | Sample |



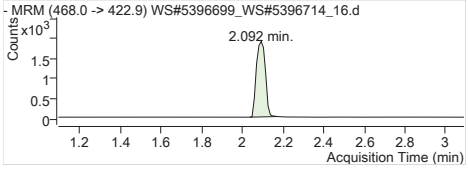



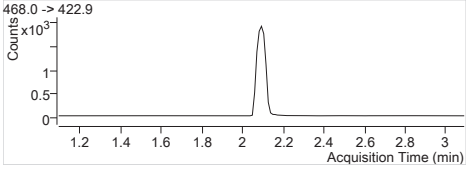

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.959 (1.948) |
| Calc. conc. | 116.58 µg/L |
| Area ratio: | 0.31099 |
| Sample type: | Sample |



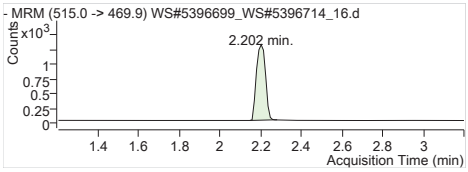



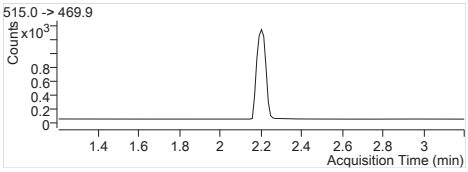

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 119.55 µg/L |
| Area ratio: | 0.07372 |
| Sample type: | Sample |



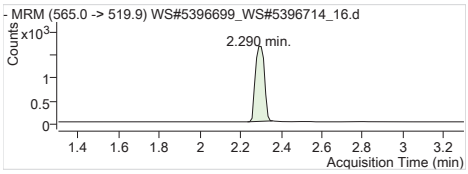



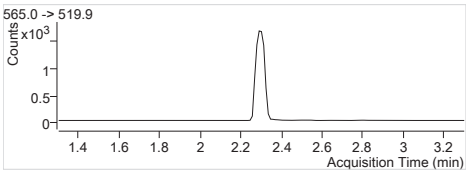

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 111.22 µg/L |
| Area ratio: | 0.27683 |
| Sample type: | Sample |



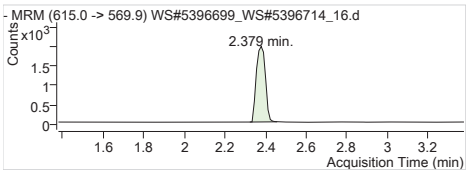



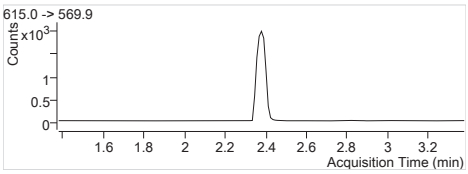

| | |
|---|---|
| **13C2-PFDA** | 515.0 -> 469.9 |
| RT (Exp. RT): | 2.202 (2.202) |
| Calc. conc. | 100.85 µg/L |
| Area ratio: | 0.18313 |
| Sample type: | Sample |



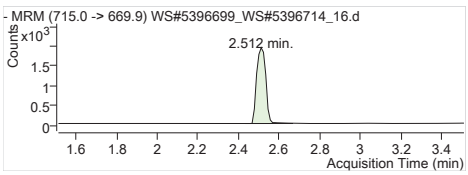



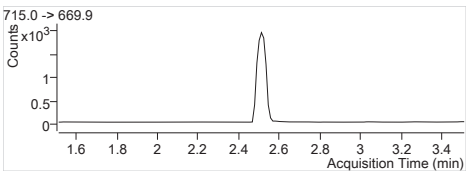

| | |
|---|---|
| **13C2-PFUnA** | 565.0 -> 519.9 |
| RT (Exp. RT): | 2.290 (2.302) |
| Calc. conc. | 99.20 µg/L |
| Area ratio: | 0.23322 |
| Sample type: | Sample |



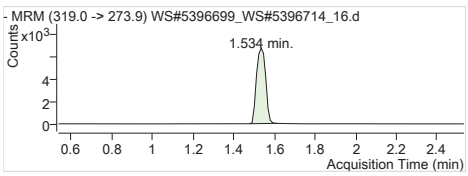



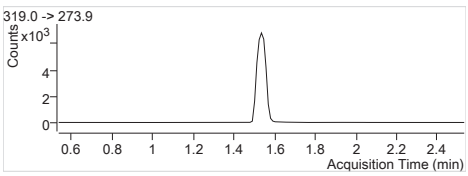

| | |
|---|---|
| **13C2-PFDoA** | 615.0 -> 569.9 |
| RT (Exp. RT): | 2.379 (2.379) |
| Calc. conc. | 90.86 µg/L |
| Area ratio: | 0.27807 |
| Sample type: | Sample |



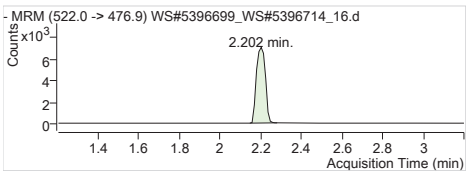



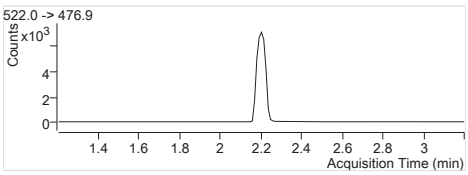

| | |
|---|---|
| **13C2-PFTeDA** | 715.0 -> 669.9 |
| RT (Exp. RT): | 2.512 (2.512) |
| Calc. conc. | 101.86 µg/L |
| Area ratio: | 0.27554 |
| Sample type: | Sample |




| | |
|---|---|
| **13C6-PFHxA** | 319.0 -> 273.9 |
| RT (Exp. RT): | 1.534 (1.534) |
| Calc. conc. | 2.05 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |



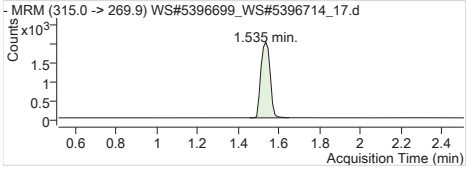

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 2.202 (2.202) |
| Calc. conc. | 2.14 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

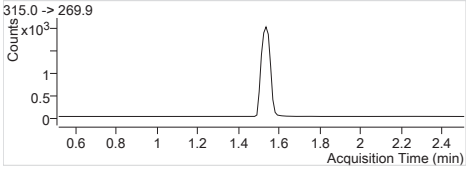
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5396699:FZA785-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_17.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B7 |
| **Acq. Date** | 2018/02/15 5:29:50 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | Reported for PFDoA, PFUnA , PFTeDA only. | | |

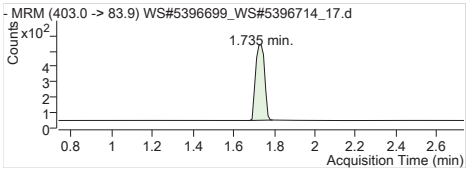
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6258 | 1.53 | 1 µg/L | | |
| MPFHxS | 1515 | 1.74 | 1 µg/L | | |
| MPFHpA | 7683 | 1.78 | 1 µg/L | | |
| MPFOA | 7161 | 1.95 | 1 µg/L | | |
| MPFOS | 1744 | 2.01 | 1 µg/L | | |
| MPFNA | 6972 | 2.09 | 1 µg/L | | |
| MPFDA | 4874 | 2.20 | 1 µg/L | | |
| MPFUnA | 5874 | 2.30 | 1 µg/L | | |
| MPFDoA | 6999 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6332 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 24872 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 24437 | 2.20 | 1 µg/L | | |

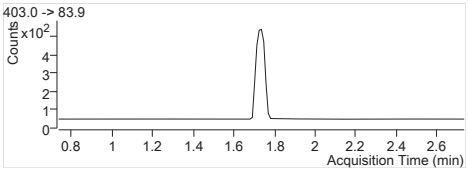
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | 182 | 1.71 | - | 0.01 µg/L | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | 1160 | 1.95 | - | 0.01 µg/L | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6185 | 1.53 | - | 105.58 µg/L | - |
| 18O2-PFHxS | 1515 | 1.74 | - | 110.94 µg/L | - |
| 13C4-PFHpA | 7683 | 1.78 | - | 109.92 µg/L | - |
| 13C4-PFOA | 7161 | 1.95 | - | 107.93 µg/L | - |
| 13C4-PFOS | 1744 | 2.01 | - | 113.72 µg/L | - |
| 13C5-PFNA | 6972 | 2.09 | - | 112.62 µg/L | - |
| 13C2-PFDA | 4830 | 2.20 | - | 108.85 µg/L | - |
| 13C2-PFUnA | 5874 | 2.30 | - | 102.24 µg/L | - |
| 13C2-PFDoA | 6999 | 2.38 | - | 93.59 µg/L | - |
| 13C2-PFTeDA | 6397 | 2.51 | - | 96.77 µg/L | - |
| 13C6-PFHxA | 24872 | 1.53 | - | 2.43 µg/L | - |
| 13C9-PFDA | 24437 | 2.20 | - | 2.41 µg/L | - |



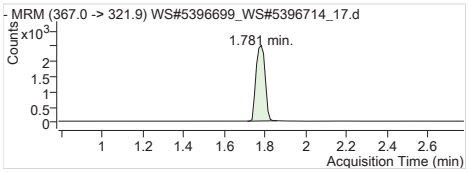



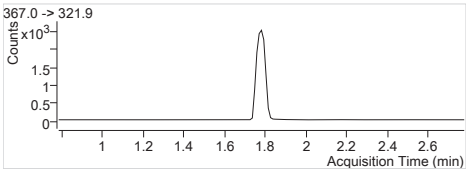

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



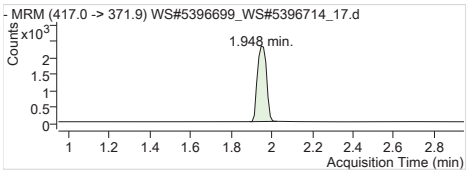



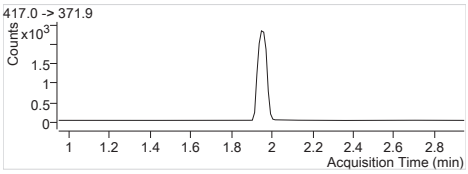

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: Sample



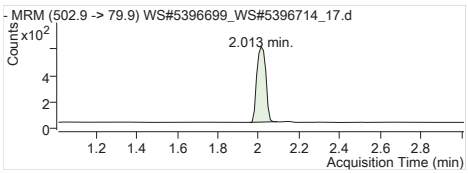



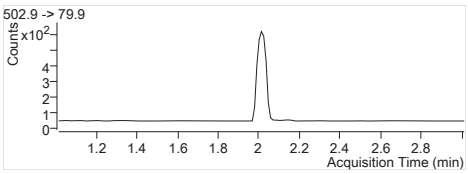

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Sample



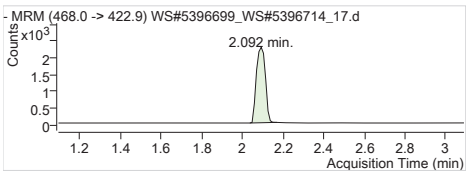



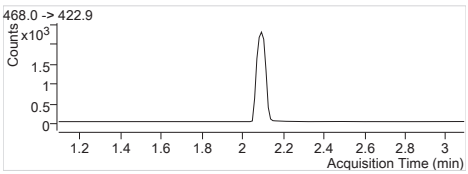

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: Sample



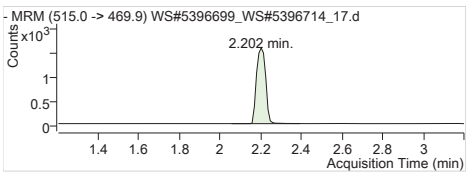



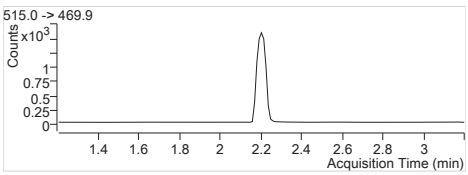

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Sample



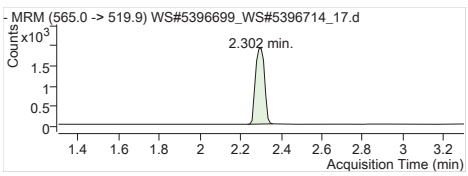



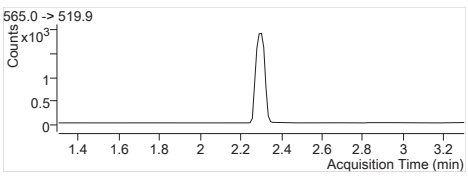

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Sample



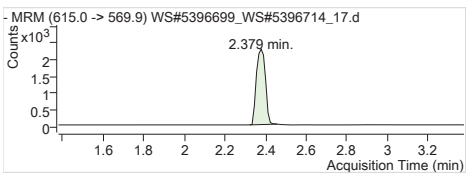



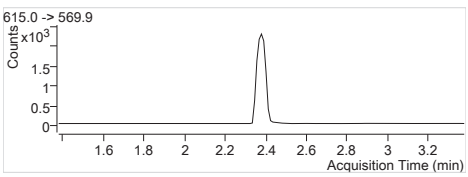

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



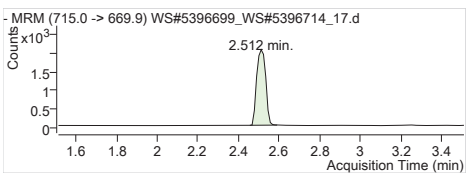



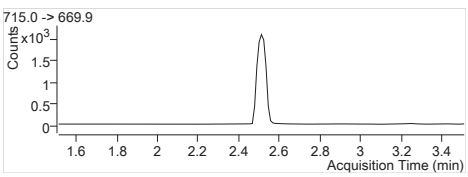

**MPFUnA** Internal Standard
RT (Exp. RT): 2.302 (2.302)
Concentration: 1 µg/L
Sample type: Sample



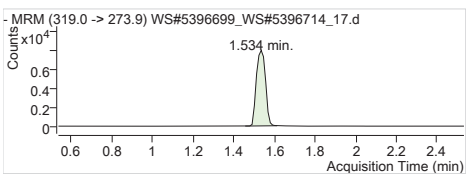



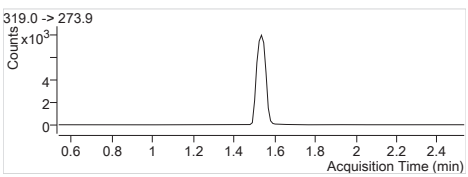

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Sample



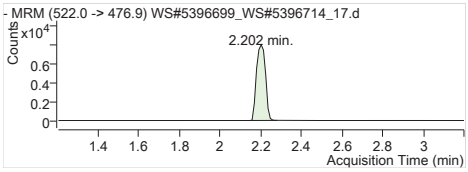



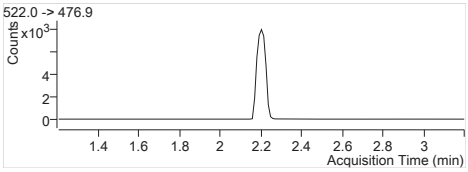

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Sample



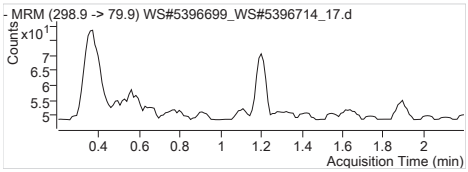



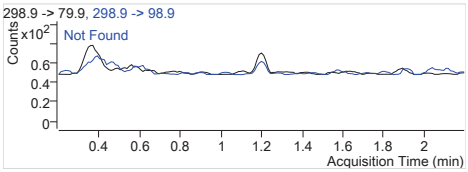

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Sample



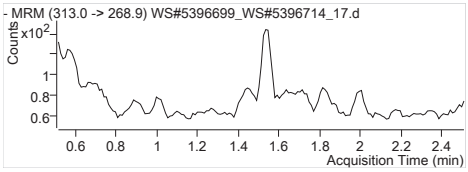



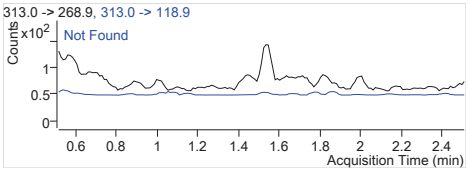

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



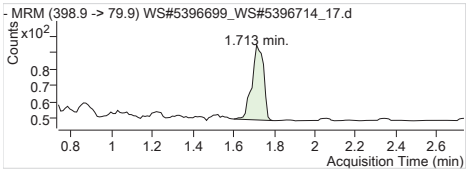



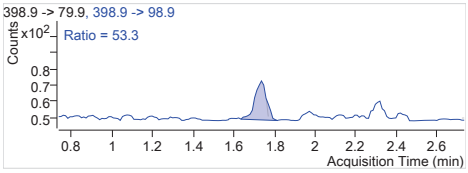

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.199)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



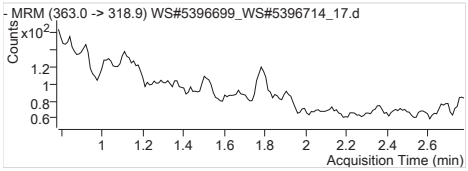



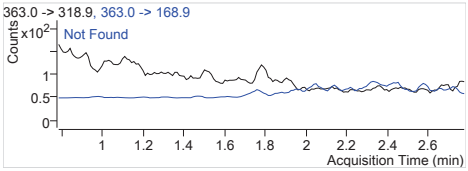

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.512)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



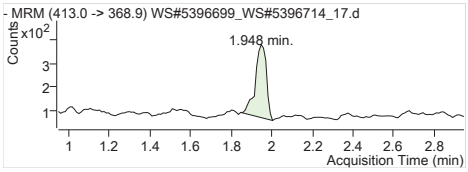



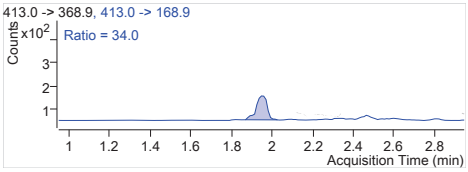

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.713 (1.735)
Calc. conc. 0.01 µg/L
Area ratio: 0.12013
Sample type: Sample



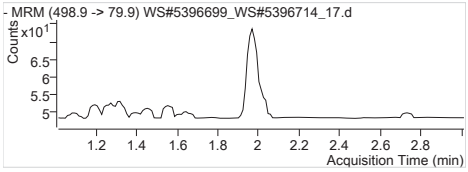



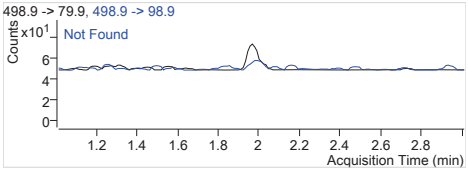

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.781)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



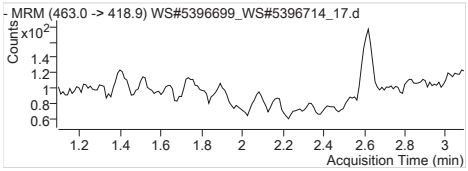



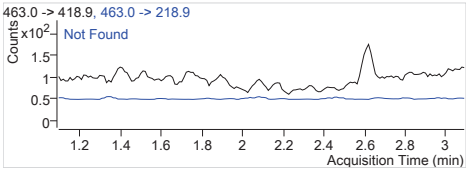

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.948 (1.948)
Calc. conc. 0.01 µg/L
Area ratio: 0.16199
Sample type: Sample



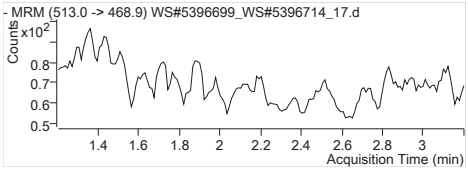



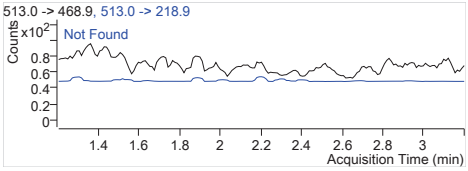

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (2.013)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



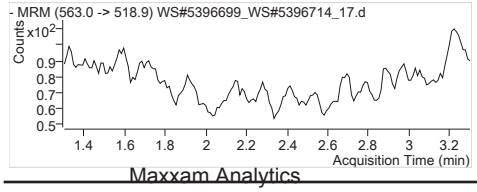



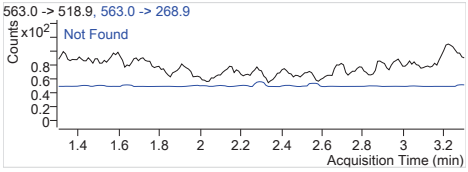

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.092)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



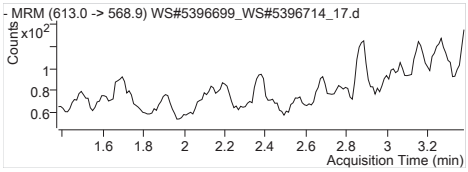



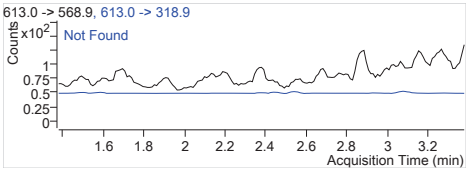

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.203)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



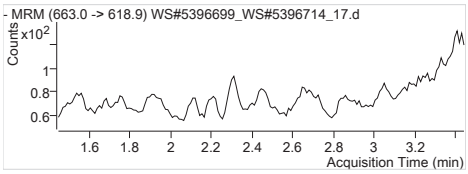



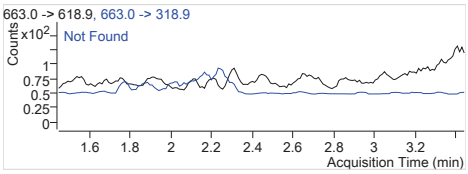

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.302)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



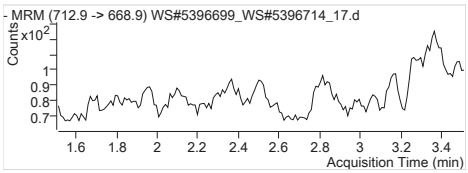



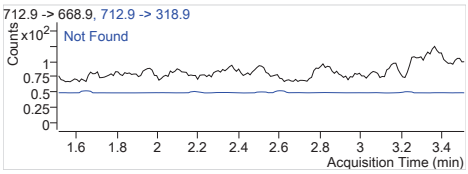

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.379) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



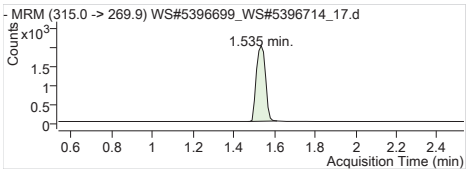



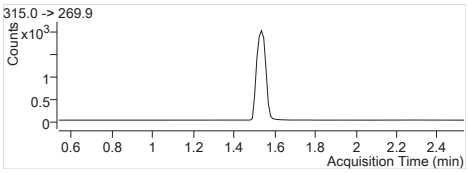

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.445) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



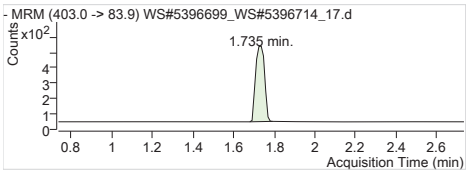



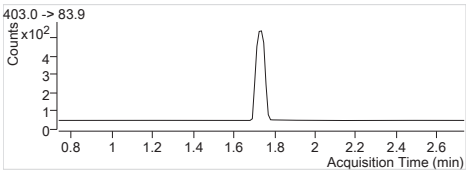

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.512) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



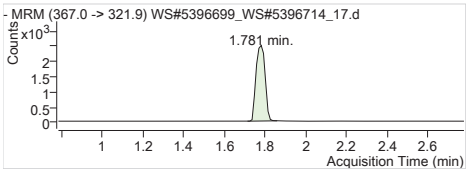



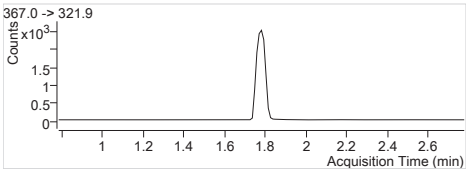

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 105.58 µg/L |
| Area ratio: | 0.24867 |
| Sample type: | Sample |



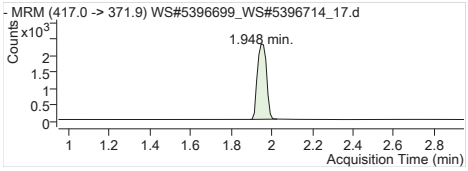



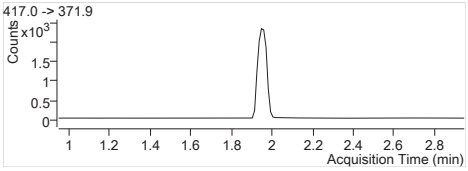

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 110.94 µg/L |
| Area ratio: | 0.06091 |
| Sample type: | Sample |



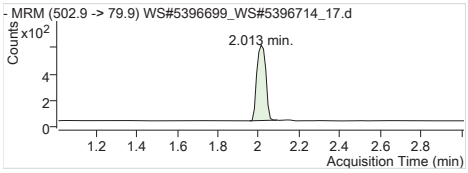



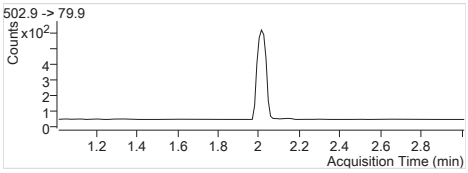

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 109.92 µg/L |
| Area ratio: | 0.30890 |
| Sample type: | Sample |



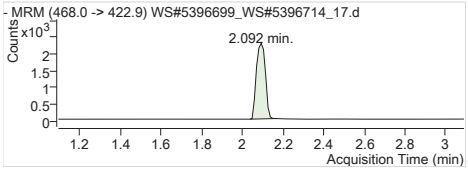



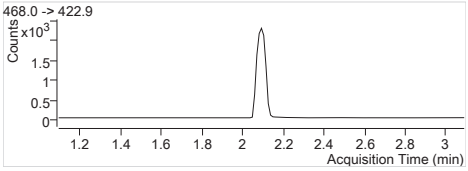

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.948 (1.948) |
| Calc. conc. | 107.93 µg/L |
| Area ratio: | 0.28791 |
| Sample type: | Sample |



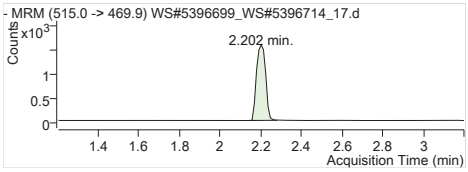



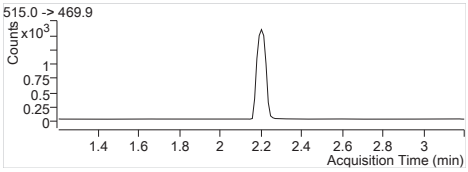

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 113.72 µg/L |
| Area ratio: | 0.07012 |
| Sample type: | Sample |



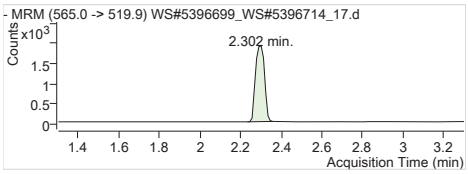



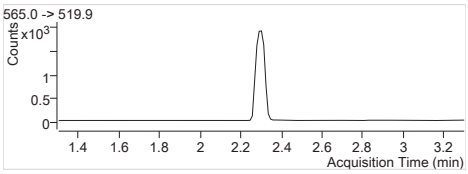

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 112.62 µg/L |
| Area ratio: | 0.28032 |
| Sample type: | Sample |



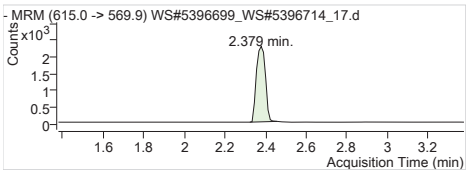



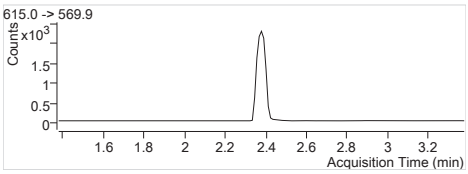

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 108.85 µg/L
Area ratio: 0.19765
Sample type: Sample



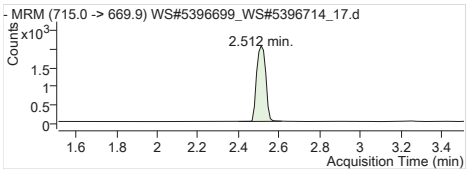



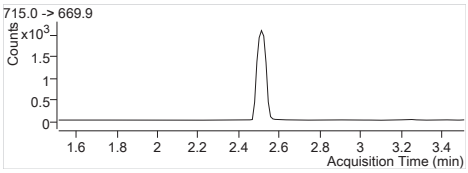

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 102.24 µg/L
Area ratio: 0.24037
Sample type: Sample



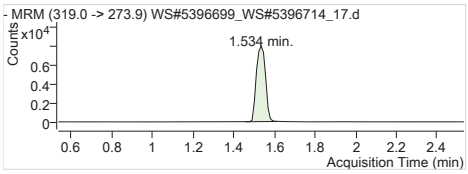



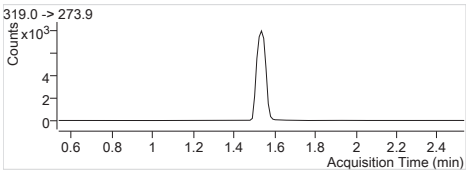

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 93.59 µg/L
Area ratio: 0.28641
Sample type: Sample



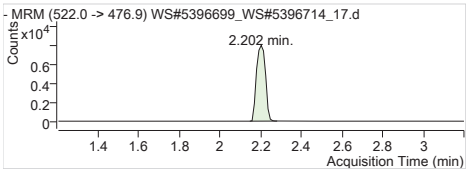



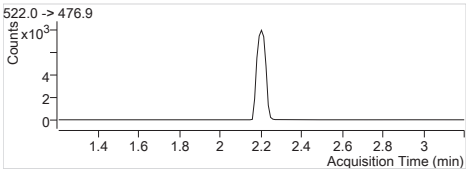

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 96.77 µg/L
Area ratio: 0.26178
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 2.43 µg/L
Area ratio: 0
Sample type: Sample



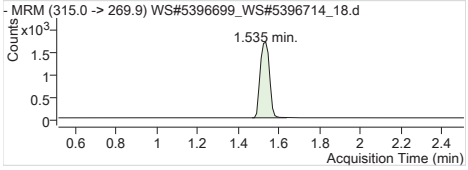

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 2.41 µg/L
Area ratio: 0
Sample type: Sample

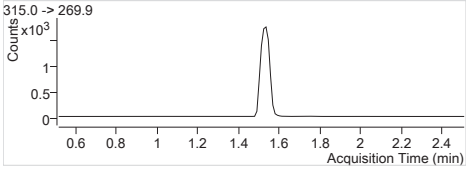
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5396699:FZA786-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_18.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B8 |
| **Acq. Date** | 2018/02/15 5:34:47 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | Reported for PFDoA, PFUnA , PFTeDA only. | | |

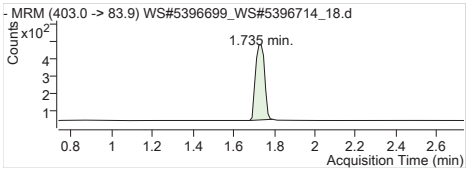
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5376 | 1.53 | 1 µg/L | | |
| MPFHxS | 1353 | 1.74 | 1 µg/L | | |
| MPFHpA | 6704 | 1.78 | 1 µg/L | | |
| MPFOA | 6537 | 1.95 | 1 µg/L | | |
| MPFOS | 1484 | 2.01 | 1 µg/L | | |
| MPFNA | 6321 | 2.09 | 1 µg/L | | |
| MPFDA | 4420 | 2.20 | 1 µg/L | | |
| MPFUnA | 5384 | 2.29 | 1 µg/L | | |
| MPFDoA | 6601 | 2.38 | 1 µg/L | | |
| MPFTeDA | 5655 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 20657 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 23166 | 2.20 | 1 µg/L | | |

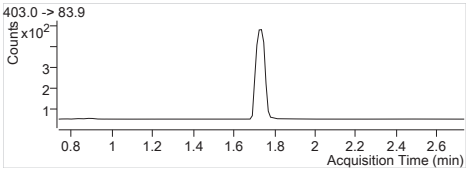
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 203 | 1.19 | - | 0.01 µg/L | - |
| PFHxA 1 | 2428 | 1.53 | - | 0.03 µg/L | - |
| PFHxS 1 | 633 | 1.72 | - | 0.03 µg/L | - |
| PFHpA 1 | 2475 | 1.78 | - | 0.02 µg/L | - |
| PFOA 1 | 17051 | 1.95 | - | 0.11 µg/L | - |
| PFOS 1 | 2108 | 1.99 | - | 0.07 µg/L | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 5359 | 1.53 | - | 110.15 µg/L | - |
| 18O2-PFHxS | 1353 | 1.74 | - | 119.30 µg/L | - |
| 13C4-PFHpA | 6704 | 1.78 | - | 115.49 µg/L | - |
| 13C4-PFOA | 6537 | 1.95 | - | 118.63 µg/L | - |
| 13C4-PFOS | 1484 | 2.01 | - | 116.51 µg/L | - |
| 13C5-PFNA | 6321 | 2.09 | - | 122.94 µg/L | - |
| 13C2-PFDA | 4409 | 2.20 | - | 104.81 µg/L | - |
| 13C2-PFUnA | 5384 | 2.29 | - | 98.85 µg/L | - |
| 13C2-PFDoA | 6601 | 2.38 | - | 93.11 µg/L | - |
| 13C2-PFTeDA | 5724 | 2.51 | - | 91.34 µg/L | - |
| 13C6-PFHxA | 20657 | 1.53 | - | 2.02 µg/L | - |
| 13C9-PFDA | 23166 | 2.20 | - | 2.28 µg/L | - |



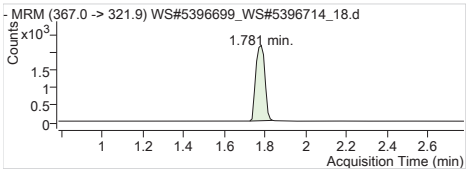



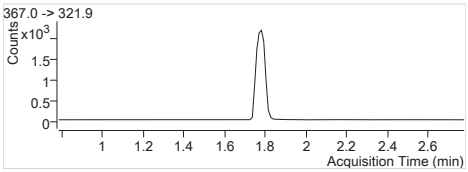

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



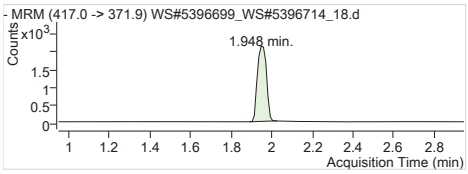



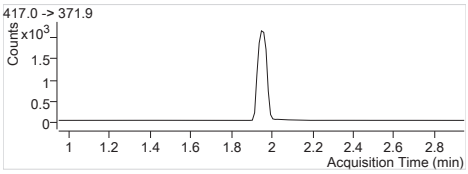

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: Sample



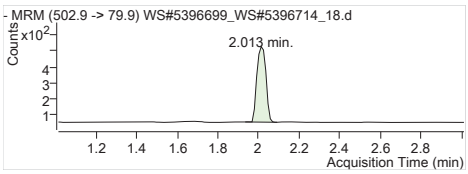



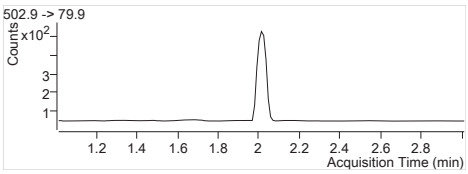

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Sample



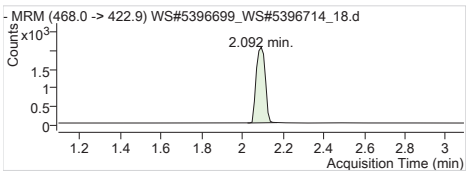



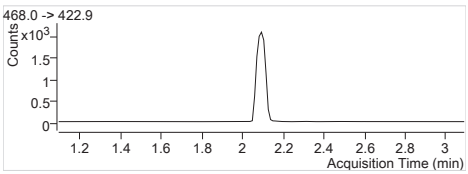

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: Sample



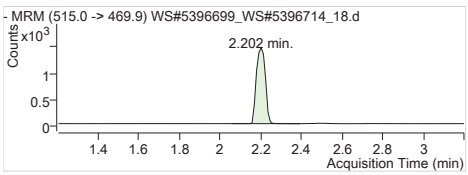



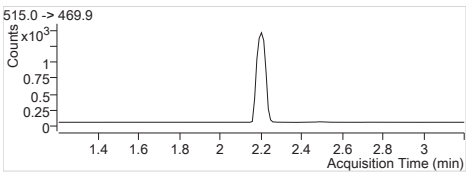

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Sample



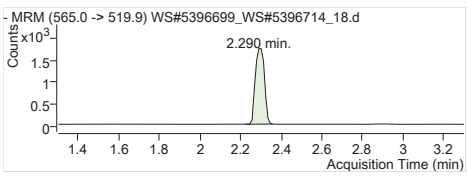



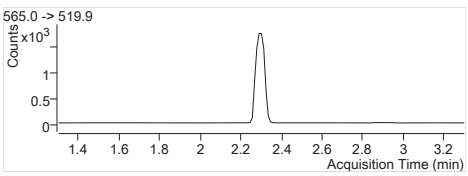

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Sample



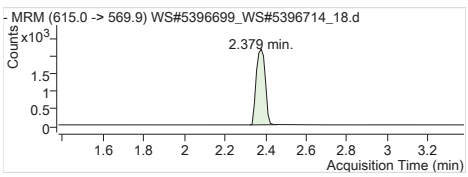



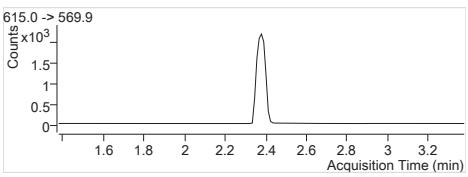

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



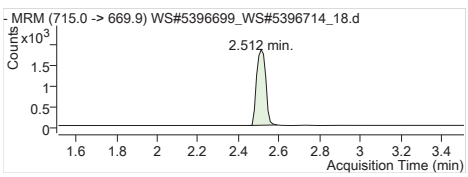



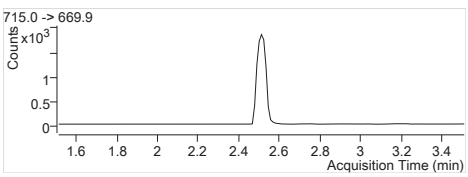

**MPFUnA** Internal Standard
RT (Exp. RT): 2.290 (2.302)
Concentration: 1 µg/L
Sample type: Sample



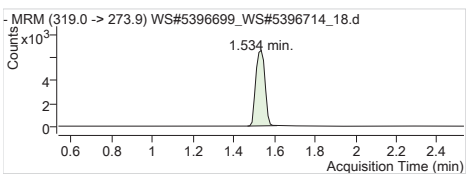



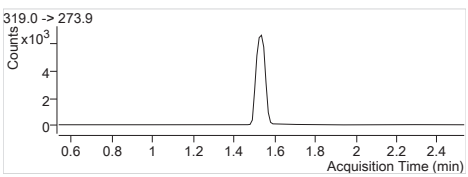

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Sample



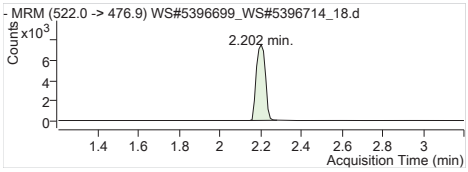



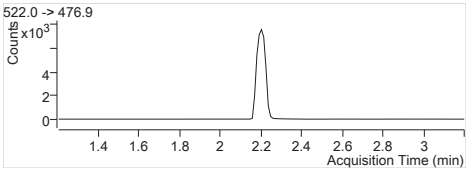

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Sample



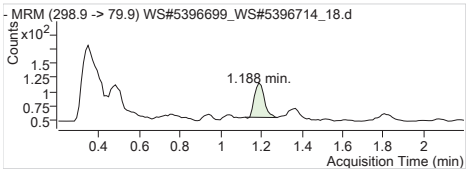



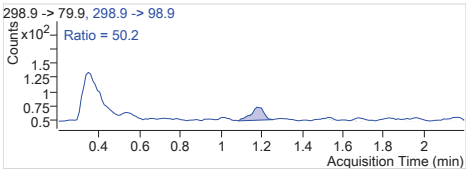

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Sample



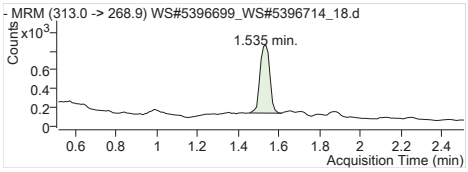



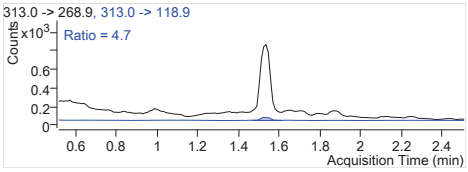

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



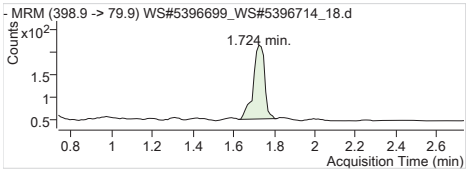



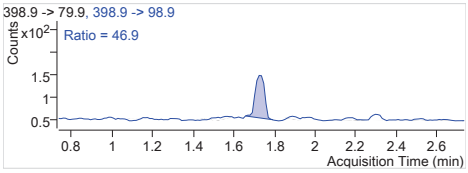

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.188 (1.199)
Calc. conc. 0.01 µg/L
Area ratio: 0.15004
Sample type: Sample



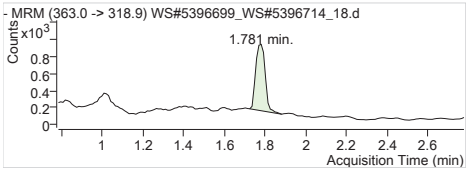



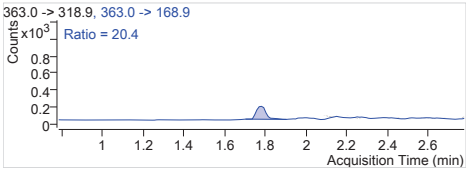

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 0.03 µg/L
Area ratio: 0.45164
Sample type: Sample



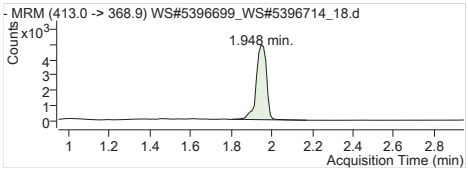



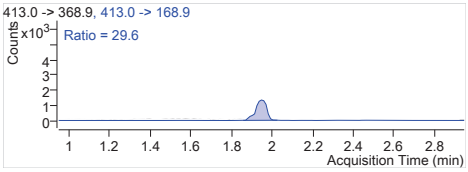

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.724 (1.735)
Calc. conc. 0.03 µg/L
Area ratio: 0.46785
Sample type: Sample



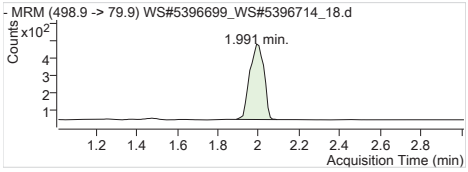



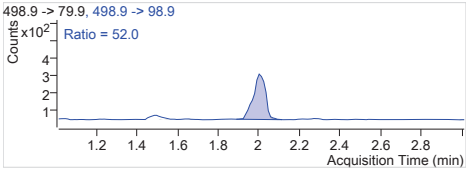

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 0.02 µg/L
Area ratio: 0.36918
Sample type: Sample



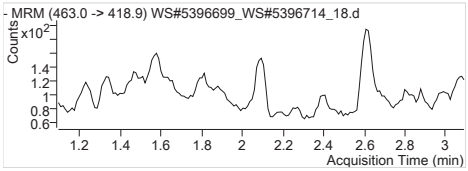



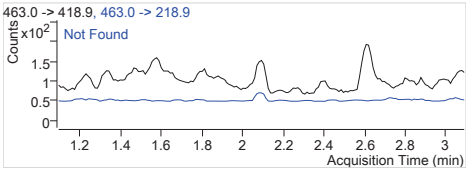

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.948 (1.948)
Calc. conc. 0.11 µg/L
Area ratio: 2.60838
Sample type: Sample



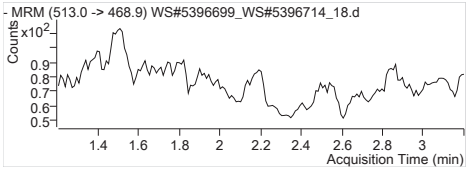



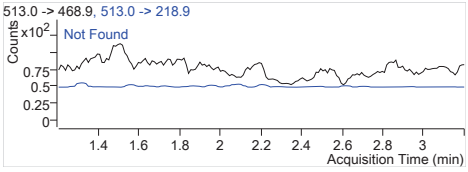

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.991 (2.013)
Calc. conc. 0.07 µg/L
Area ratio: 1.42049
Sample type: Sample



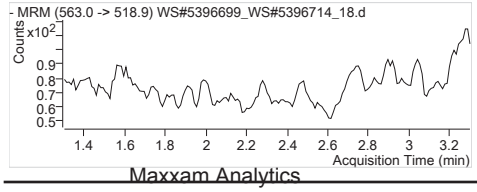



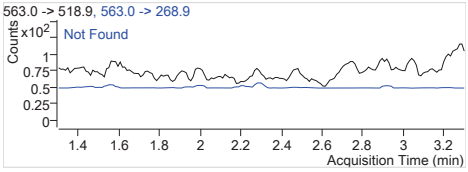

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.092)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



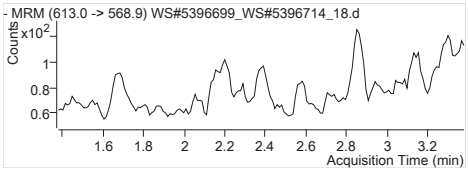



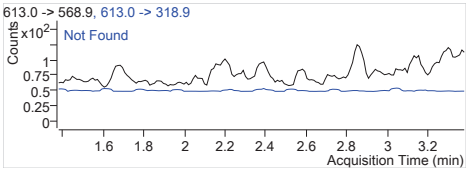

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.203)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



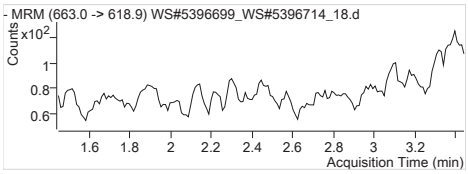



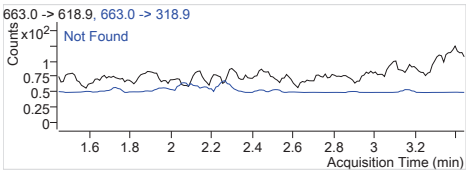

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.302)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



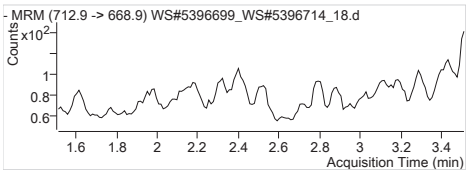



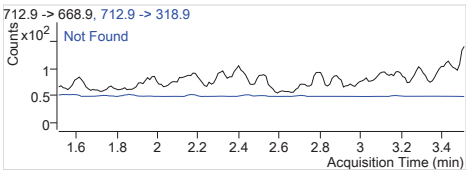

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.379) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



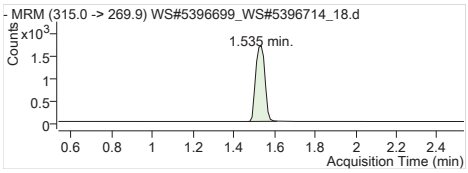



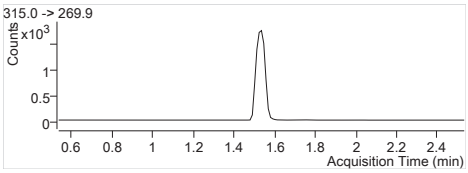

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.445) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



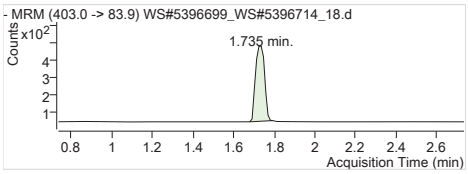



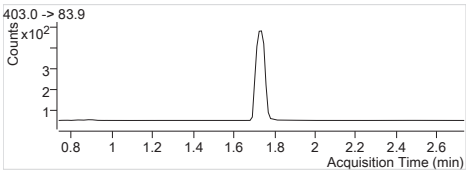

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.512) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



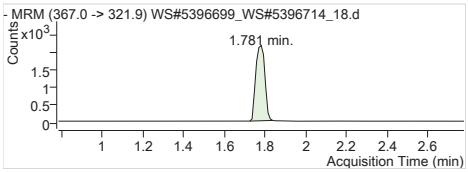



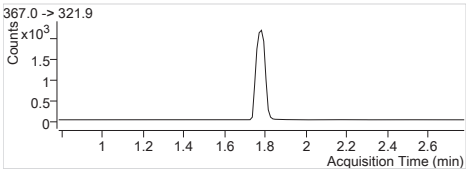

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 110.15 µg/L |
| Area ratio: | 0.25943 |
| Sample type: | Sample |



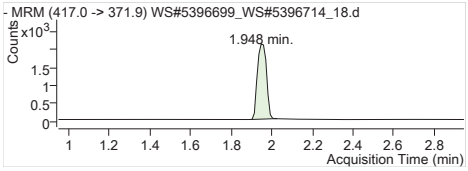



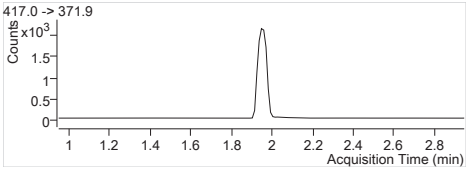

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 119.30 µg/L |
| Area ratio: | 0.06550 |
| Sample type: | Sample |



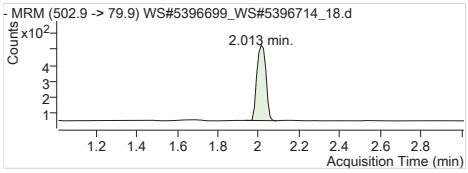



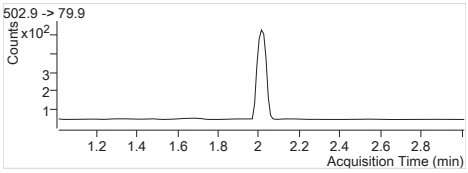

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 115.49 µg/L |
| Area ratio: | 0.32454 |
| Sample type: | Sample |



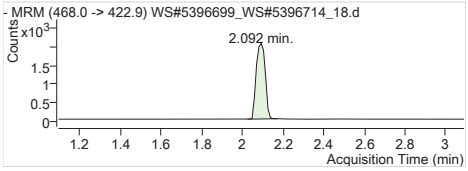



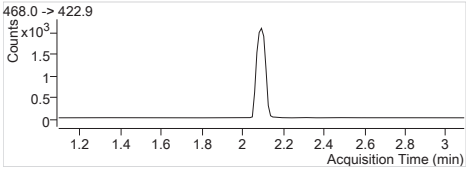

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.948 (1.948) |
| Calc. conc. | 118.63 µg/L |
| Area ratio: | 0.31645 |
| Sample type: | Sample |



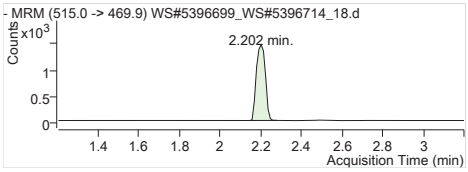



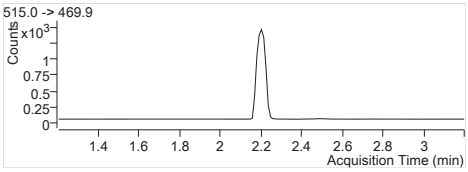

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 116.51 µg/L |
| Area ratio: | 0.07184 |
| Sample type: | Sample |



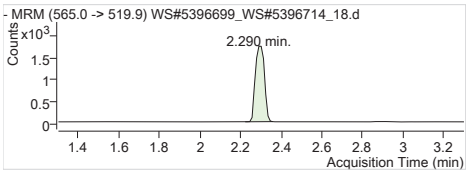



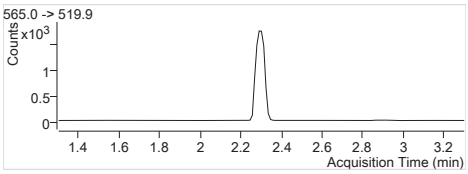

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 122.94 µg/L |
| Area ratio: | 0.30600 |
| Sample type: | Sample |



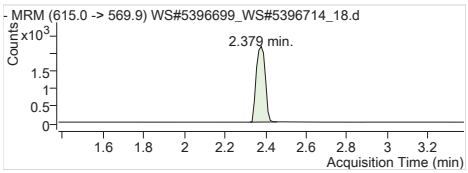



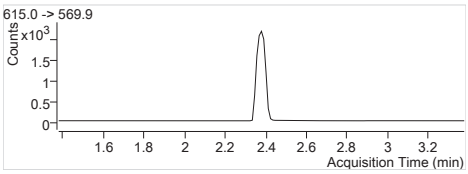

| | |
|---|---|
| **13C2-PFDA** | 515.0 -> 469.9 |
| RT (Exp. RT): | 2.202 (2.202) |
| Calc. conc. | 104.81 µg/L |
| Area ratio: | 0.19032 |
| Sample type: | Sample |



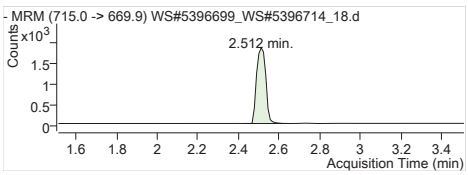



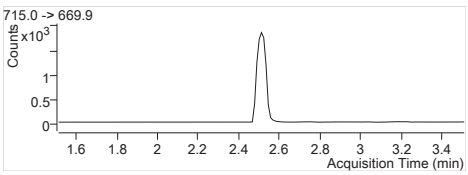

| | |
|---|---|
| **13C2-PFUnA** | 565.0 -> 519.9 |
| RT (Exp. RT): | 2.290 (2.302) |
| Calc. conc. | 98.85 µg/L |
| Area ratio: | 0.23241 |
| Sample type: | Sample |



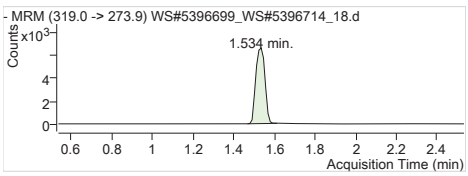



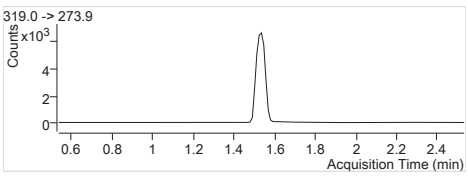

| | |
|---|---|
| **13C2-PFDoA** | 615.0 -> 569.9 |
| RT (Exp. RT): | 2.379 (2.379) |
| Calc. conc. | 93.11 µg/L |
| Area ratio: | 0.28494 |
| Sample type: | Sample |



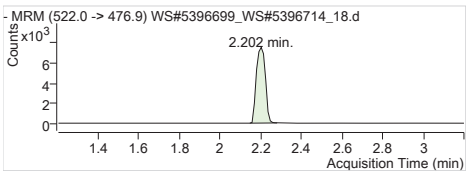



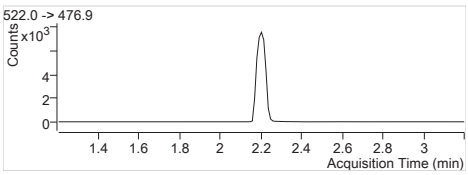

| | |
|---|---|
| **13C2-PFTeDA** | 715.0 -> 669.9 |
| RT (Exp. RT): | 2.512 (2.512) |
| Calc. conc. | 91.34 µg/L |
| Area ratio: | 0.24709 |
| Sample type: | Sample |




| | |
|---|---|
| **13C6-PFHxA** | 319.0 -> 273.9 |
| RT (Exp. RT): | 1.534 (1.534) |
| Calc. conc. | 2.02 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |



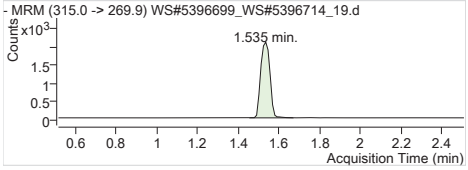

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 2.202 (2.202) |
| Calc. conc. | 2.28 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

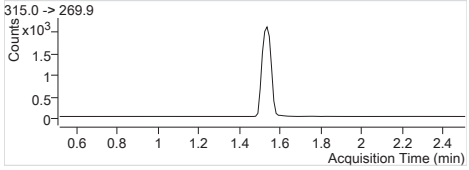
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5396699:FZA788-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_19.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B9 |
| **Acq. Date** | 2018/02/15 5:39:42 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | Reported for PFUnA , PFTeDA only. | | |

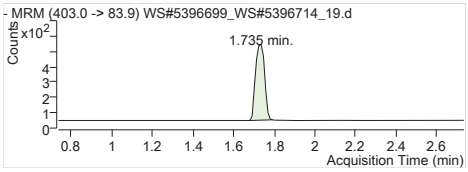
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6593 | 1.53 | 1 µg/L | | |
| MPFHxS | 1548 | 1.74 | 1 µg/L | | |
| MPFHpA | 8382 | 1.78 | 1 µg/L | | |
| MPFOA | 7653 | 1.95 | 1 µg/L | | |
| MPFOS | 1813 | 2.01 | 1 µg/L | | |
| MPFNA | 7125 | 2.09 | 1 µg/L | | |
| MPFDA | 5255 | 2.20 | 1 µg/L | | |
| MPFUnA | 6047 | 2.29 | 1 µg/L | | |
| MPFDoA | 7206 | 2.38 | 1 µg/L | | |
| MPFTeDA | 7026 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 24625 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 26438 | 2.20 | 1 µg/L | | |

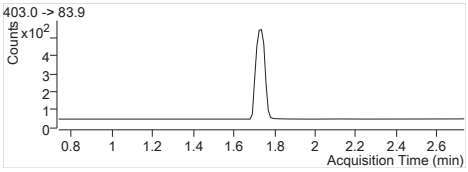
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6493 | 1.53 | - | 111.95 µg/L | - |
| 18O2-PFHxS | 1548 | 1.74 | - | 114.50 µg/L | - |
| 13C4-PFHpA | 8382 | 1.78 | - | 121.12 µg/L | - |
| 13C4-PFOA | 7653 | 1.95 | - | 116.50 µg/L | - |
| 13C4-PFOS | 1813 | 2.01 | - | 119.41 µg/L | - |
| 13C5-PFNA | 7125 | 2.09 | - | 116.25 µg/L | - |
| 13C2-PFDA | 5236 | 2.20 | - | 109.07 µg/L | - |
| 13C2-PFUnA | 6047 | 2.29 | - | 97.29 µg/L | - |
| 13C2-PFDoA | 7206 | 2.38 | - | 89.06 µg/L | - |
| 13C2-PFTeDA | 7086 | 2.51 | - | 99.08 µg/L | - |
| 13C6-PFHxA | 24625 | 1.53 | - | 2.41 µg/L | - |
| 13C9-PFDA | 26438 | 2.20 | - | 2.61 µg/L | - |



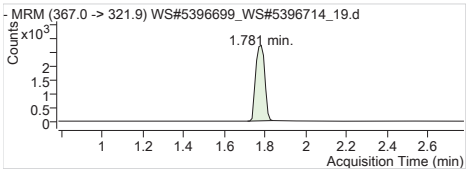



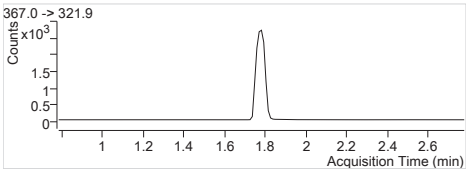

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



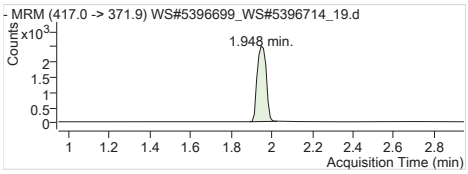



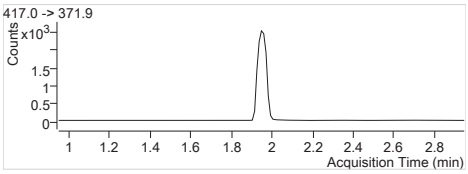

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: Sample



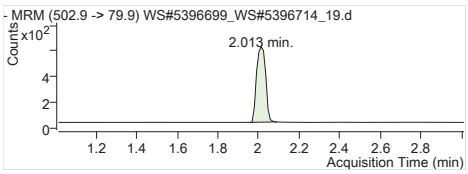



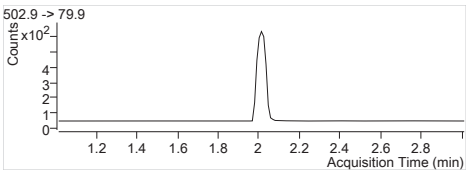

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Sample



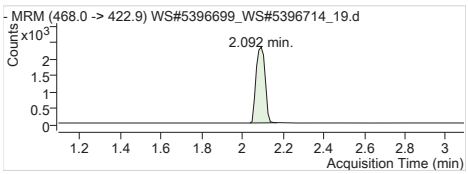



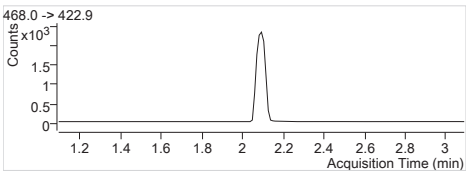

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: Sample



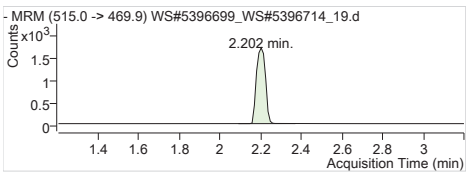



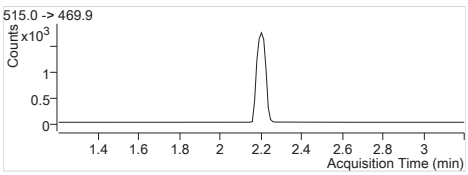

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Sample



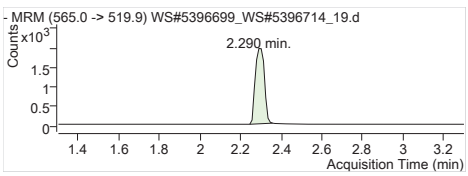



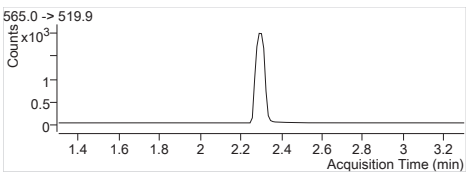

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Sample



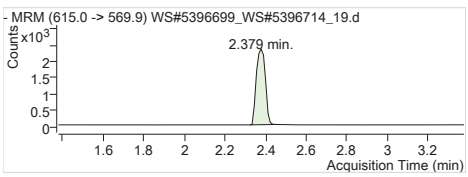



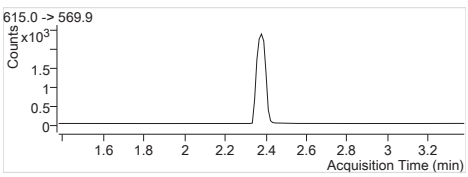

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



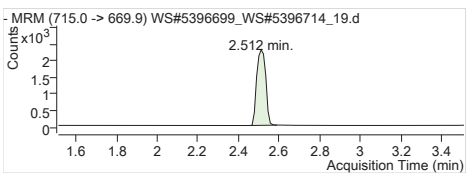



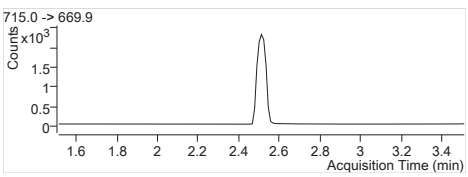

**MPFUnA** Internal Standard
RT (Exp. RT): 2.290 (2.302)
Concentration: 1 µg/L
Sample type: Sample



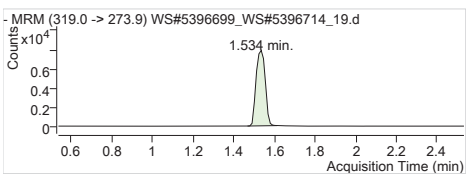



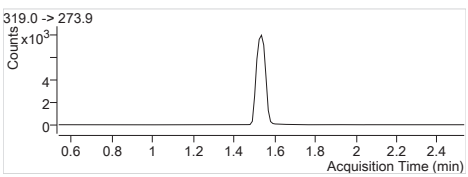

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Sample



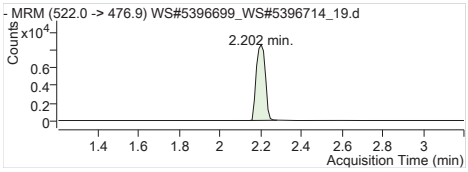



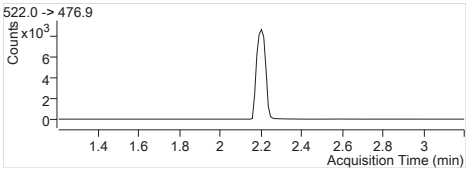

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Sample



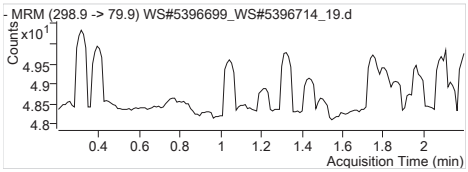



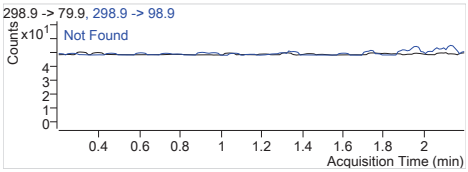

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Sample



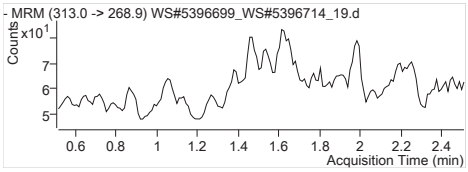



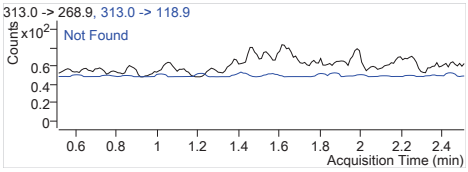

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



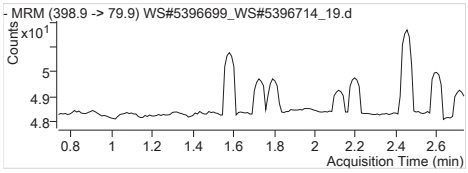



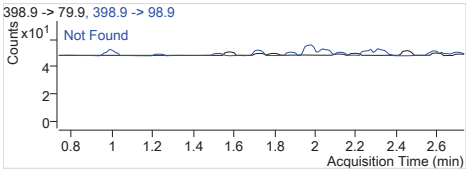

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.199)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



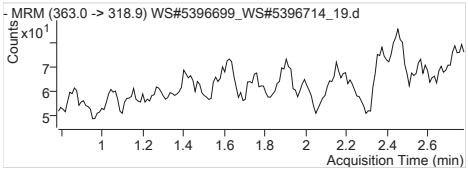



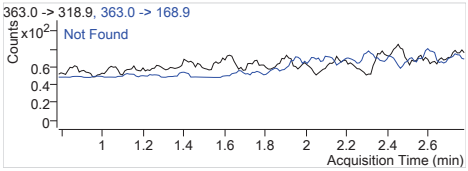

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.512)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



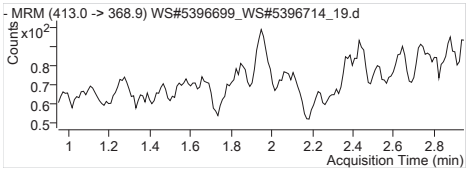



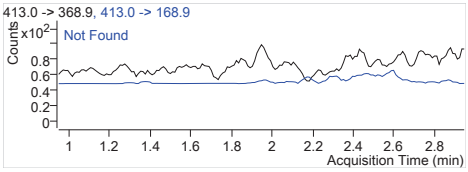

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.735)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



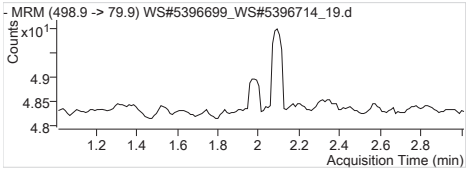



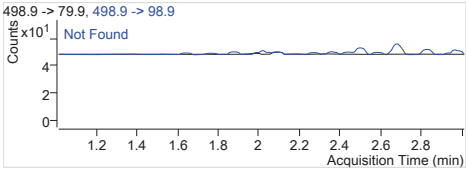

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.781)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



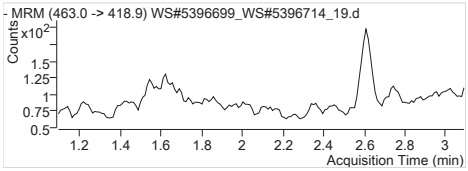



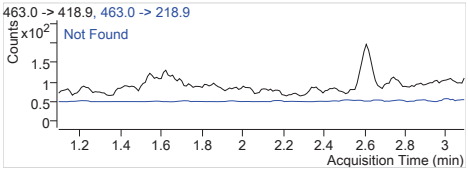

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.948)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



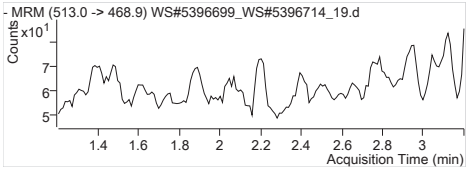



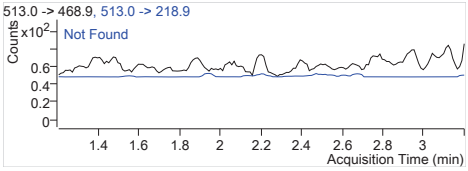

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (2.013)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



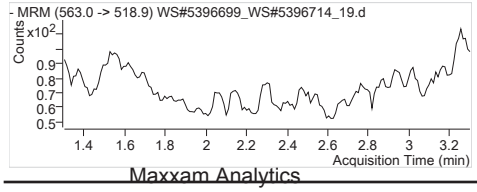



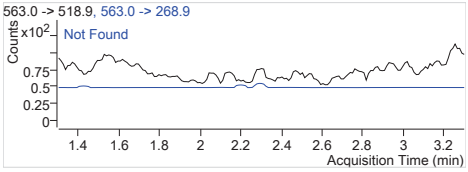

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.092)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



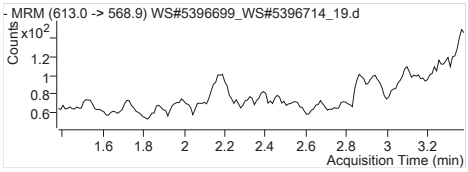



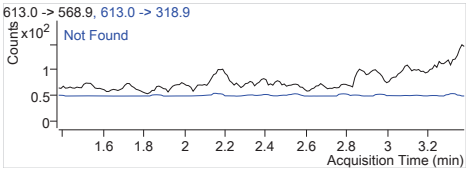

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.203)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



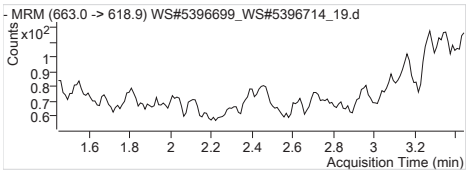



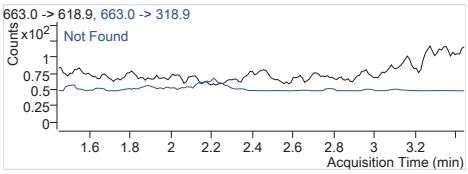

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.302)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



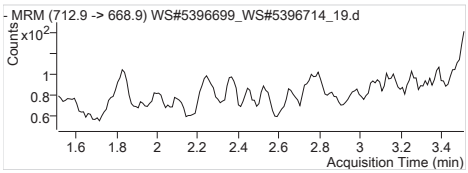



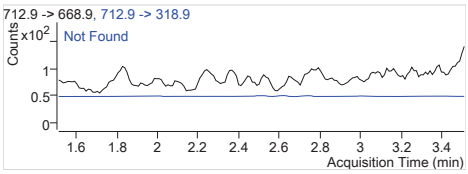

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.379) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



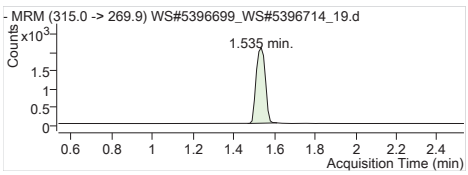



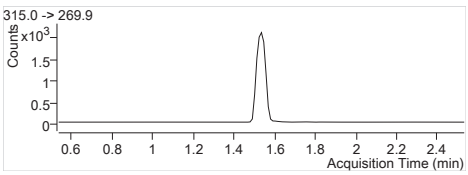

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.445) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



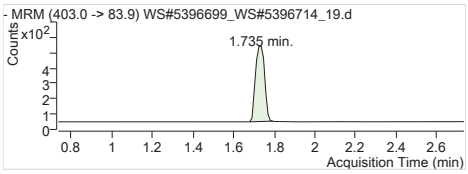



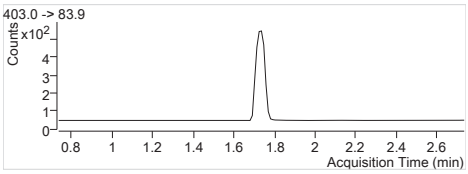

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.512) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



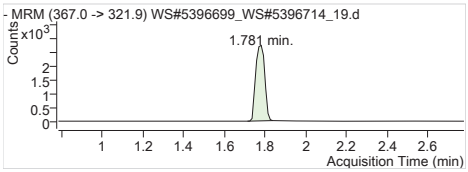



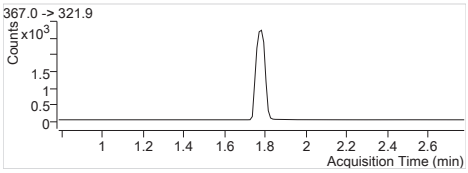

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 111.95 µg/L |
| Area ratio: | 0.26368 |
| Sample type: | Sample |



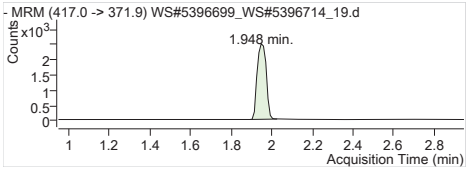



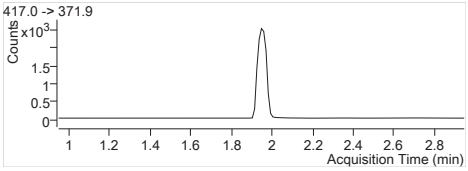

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 114.50 µg/L |
| Area ratio: | 0.06286 |
| Sample type: | Sample |



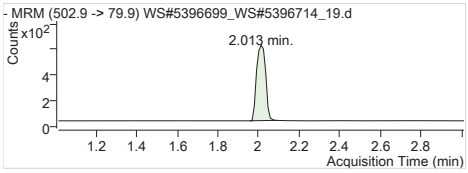



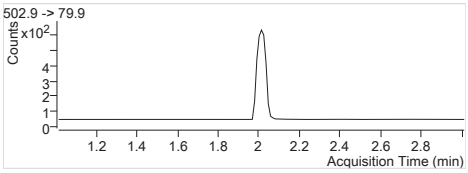

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 121.12 µg/L |
| Area ratio: | 0.34039 |
| Sample type: | Sample |



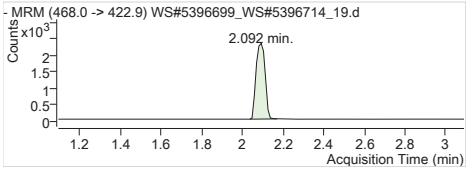



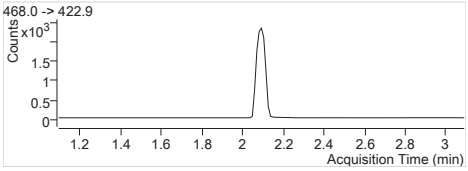

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.948 (1.948) |
| Calc. conc. | 116.50 µg/L |
| Area ratio: | 0.31078 |
| Sample type: | Sample |



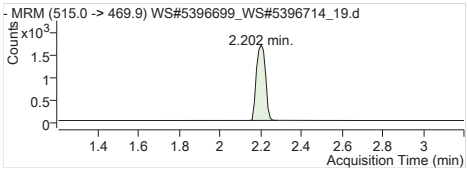



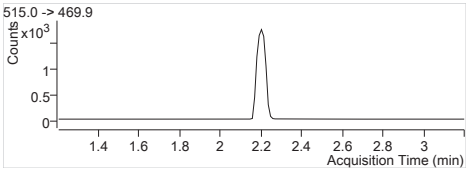

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 119.41 µg/L |
| Area ratio: | 0.07362 |
| Sample type: | Sample |



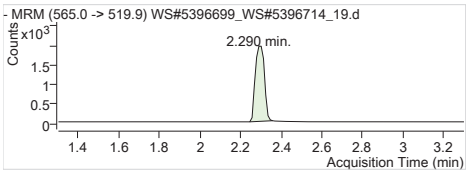



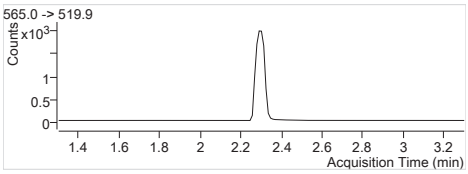

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 116.25 µg/L |
| Area ratio: | 0.28934 |
| Sample type: | Sample |



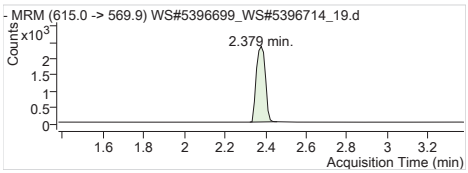



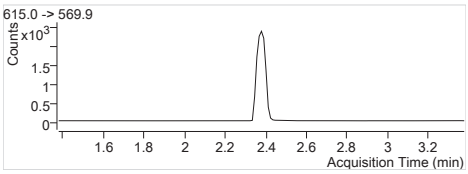

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 109.07 µg/L
Area ratio: 0.19805
Sample type: Sample



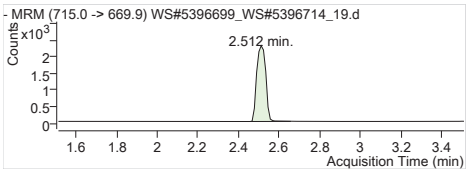



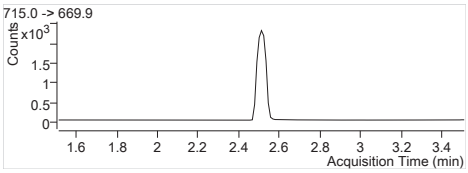

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.290 (2.302)
Calc. conc. 97.29 µg/L
Area ratio: 0.22872
Sample type: Sample



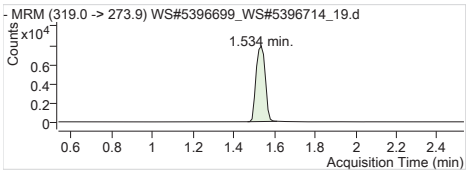



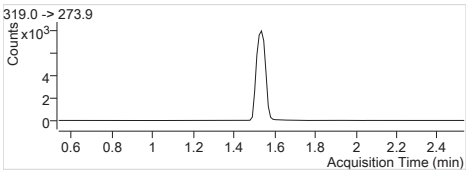

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 89.06 µg/L
Area ratio: 0.27256
Sample type: Sample



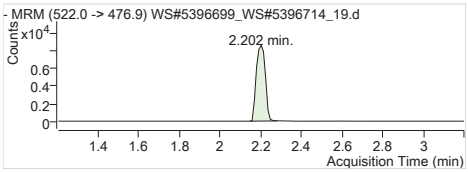



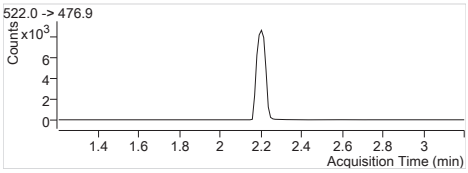

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 99.08 µg/L
Area ratio: 0.26802
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 2.41 µg/L
Area ratio: 0
Sample type: Sample



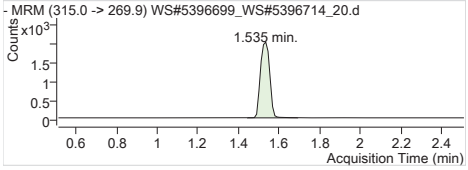

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 2.61 µg/L
Area ratio: 0
Sample type: Sample

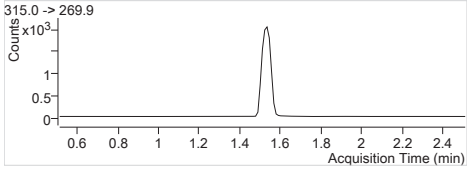
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5396699:FZA789-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_20.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-C1 |
| **Acq. Date** | 2018/02/15 5:44:38 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | Reported for PFDoA, PFUnA , PFTeDA only. | | |

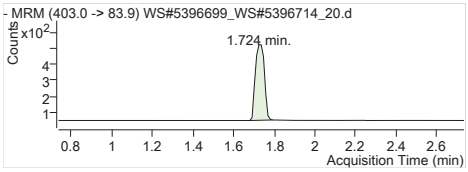
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6376 | 1.53 | 1 µg/L | | |
| MPFHxS | 1478 | 1.72 | 1 µg/L | | |
| MPFHpA | 7889 | 1.78 | 1 µg/L | | |
| MPFOA | 8085 | 1.95 | 1 µg/L | | |
| MPFOS | 1818 | 2.01 | 1 µg/L | | |
| MPFNA | 7057 | 2.09 | 1 µg/L | | |
| MPFDA | 4983 | 2.20 | 1 µg/L | | |
| MPFUnA | 5974 | 2.29 | 1 µg/L | | |
| MPFDoA | 7597 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6372 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 25529 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 26327 | 2.20 | 1 µg/L | | |

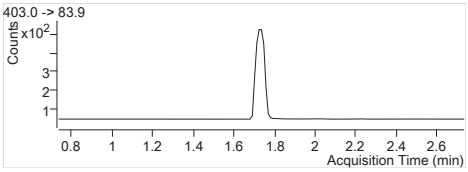
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6285 | 1.53 | - | 104.53 µg/L | - |
| 18O2-PFHxS | 1478 | 1.72 | - | 105.45 µg/L | - |
| 13C4-PFHpA | 7889 | 1.78 | - | 109.96 µg/L | - |
| 13C4-PFOA | 8085 | 1.95 | - | 118.72 µg/L | - |
| 13C4-PFOS | 1818 | 2.01 | - | 115.50 µg/L | - |
| 13C5-PFNA | 7056 | 2.09 | - | 111.05 µg/L | - |
| 13C2-PFDA | 4899 | 2.20 | - | 102.48 µg/L | - |
| 13C2-PFUnA | 5974 | 2.29 | - | 96.52 µg/L | - |
| 13C2-PFDoA | 7597 | 2.38 | - | 94.29 µg/L | - |
| 13C2-PFTeDA | 6428 | 2.51 | - | 90.26 µg/L | - |
| 13C6-PFHxA | 25529 | 1.53 | - | 2.50 µg/L | - |
| 13C9-PFDA | 26327 | 2.20 | - | 2.60 µg/L | - |



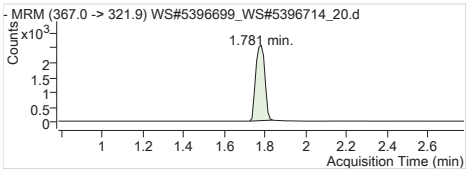



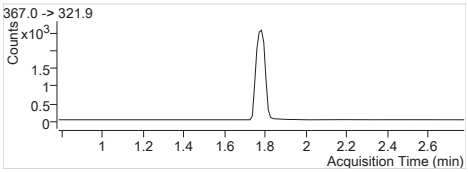

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



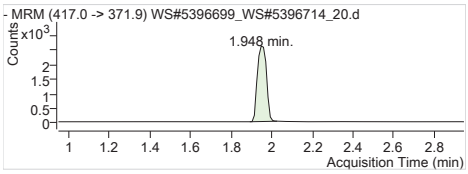



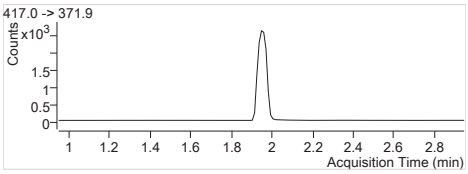

**MPFHxS** Internal Standard
RT (Exp. RT): 1.724 (1.735)
Concentration: 1 µg/L
Sample type: Sample



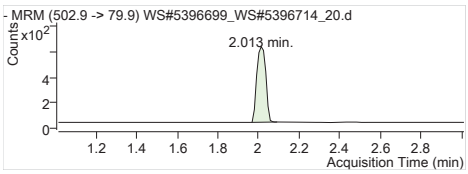



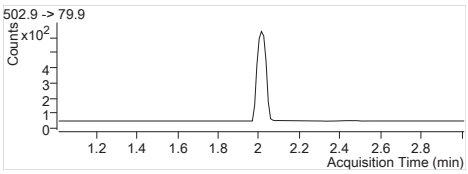

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Sample



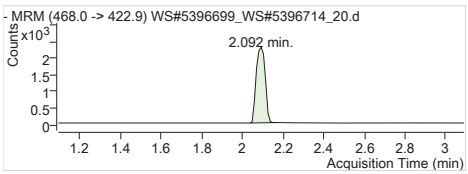



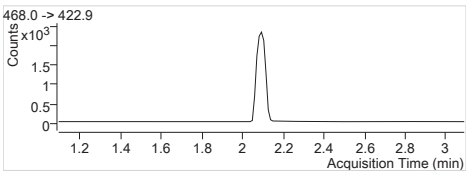

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: Sample



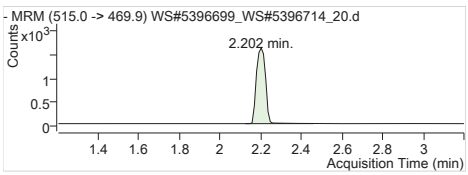



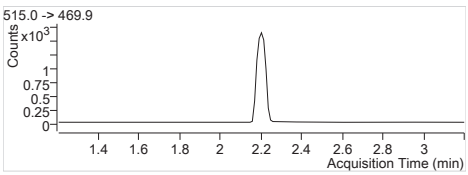

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Sample



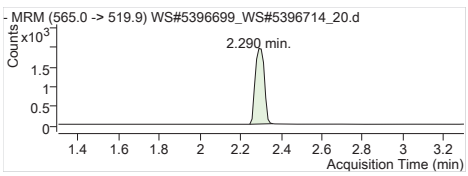



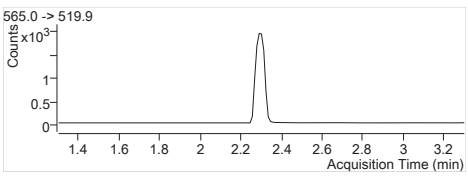

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Sample



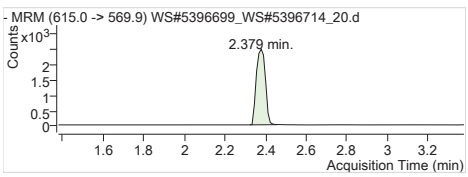



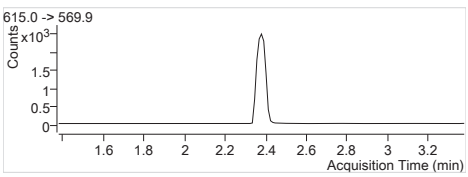

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



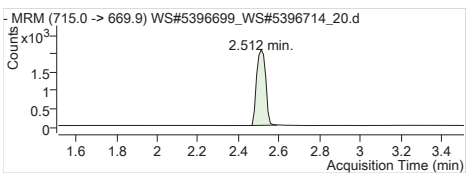



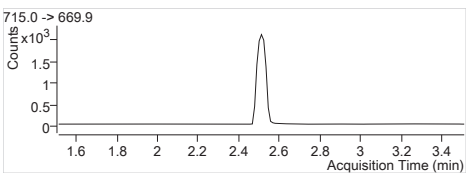

**MPFUnA** Internal Standard
RT (Exp. RT): 2.290 (2.302)
Concentration: 1 µg/L
Sample type: Sample



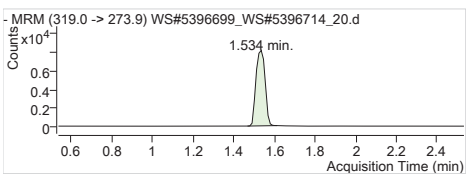



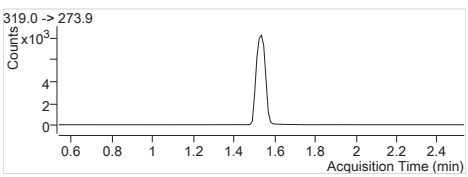

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Sample



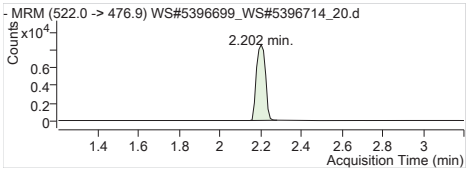



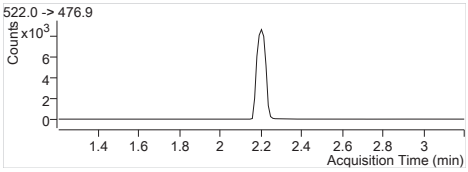

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Sample



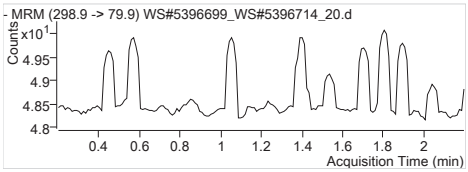



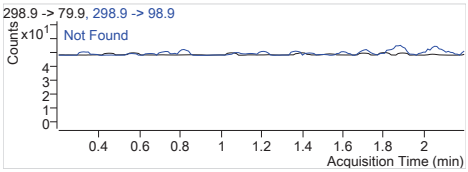

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Sample



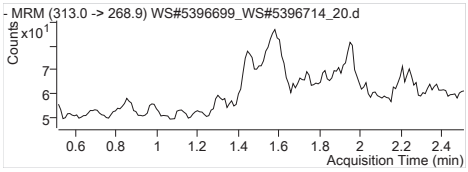



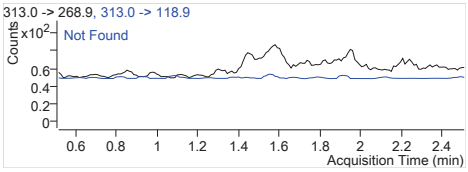

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



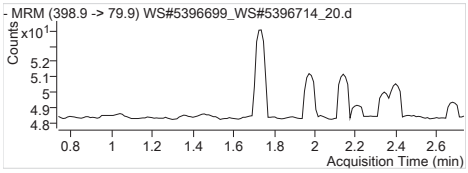



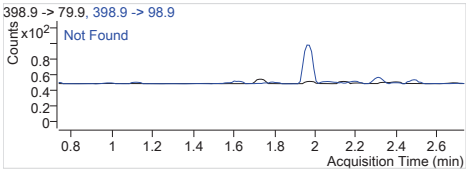

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.199)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



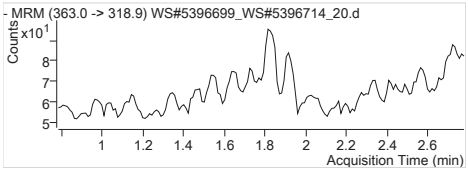



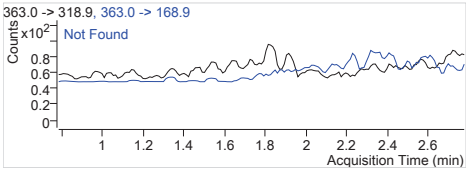

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.512)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



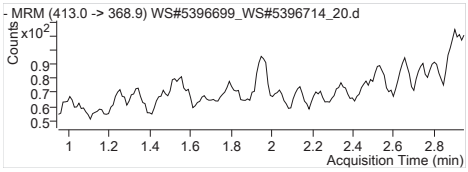



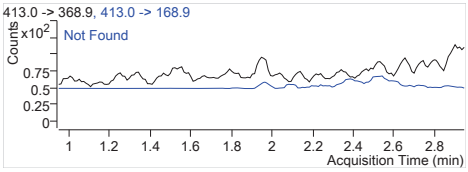

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.735)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



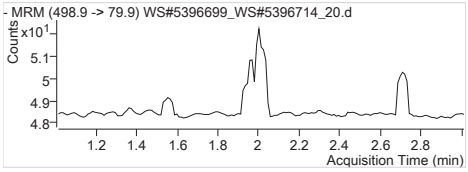



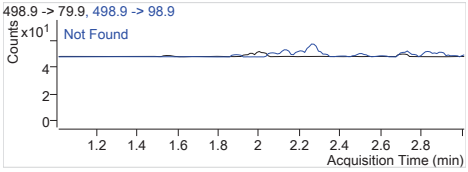

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.781)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



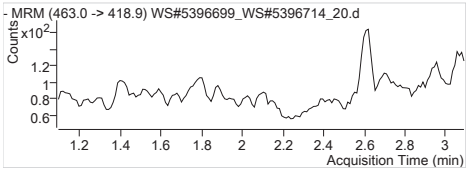



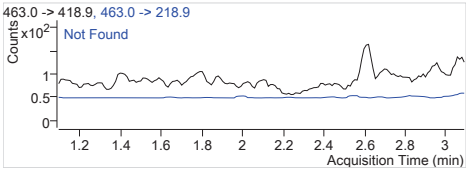

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.948)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



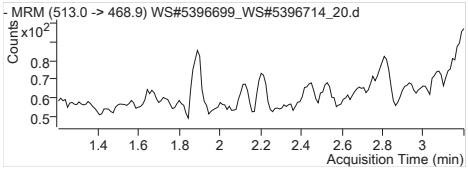



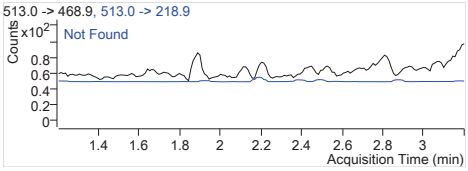

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (2.013)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



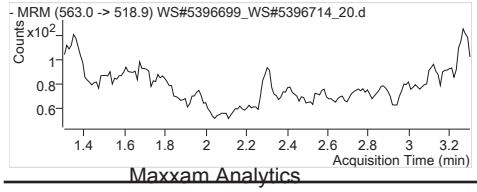



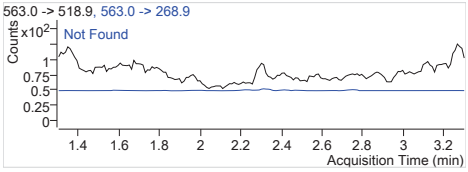

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.092)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



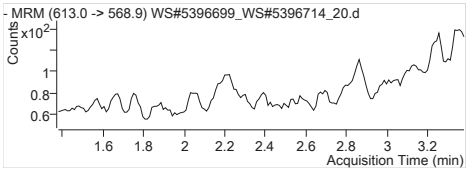



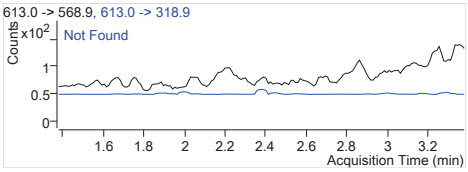

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.203)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



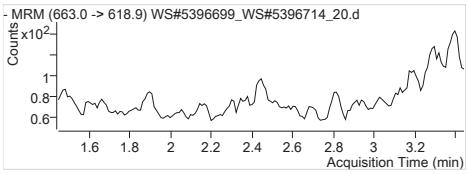



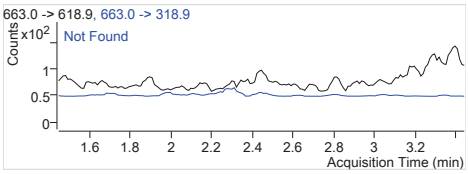

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.302)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



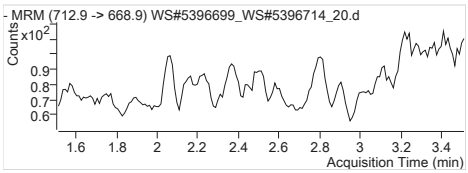



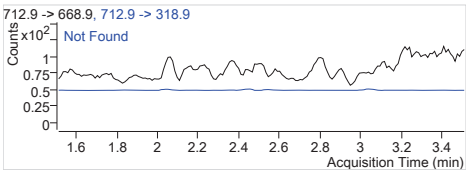

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.379) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



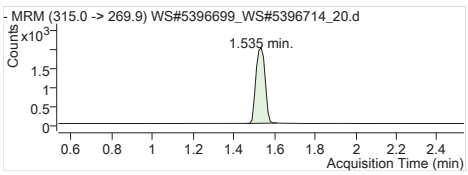



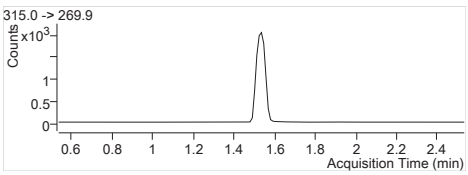

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.445) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



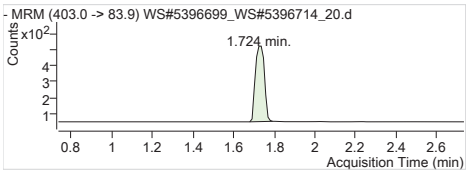



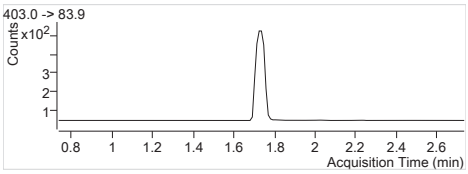

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.512) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



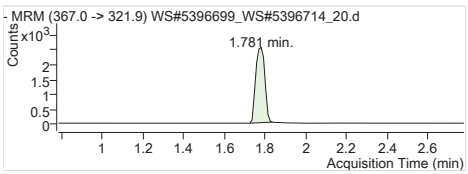



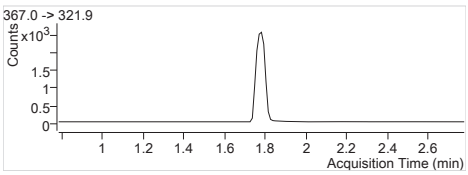

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 104.53 µg/L |
| Area ratio: | 0.24619 |
| Sample type: | Sample |



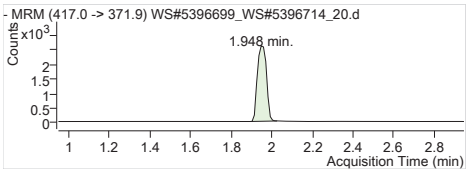



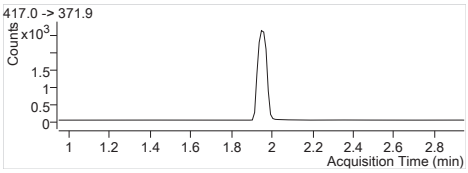

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.724 (1.735) |
| Calc. conc. | 105.45 µg/L |
| Area ratio: | 0.05789 |
| Sample type: | Sample |



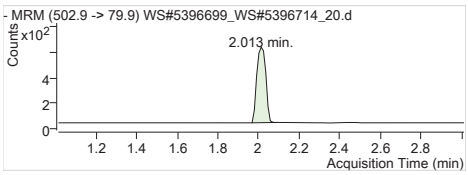



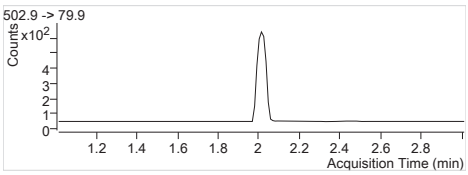

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 109.96 µg/L |
| Area ratio: | 0.30902 |
| Sample type: | Sample |



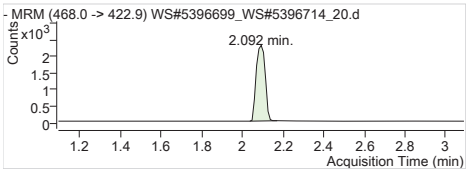



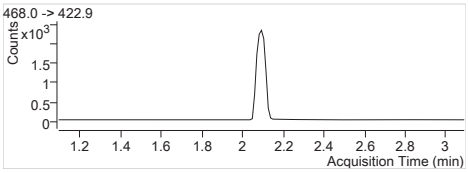

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.948 (1.948) |
| Calc. conc. | 118.72 µg/L |
| Area ratio: | 0.31670 |
| Sample type: | Sample |



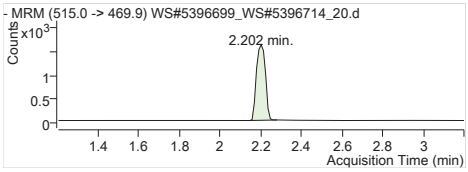



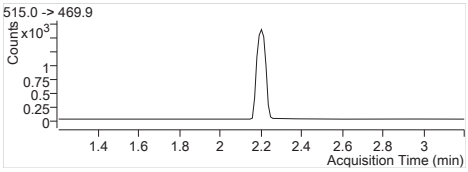

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 115.50 µg/L |
| Area ratio: | 0.07121 |
| Sample type: | Sample |



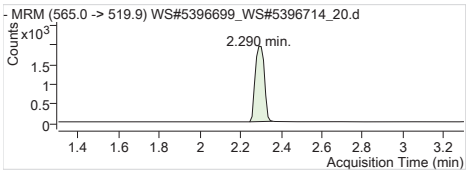



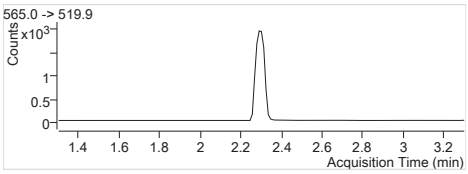

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 111.05 µg/L |
| Area ratio: | 0.27639 |
| Sample type: | Sample |



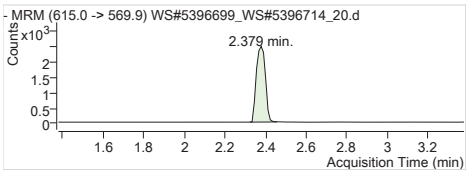



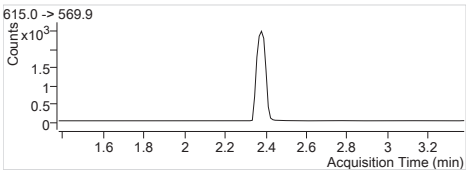

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 102.48 µg/L
Area ratio: 0.18608
Sample type: Sample



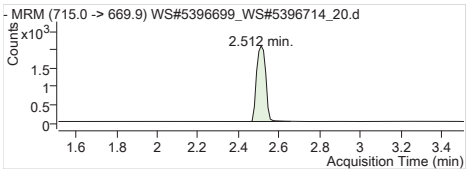



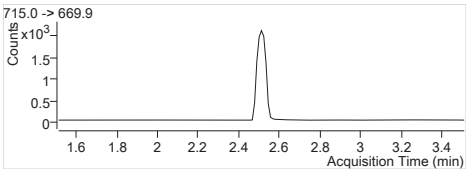

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.290 (2.302)
Calc. conc. 96.52 µg/L
Area ratio: 0.22692
Sample type: Sample



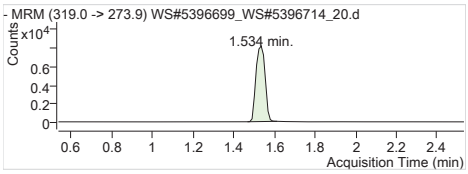



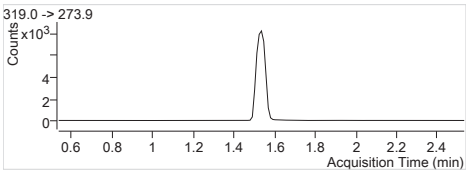

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 94.29 µg/L
Area ratio: 0.28856
Sample type: Sample



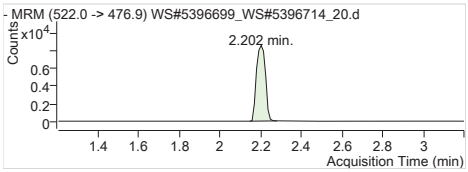



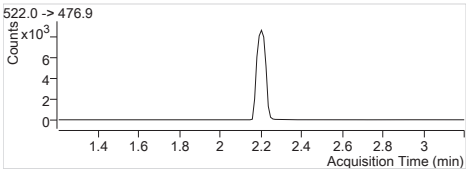

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 90.26 µg/L
Area ratio: 0.24416
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 2.50 µg/L
Area ratio: 0
Sample type: Sample



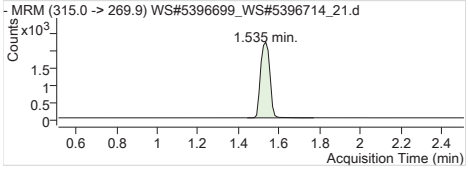

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 2.60 µg/L
Area ratio: 0
Sample type: Sample

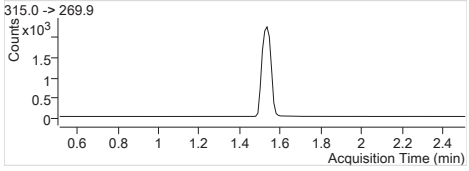
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5396699:FZA790-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_21.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-C2 |
| **Acq. Date** | 2018/02/15 5:49:34 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | Reported for PFDoA, PFUnA , PFTeDA only. | | |

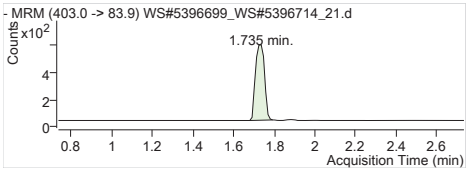
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 7037 | 1.53 | 1 µg/L | | |
| MPFHxS | 1718 | 1.74 | 1 µg/L | | |
| MPFHpA | 8621 | 1.78 | 1 µg/L | | |
| MPFOA | 8081 | 1.95 | 1 µg/L | | |
| MPFOS | 1758 | 2.01 | 1 µg/L | | |
| MPFNA | 7265 | 2.09 | 1 µg/L | | |
| MPFDA | 5694 | 2.20 | 1 µg/L | | |
| MPFUnA | 6352 | 2.29 | 1 µg/L | | |
| MPFDoA | 7793 | 2.38 | 1 µg/L | | |
| MPFTeDA | 7129 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 23783 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 23035 | 2.20 | 1 µg/L | | |

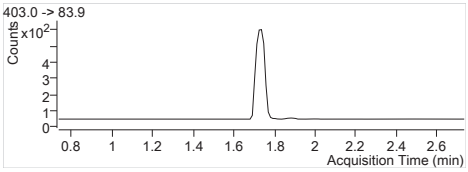
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6928 | 1.53 | - | 123.68 µg/L | - |
| 18O2-PFHxS | 1718 | 1.74 | - | 131.57 µg/L | - |
| 13C4-PFHpA | 8621 | 1.78 | - | 128.99 µg/L | - |
| 13C4-PFOA | 8081 | 1.95 | - | 127.37 µg/L | - |
| 13C4-PFOS | 1758 | 2.01 | - | 119.88 µg/L | - |
| 13C5-PFNA | 7265 | 2.09 | - | 122.73 µg/L | - |
| 13C2-PFDA | 5618 | 2.20 | - | 134.31 µg/L | - |
| 13C2-PFUnA | 6352 | 2.29 | - | 117.29 µg/L | - |
| 13C2-PFDoA | 7793 | 2.38 | - | 110.55 µg/L | - |
| 13C2-PFTeDA | 7193 | 2.51 | - | 115.43 µg/L | - |
| 13C6-PFHxA | 23783 | 1.53 | - | 2.33 µg/L | - |
| 13C9-PFDA | 23035 | 2.20 | - | 2.27 µg/L | - |



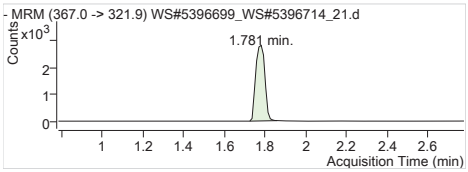



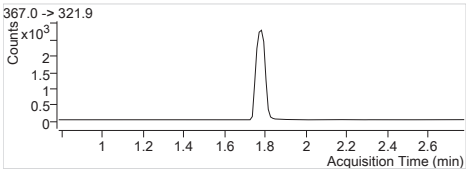

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



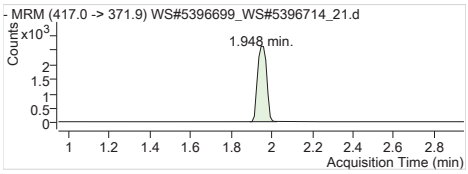



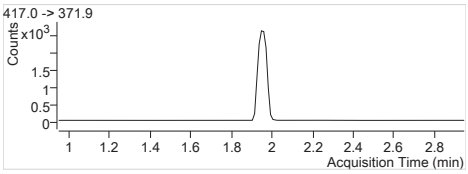

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: Sample



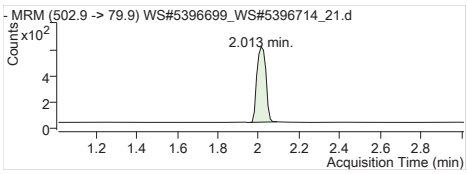



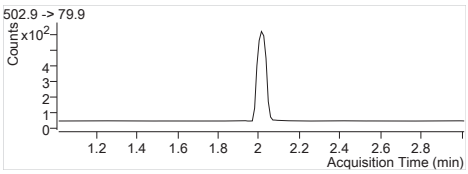

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Sample



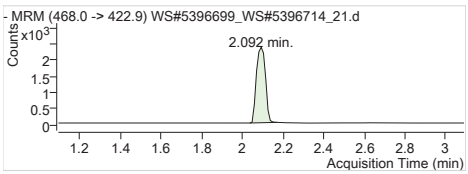



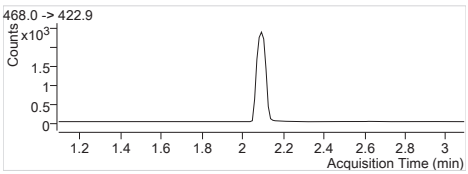

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: Sample



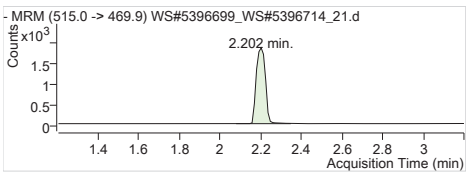



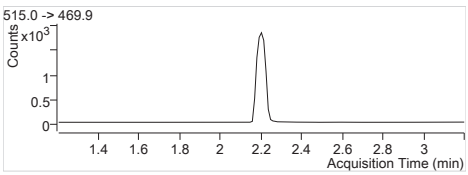

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Sample



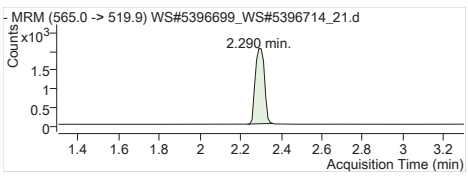



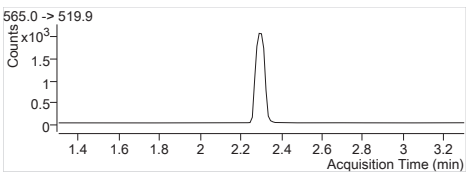

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Sample



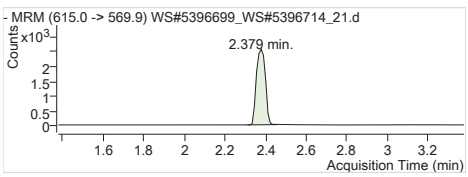



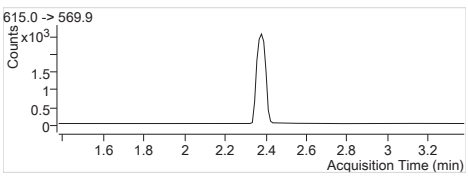

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



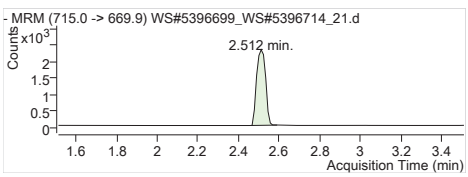



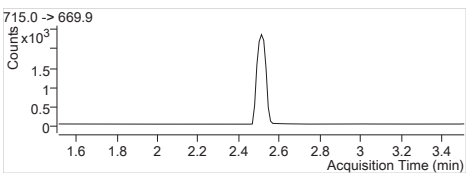

**MPFUnA** Internal Standard
RT (Exp. RT): 2.290 (2.302)
Concentration: 1 µg/L
Sample type: Sample



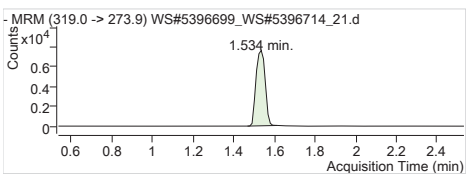



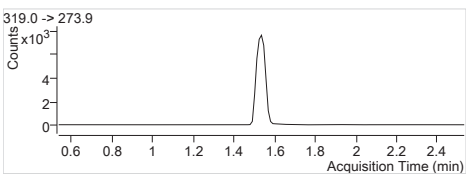

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Sample



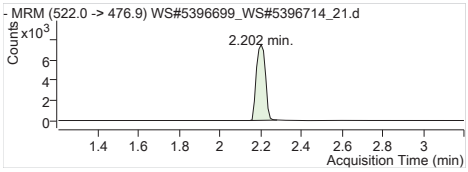



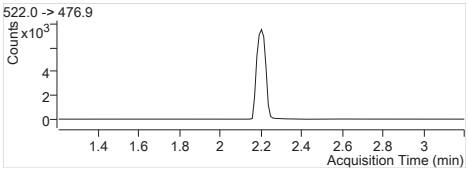

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Sample



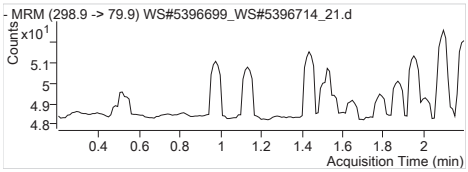



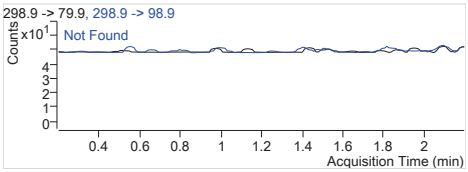

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Sample



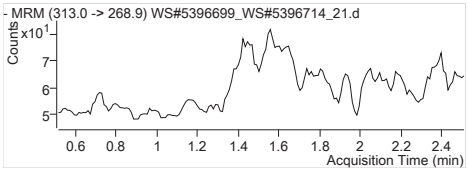



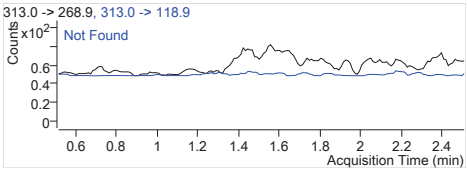

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



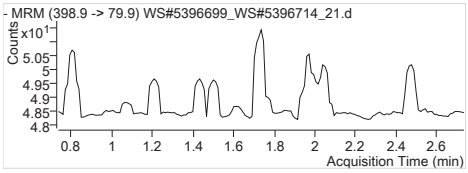



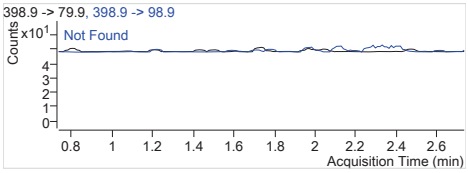

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.199)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



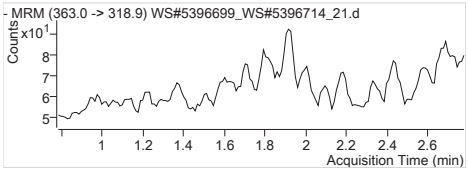



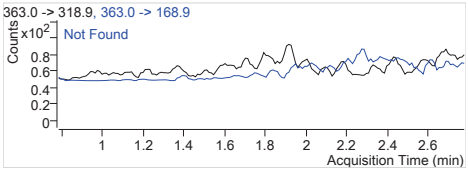

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.512)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



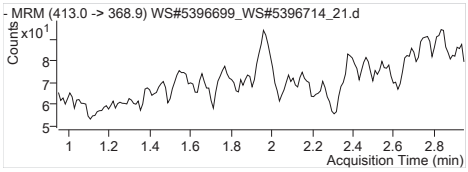



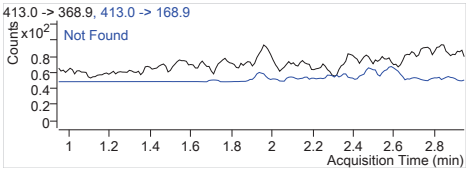

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.735)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



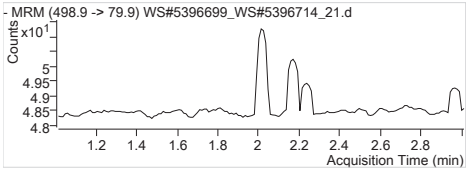



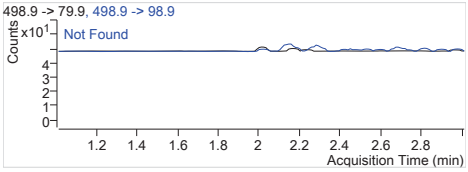

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.781)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



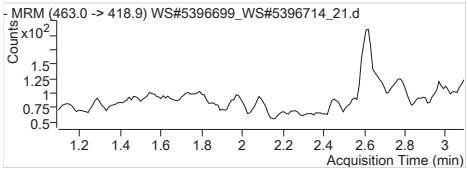



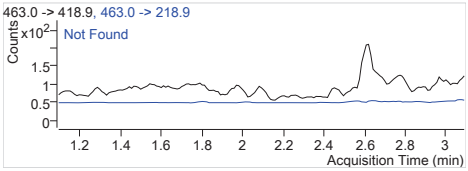

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.948)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



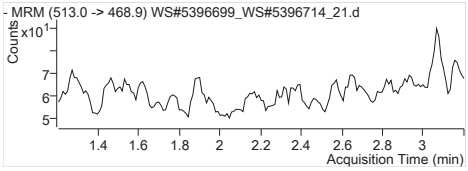



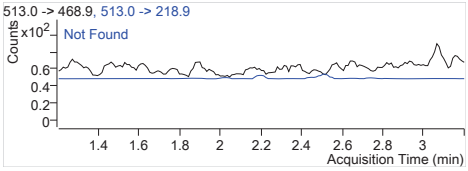

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (2.013)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



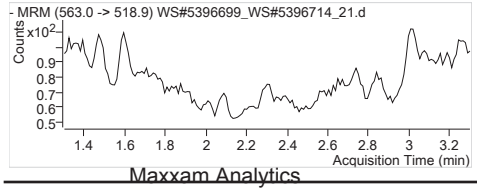



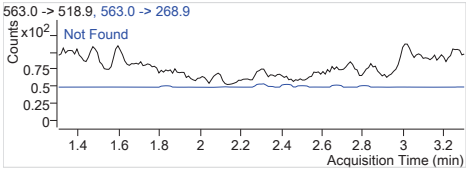

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.092)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



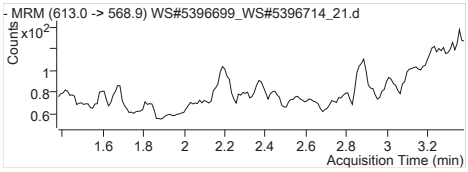



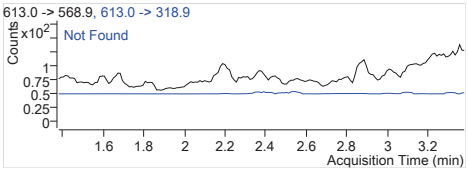

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.203)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



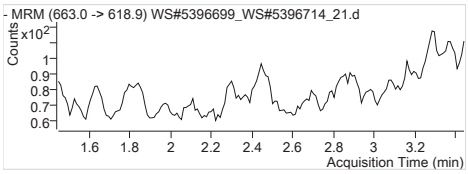



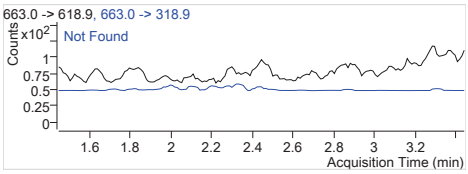

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.302)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



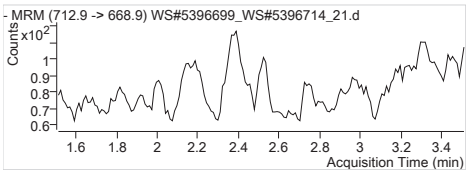



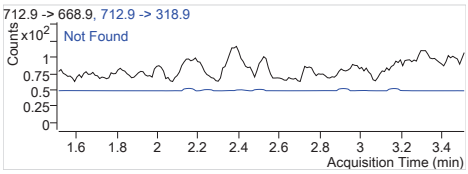

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.379) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



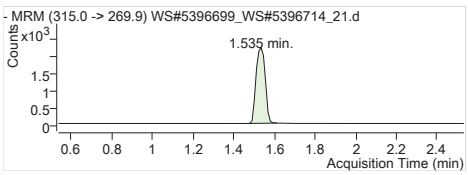



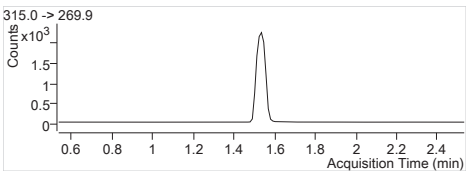

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.445) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



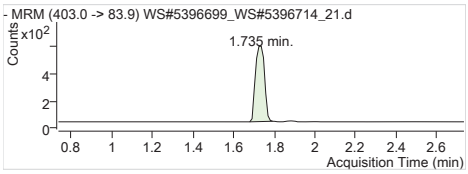



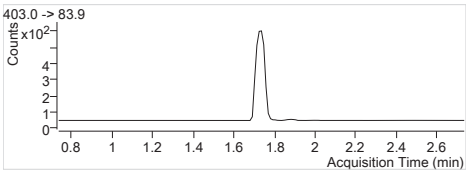

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.512) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



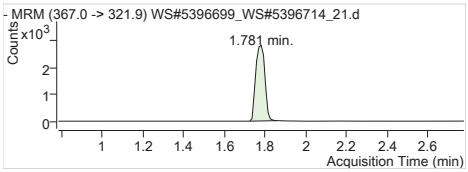



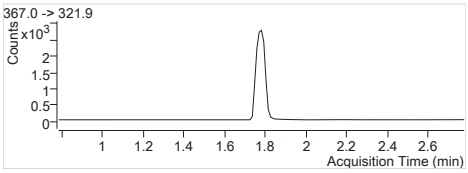

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 123.68 µg/L |
| Area ratio: | 0.29130 |
| Sample type: | Sample |



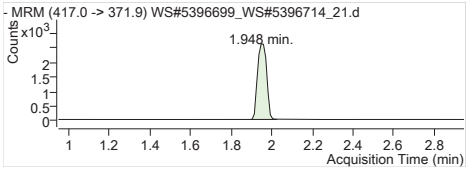



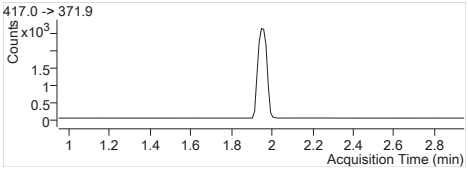

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 131.57 µg/L |
| Area ratio: | 0.07224 |
| Sample type: | Sample |



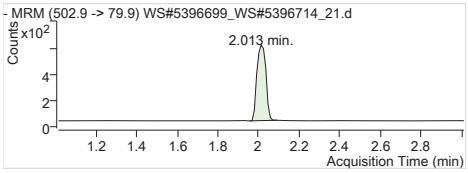



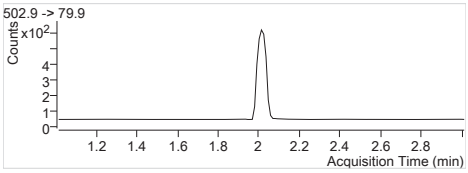

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 128.99 µg/L |
| Area ratio: | 0.36249 |
| Sample type: | Sample |



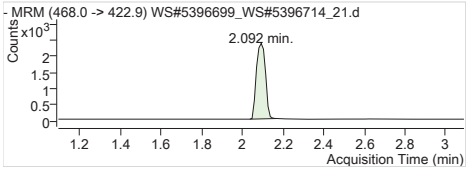



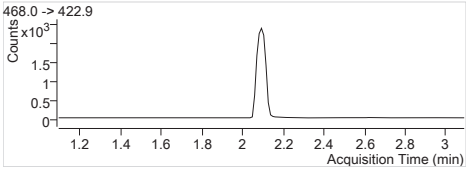

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.948 (1.948) |
| Calc. conc. | 127.37 µg/L |
| Area ratio: | 0.33978 |
| Sample type: | Sample |



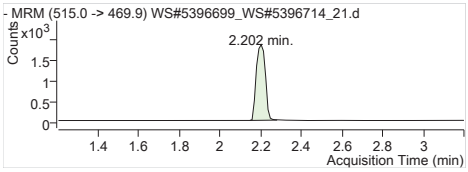



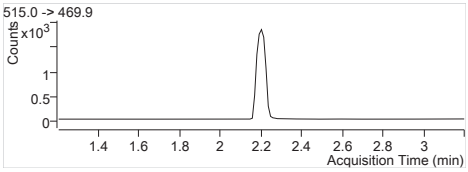

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 119.88 µg/L |
| Area ratio: | 0.07392 |
| Sample type: | Sample |



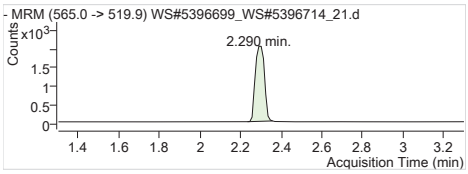



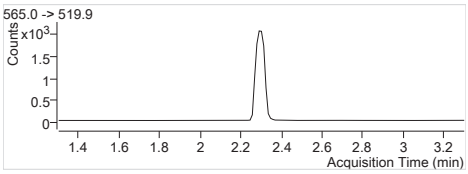

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 122.73 µg/L |
| Area ratio: | 0.30547 |
| Sample type: | Sample |



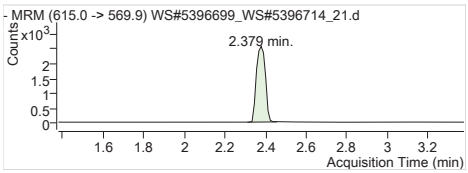



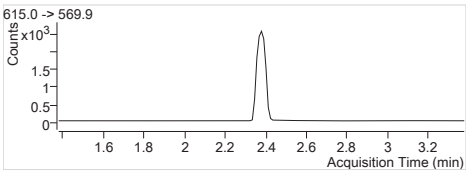

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 134.31 µg/L
Area ratio: 0.24389
Sample type: Sample



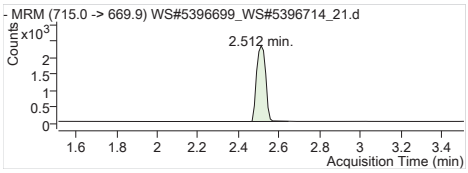



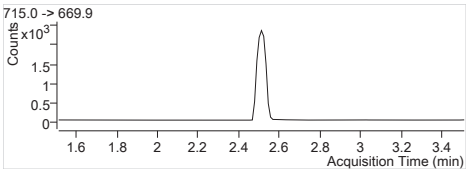

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.290 (2.302)
Calc. conc. 117.29 µg/L
Area ratio: 0.27575
Sample type: Sample



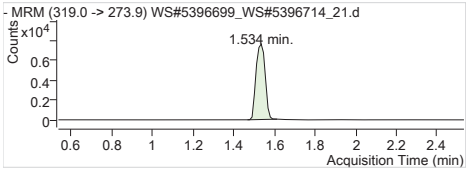



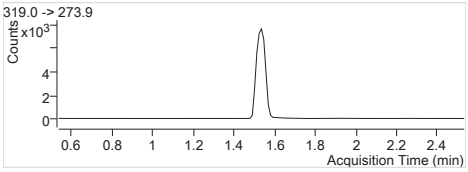

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 110.55 µg/L
Area ratio: 0.33831
Sample type: Sample



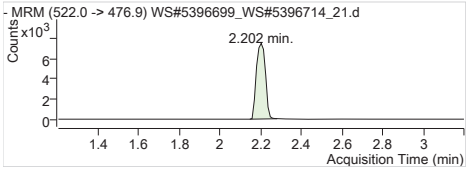



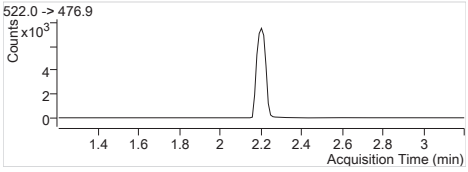

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 115.43 µg/L
Area ratio: 0.31226
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 2.33 µg/L
Area ratio: 0
Sample type: Sample



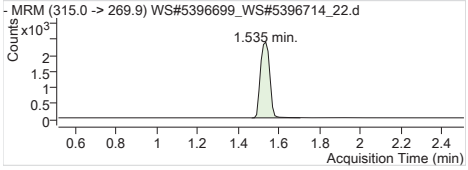

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 2.27 µg/L
Area ratio: 0
Sample type: Sample

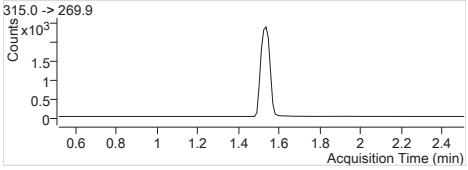
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5396699:FZA791-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_22.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-C3 |
| **Acq. Date** | 2018/02/15 5:54:30 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | Reported for PFDoA, PFUnA , PFTeDA only. | | |

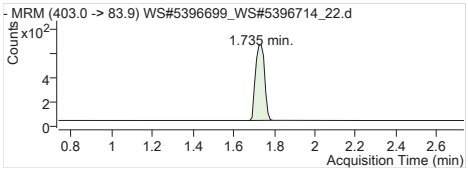
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 7507 | 1.53 | 1 µg/L | | |
| MPFHxS | 1961 | 1.74 | 1 µg/L | | |
| MPFHpA | 9429 | 1.78 | 1 µg/L | | |
| MPFOA | 9103 | 1.95 | 1 µg/L | | |
| MPFOS | 2053 | 2.01 | 1 µg/L | | |
| MPFNA | 8286 | 2.09 | 1 µg/L | | |
| MPFDA | 6130 | 2.20 | 1 µg/L | | |
| MPFUnA | 7567 | 2.29 | 1 µg/L | | |
| MPFDoA | 8696 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6877 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 25766 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 26734 | 2.20 | 1 µg/L | | |

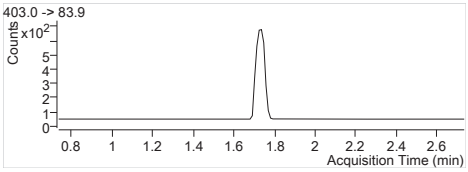
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 7424 | 1.53 | - | 122.33 µg/L | - |
| 18O2-PFHxS | 1961 | 1.74 | - | 138.62 µg/L | - |
| 13C4-PFHpA | 9429 | 1.78 | - | 130.22 µg/L | - |
| 13C4-PFOA | 9103 | 1.95 | - | 132.44 µg/L | - |
| 13C4-PFOS | 2053 | 2.01 | - | 129.23 µg/L | - |
| 13C5-PFNA | 8285 | 2.09 | - | 129.19 µg/L | - |
| 13C2-PFDA | 6070 | 2.20 | - | 125.04 µg/L | - |
| 13C2-PFUnA | 7567 | 2.29 | - | 120.39 µg/L | - |
| 13C2-PFDoA | 8696 | 2.38 | - | 106.29 µg/L | - |
| 13C2-PFTeDA | 6878 | 2.51 | - | 95.10 µg/L | - |
| 13C6-PFHxA | 25766 | 1.53 | - | 2.52 µg/L | - |
| 13C9-PFDA | 26734 | 2.20 | - | 2.64 µg/L | - |



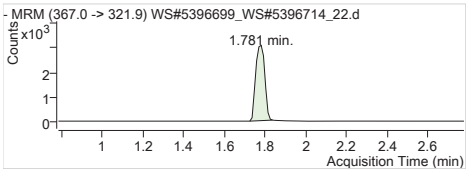



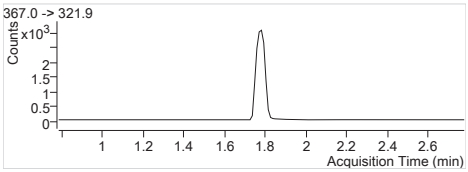

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



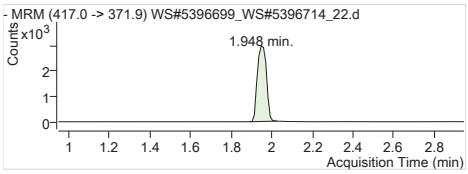



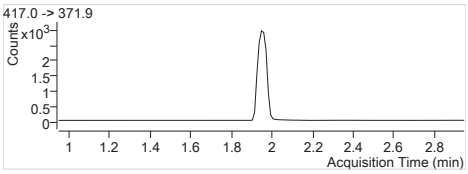

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: Sample



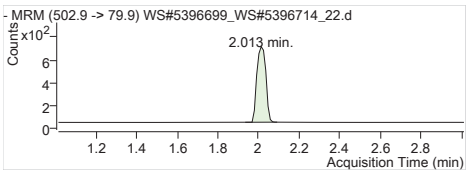



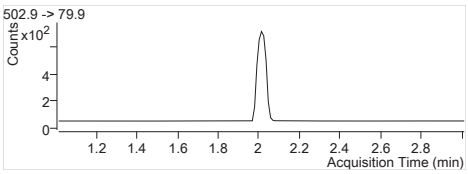

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Sample



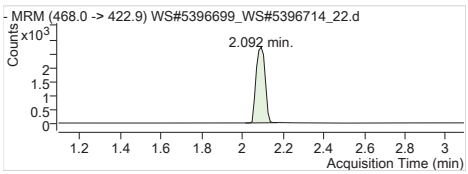



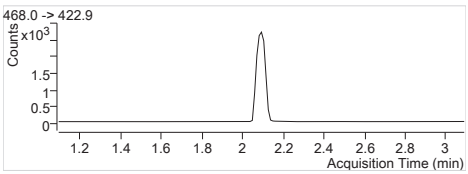

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: Sample



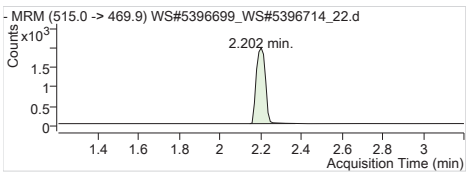



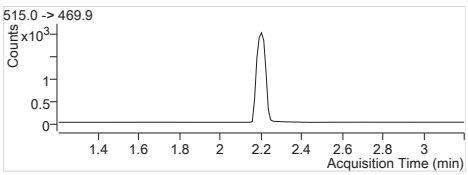

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Sample



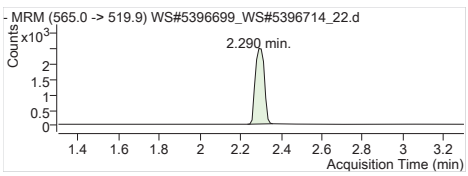



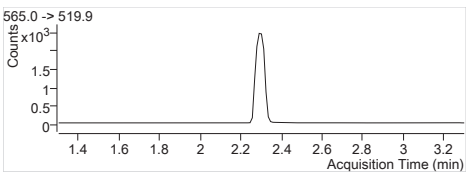

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Sample



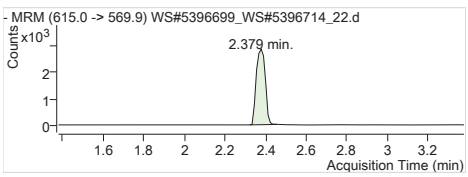



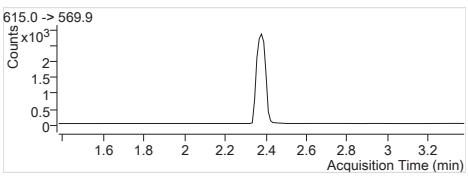

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



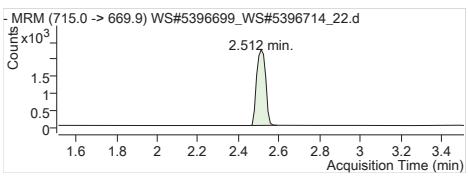



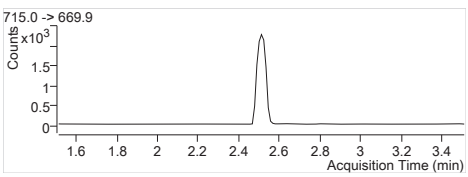

**MPFUnA** Internal Standard
RT (Exp. RT): 2.290 (2.302)
Concentration: 1 µg/L
Sample type: Sample



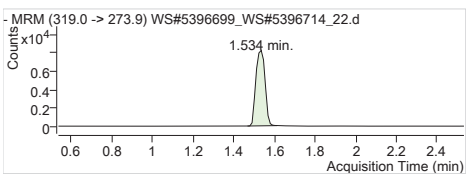



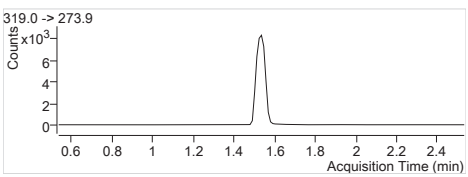

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Sample



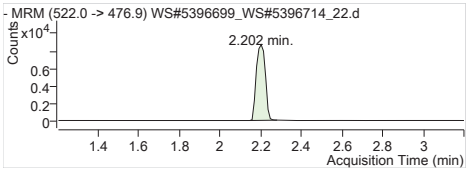



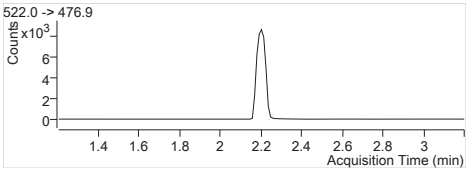

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Sample



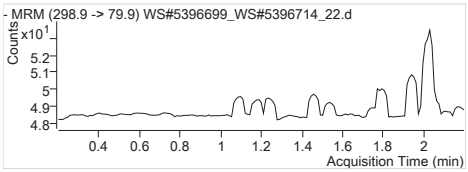



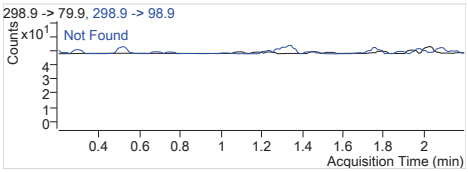

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Sample



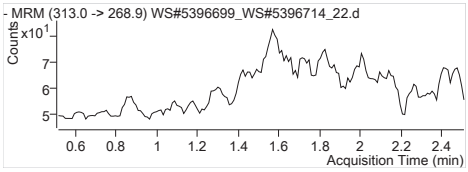



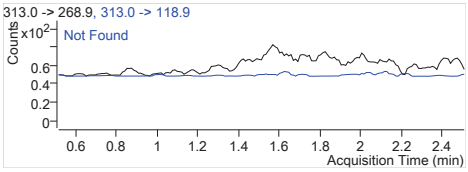

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



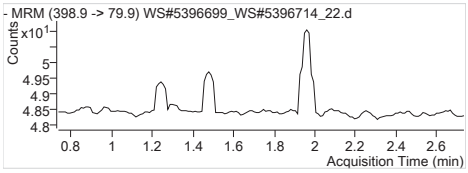



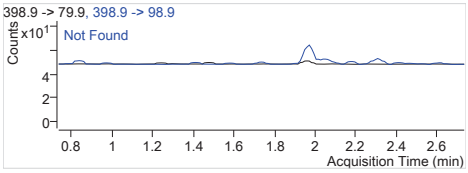

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.199)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



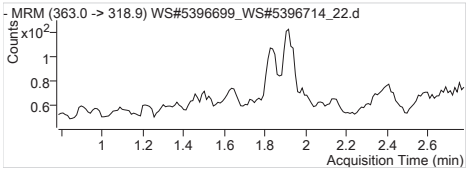



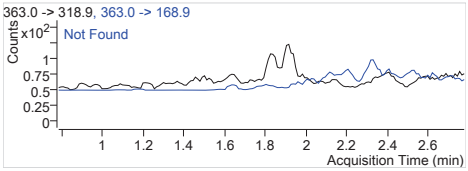

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.512)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



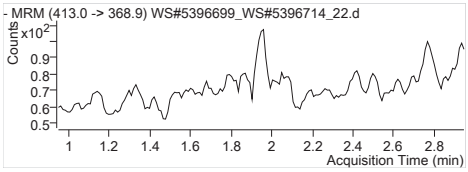



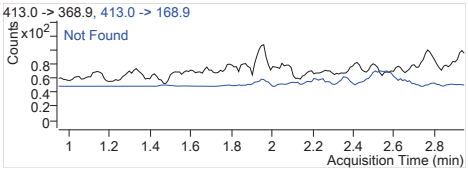

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.735)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



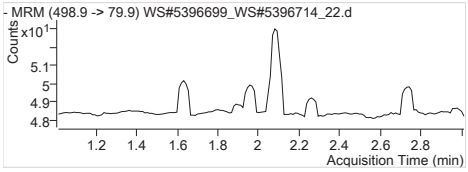



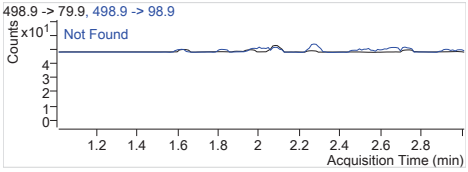

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.781)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



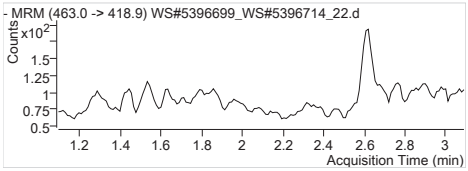



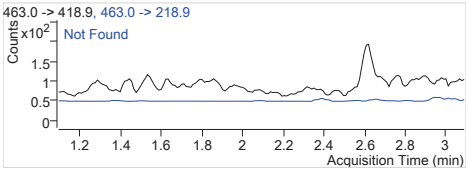

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.948)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



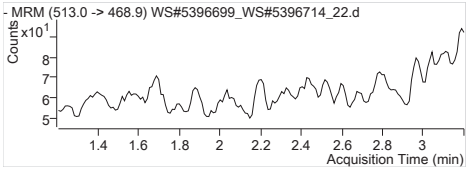



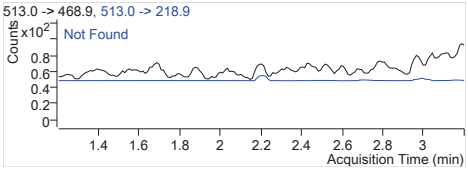

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (2.013)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



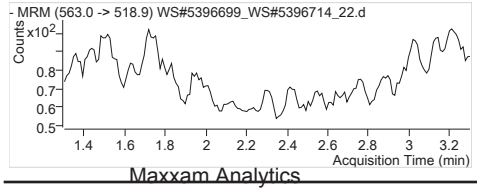



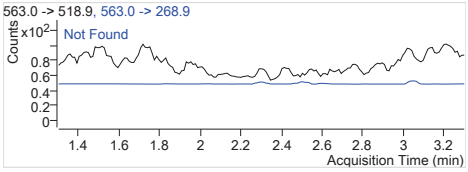

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.092)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



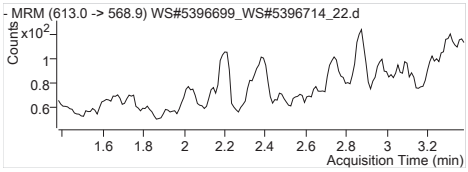



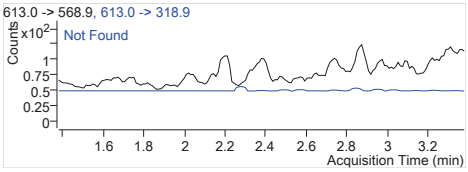

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.203)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



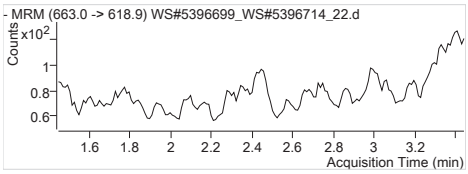



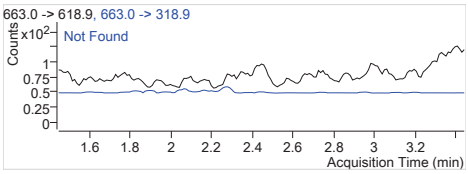

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.302)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



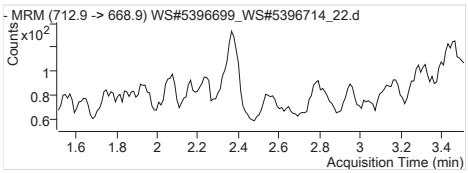



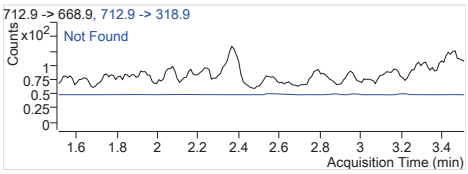

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.379) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



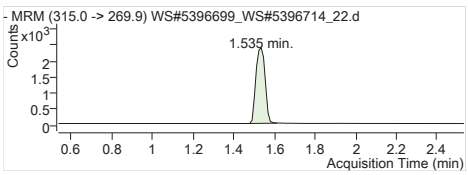



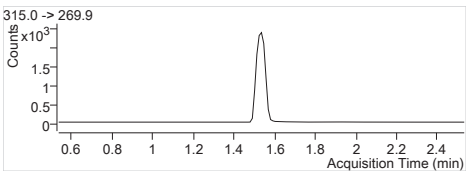

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.445) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



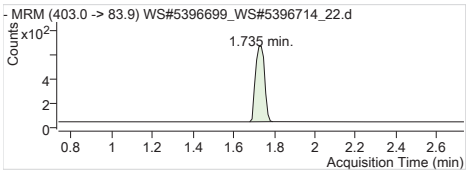



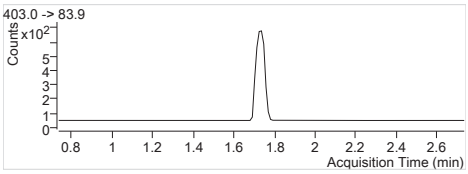

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.512) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



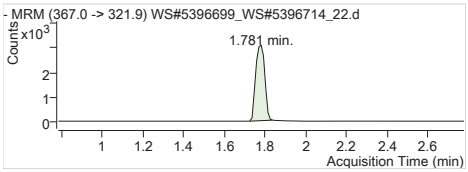



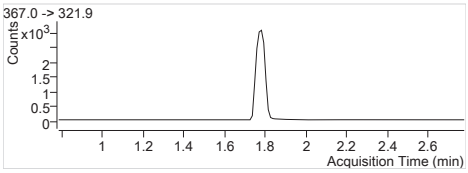

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 122.33 µg/L |
| Area ratio: | 0.28813 |
| Sample type: | Sample |



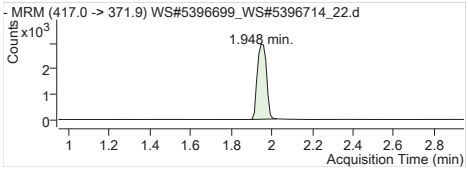



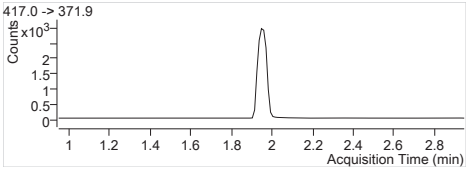

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 138.62 µg/L |
| Area ratio: | 0.07611 |
| Sample type: | Sample |



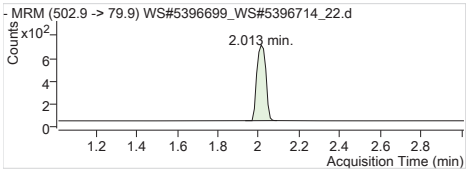



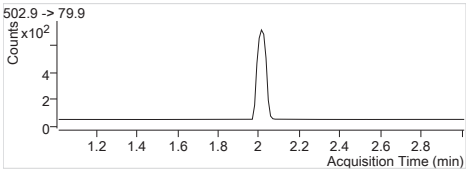

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 130.22 µg/L |
| Area ratio: | 0.36595 |
| Sample type: | Sample |



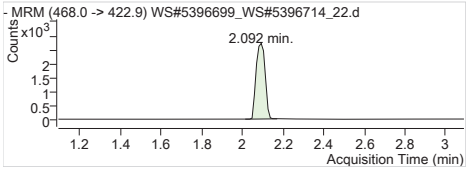



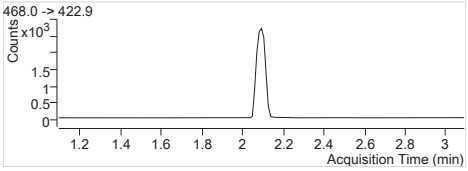

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.948 (1.948) |
| Calc. conc. | 132.44 µg/L |
| Area ratio: | 0.35330 |
| Sample type: | Sample |



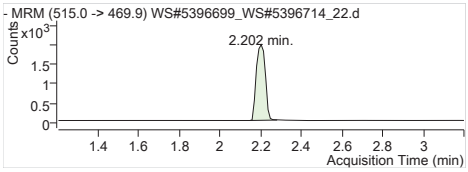



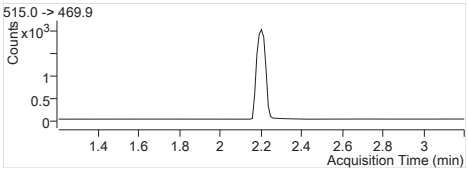

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 129.23 µg/L |
| Area ratio: | 0.07968 |
| Sample type: | Sample |



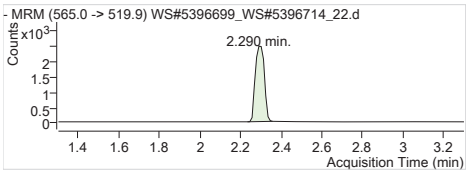



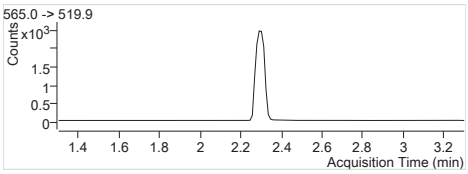

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 129.19 µg/L |
| Area ratio: | 0.32155 |
| Sample type: | Sample |



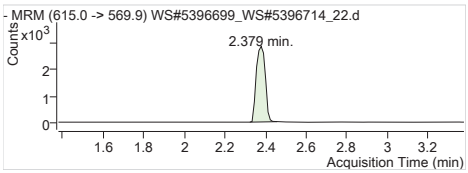



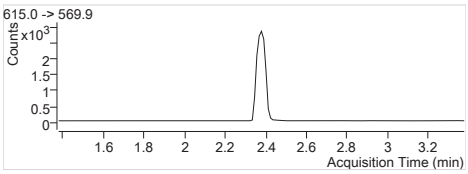

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 125.04 µg/L
Area ratio: 0.22705
Sample type: Sample



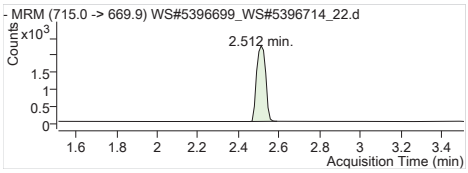



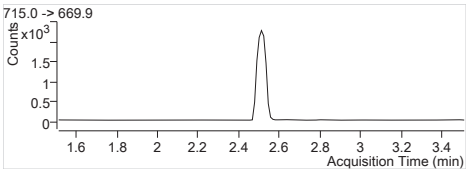

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.290 (2.302)
Calc. conc. 120.39 µg/L
Area ratio: 0.28305
Sample type: Sample



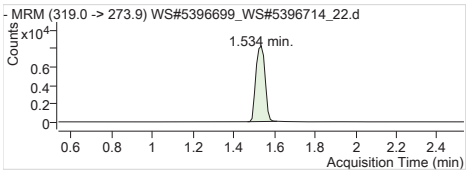



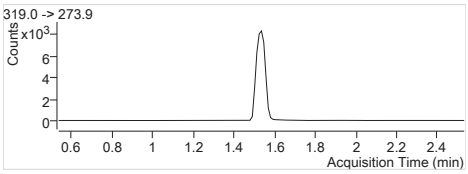

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 106.29 µg/L
Area ratio: 0.32528
Sample type: Sample



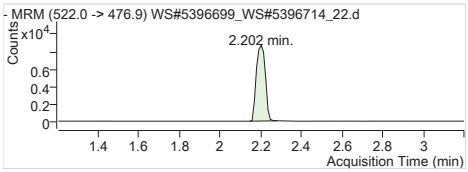



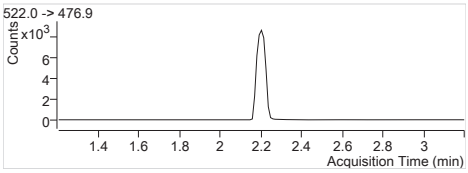

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 95.10 µg/L
Area ratio: 0.25728
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 2.52 µg/L
Area ratio: 0
Sample type: Sample



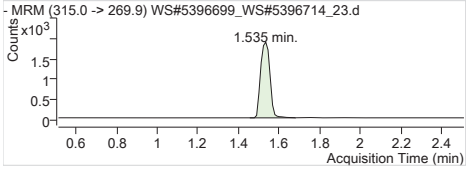

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 2.64 µg/L
Area ratio: 0
Sample type: Sample

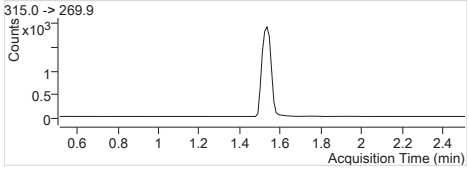
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5396699:FZA792-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_23.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-C4 |
| **Acq. Date** | 2018/02/15 5:59:26 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | Reported for PFDoA, PFUnA , PFTeDA only. | | |

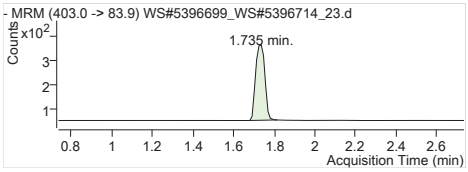
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5977 | 1.53 | 1 µg/L | | |
| MPFHxS | 1003 | 1.74 | 1 µg/L | | |
| MPFHpA | 7839 | 1.78 | 1 µg/L | | |
| MPFOA | 8107 | 1.95 | 1 µg/L | | |
| MPFOS | 1488 | 2.01 | 1 µg/L | | |
| MPFNA | 7598 | 2.09 | 1 µg/L | | |
| MPFDA | 6005 | 2.20 | 1 µg/L | | |
| MPFUnA | 7162 | 2.29 | 1 µg/L | | |
| MPFDoA | 8471 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6236 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 26857 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 27684 | 2.20 | 1 µg/L | | |

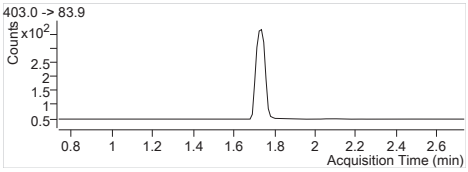
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 5842 | 1.53 | - | 92.35 µg/L | - |
| 18O2-PFHxS | 1003 | 1.74 | - | 68.02 µg/L | - |
| 13C4-PFHpA | 7839 | 1.78 | - | 103.86 µg/L | - |
| 13C4-PFOA | 8107 | 1.95 | - | 113.15 µg/L | - |
| 13C4-PFOS | 1488 | 2.01 | - | 89.86 µg/L | - |
| 13C5-PFNA | 7593 | 2.09 | - | 113.59 µg/L | - |
| 13C2-PFDA | 5960 | 2.20 | - | 118.56 µg/L | - |
| 13C2-PFUnA | 7162 | 2.29 | - | 110.04 µg/L | - |
| 13C2-PFDoA | 8471 | 2.38 | - | 99.99 µg/L | - |
| 13C2-PFTeDA | 6307 | 2.51 | - | 84.22 µg/L | - |
| 13C6-PFHxA | 26857 | 1.53 | - | 2.63 µg/L | - |
| 13C9-PFDA | 27684 | 2.20 | - | 2.73 µg/L | - |



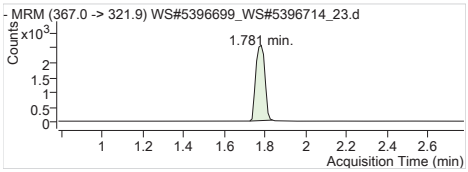



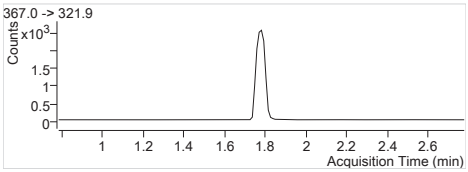

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



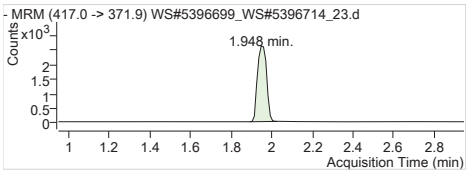



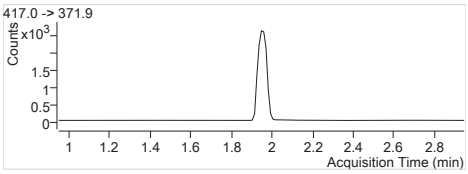

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: Sample



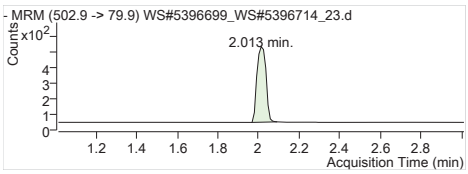



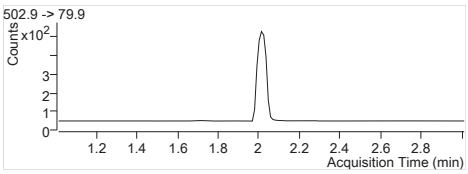

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Sample



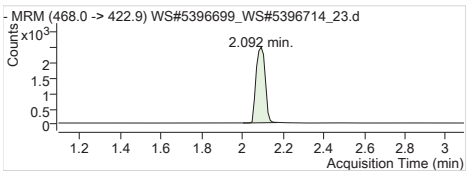



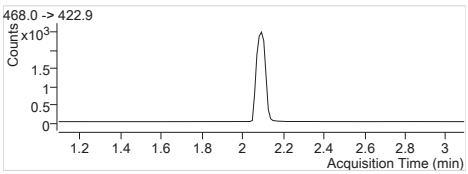

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: Sample



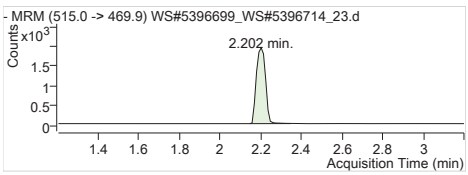



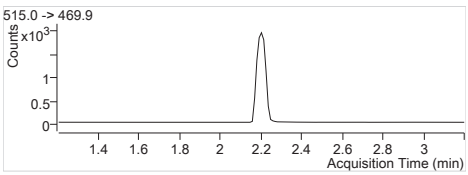

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Sample



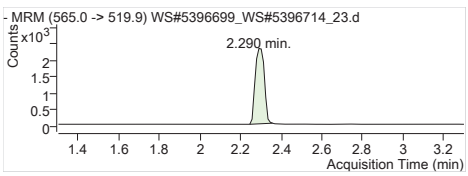



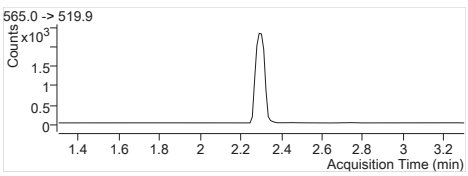

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Sample



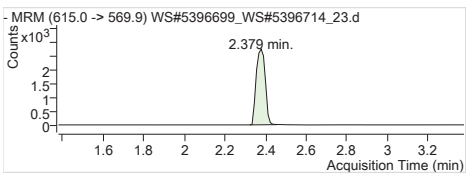



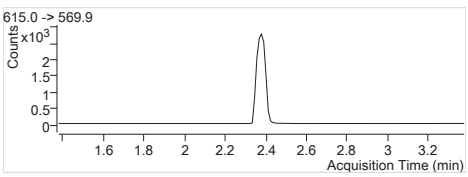

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



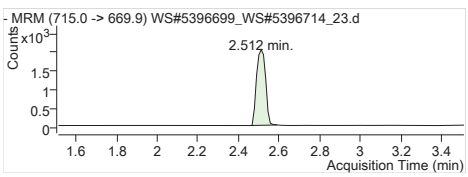



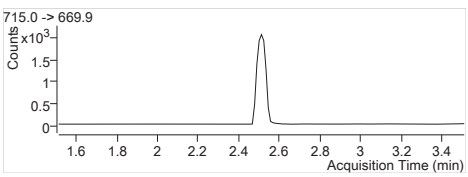

**MPFUnA** Internal Standard
RT (Exp. RT): 2.290 (2.302)
Concentration: 1 µg/L
Sample type: Sample



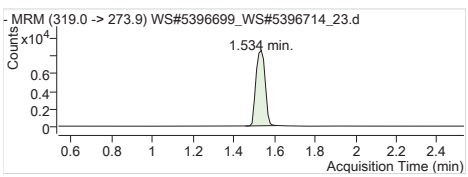



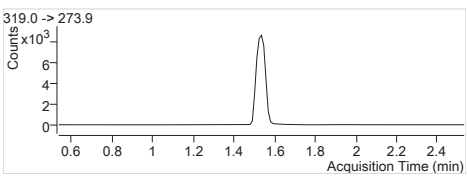

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Sample



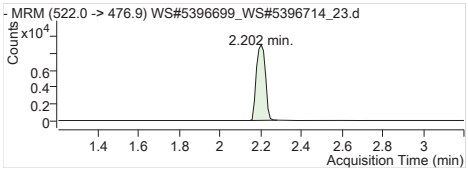



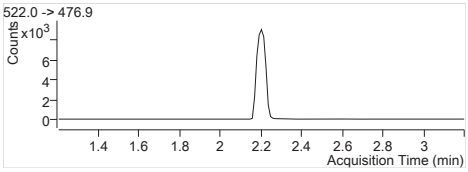

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Sample



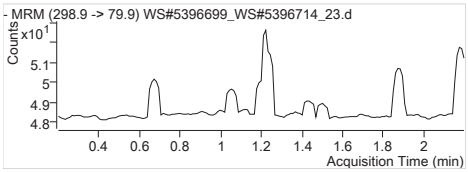



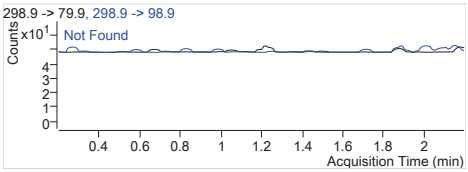

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Sample



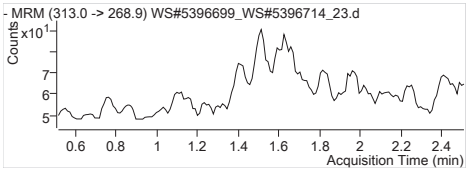



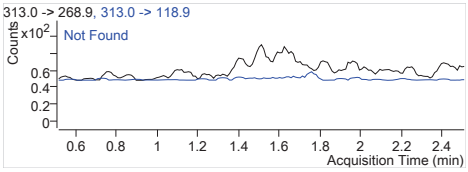

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



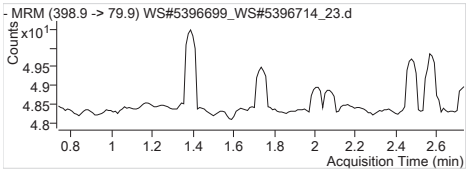



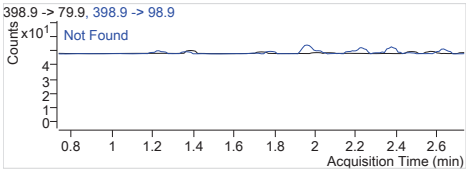

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.199)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



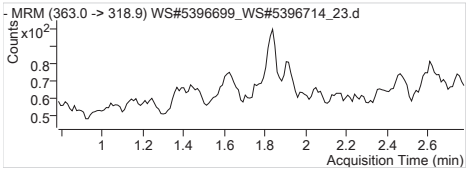



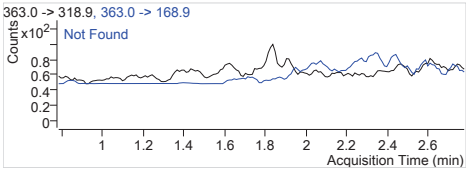

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.512)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



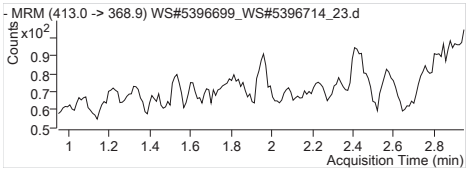



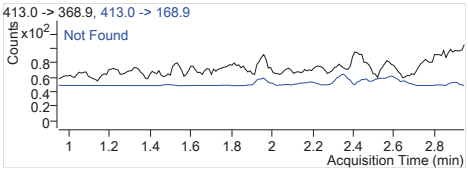

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.735)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



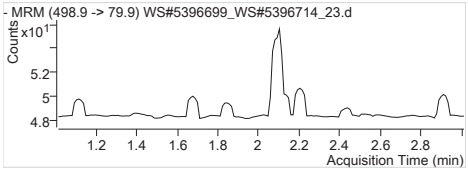



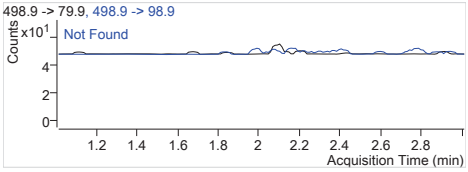

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.781)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



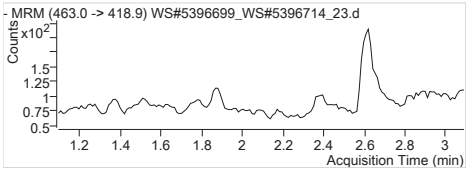



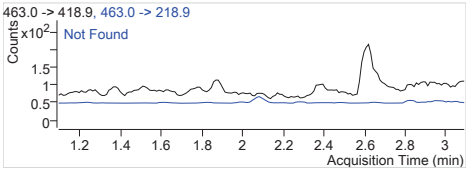

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.948)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



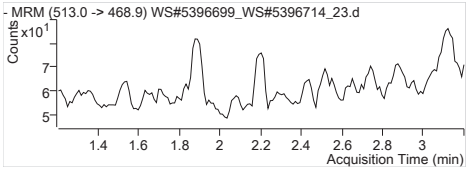



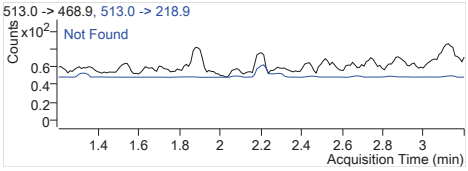

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (2.013)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



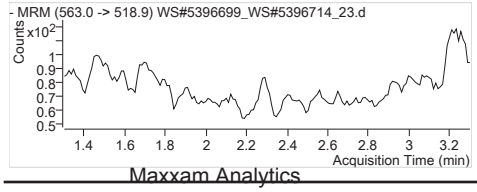



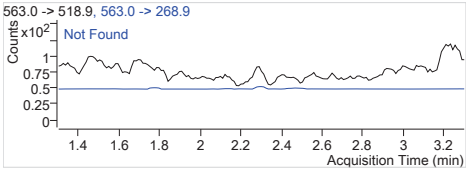

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.092)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



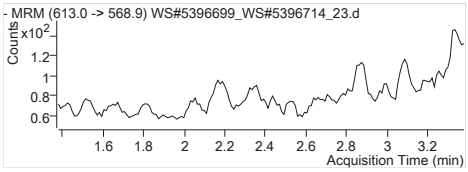



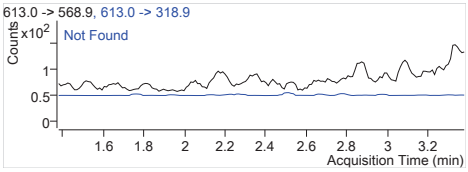

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.203)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



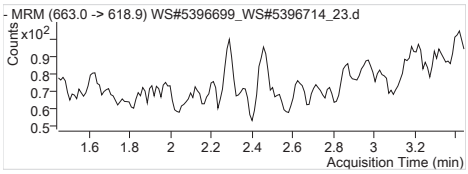



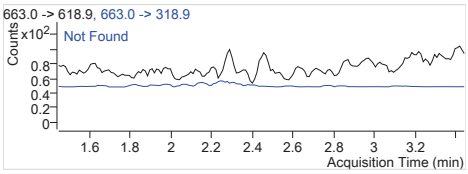

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.302)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



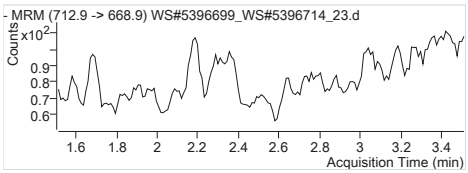



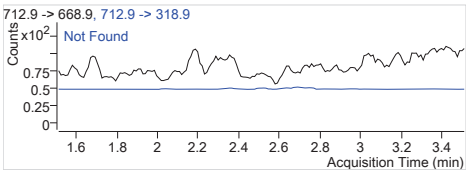

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.379) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



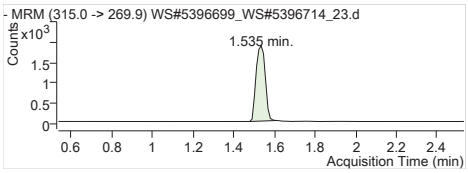



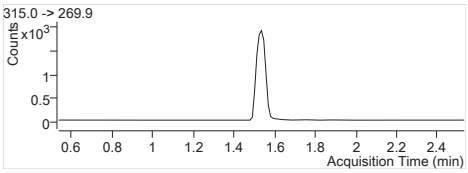

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.445) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



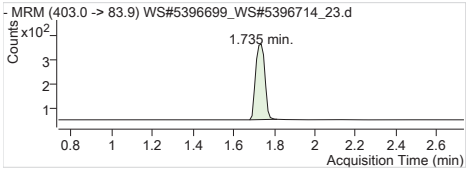



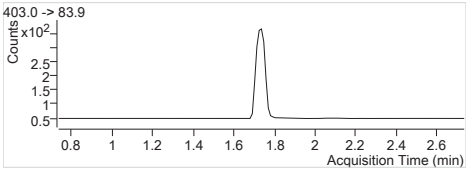

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.512) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



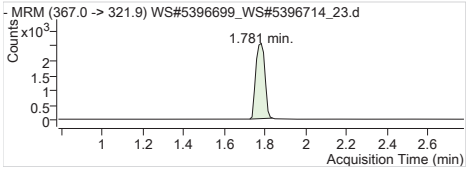



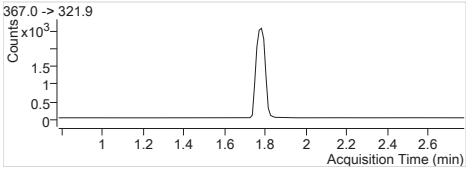

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 92.35 µg/L |
| Area ratio: | 0.21752 |
| Sample type: | Sample |



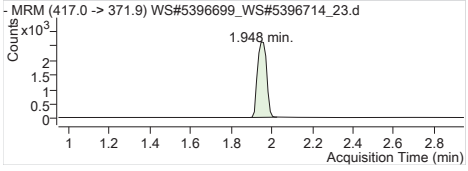



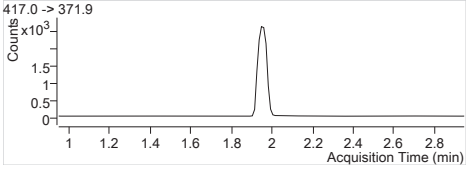

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 68.02 µg/L |
| Area ratio: | 0.03735 |
| Sample type: | Sample |



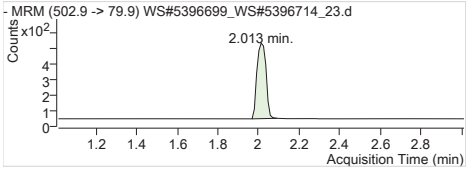



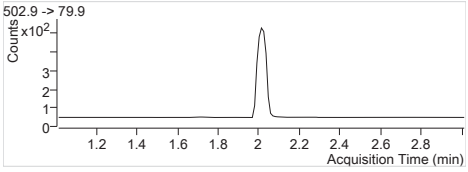

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 103.86 µg/L |
| Area ratio: | 0.29188 |
| Sample type: | Sample |



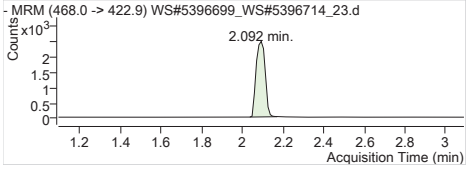



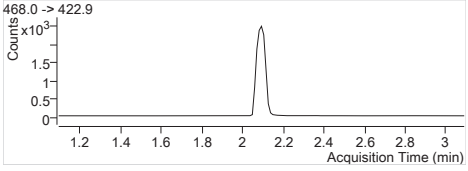

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.948 (1.948) |
| Calc. conc. | 113.15 µg/L |
| Area ratio: | 0.30186 |
| Sample type: | Sample |



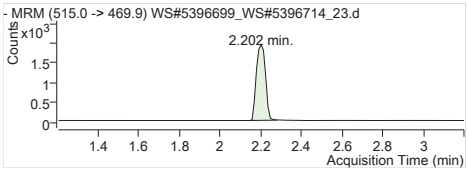



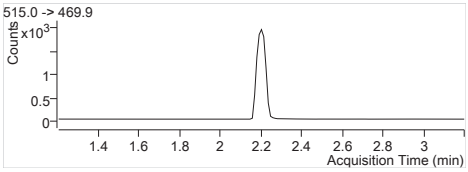

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 89.86 µg/L |
| Area ratio: | 0.05540 |
| Sample type: | Sample |



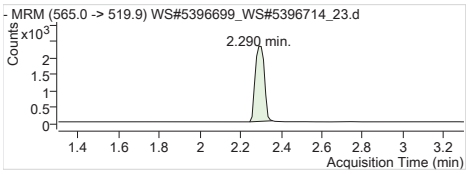



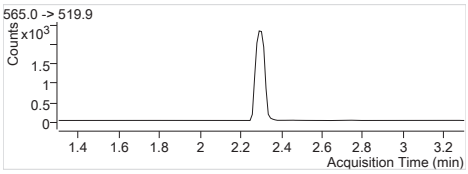

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 113.59 µg/L |
| Area ratio: | 0.28272 |
| Sample type: | Sample |



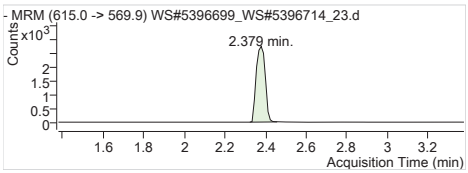



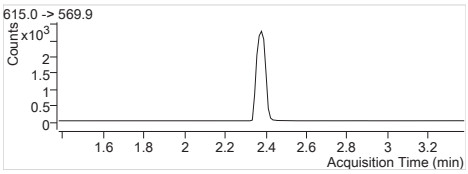

| | |
|---|---|
| **13C2-PFDA** | 515.0 -> 469.9 |
| RT (Exp. RT): | 2.202 (2.202) |
| Calc. conc. | 118.56 µg/L |
| Area ratio: | 0.21529 |
| Sample type: | Sample |



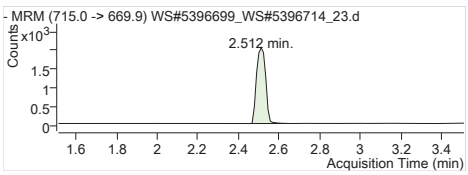



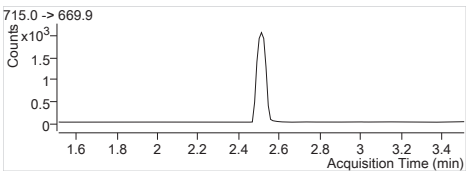

| | |
|---|---|
| **13C2-PFUnA** | 565.0 -> 519.9 |
| RT (Exp. RT): | 2.290 (2.302) |
| Calc. conc. | 110.04 µg/L |
| Area ratio: | 0.25871 |
| Sample type: | Sample |



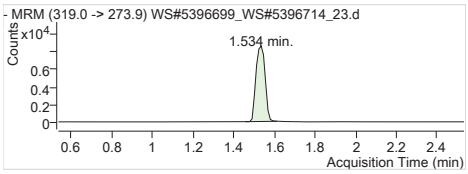



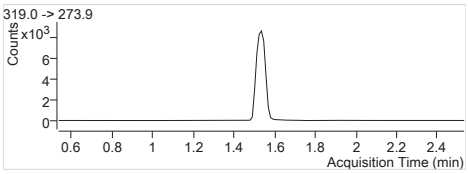

| | |
|---|---|
| **13C2-PFDoA** | 615.0 -> 569.9 |
| RT (Exp. RT): | 2.379 (2.379) |
| Calc. conc. | 99.99 µg/L |
| Area ratio: | 0.30599 |
| Sample type: | Sample |



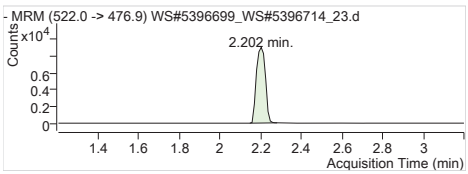



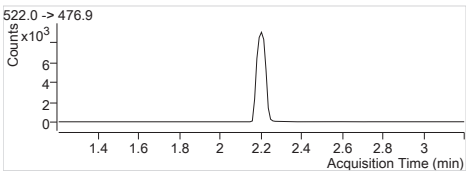

| | |
|---|---|
| **13C2-PFTeDA** | 715.0 -> 669.9 |
| RT (Exp. RT): | 2.512 (2.512) |
| Calc. conc. | 84.22 µg/L |
| Area ratio: | 0.22782 |
| Sample type: | Sample |




| | |
|---|---|
| **13C6-PFHxA** | 319.0 -> 273.9 |
| RT (Exp. RT): | 1.534 (1.534) |
| Calc. conc. | 2.63 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |



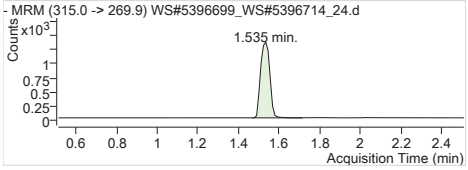

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 2.202 (2.202) |
| Calc. conc. | 2.73 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

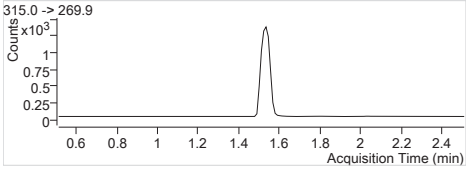
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5396699:FZA802-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_24.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-C5 |
| **Acq. Date** | 2018/02/15 6:04:22 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | Reinjected due to low ext IS recovery- Reported for all except PFOA | | |

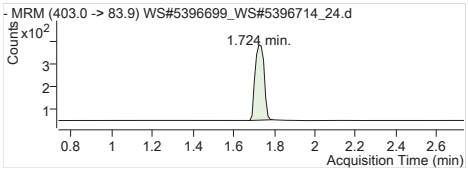
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 4215 | 1.53 | 1 µg/L | | |
| MPFHxS | 1048 | 1.72 | 1 µg/L | | |
| MPFHpA | 5473 | 1.78 | 1 µg/L | | |
| MPFOA | 2585 | 1.95 | 1 µg/L | | |
| MPFOS | 1008 | 2.01 | 1 µg/L | | |
| MPFNA | 4487 | 2.09 | 1 µg/L | | |
| MPFDA | 4168 | 2.20 | 1 µg/L | | |
| MPFUnA | 5731 | 2.29 | 1 µg/L | | |
| MPFDoA | 6958 | 2.38 | 1 µg/L | | |
| MPFTeDA | 5187 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 24222 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 25076 | 2.20 | 1 µg/L | | |

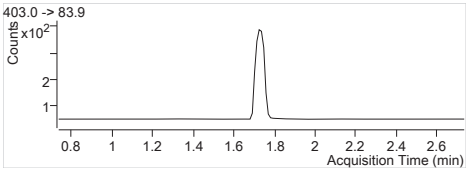
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 4175 | 1.53 | - | 73.18 µg/L | - |
| 18O2-PFHxS | 1048 | 1.72 | - | 78.81 µg/L | - |
| 13C4-PFHpA | 5473 | 1.78 | - | 80.40 µg/L | - |
| 13C4-PFOA | 2585 | 1.95 | - | 40.01 µg/L | - |
| 13C4-PFOS | 1008 | 2.01 | - | 67.49 µg/L | - |
| 13C5-PFNA | 4453 | 2.09 | - | 73.86 µg/L | - |
| 13C2-PFDA | 4132 | 2.20 | - | 90.74 µg/L | - |
| 13C2-PFUnA | 5731 | 2.29 | - | 97.21 µg/L | - |
| 13C2-PFDoA | 6958 | 2.38 | - | 90.67 µg/L | - |
| 13C2-PFTeDA | 5225 | 2.51 | - | 77.02 µg/L | - |
| 13C6-PFHxA | 24222 | 1.53 | - | 2.37 µg/L | - |
| 13C9-PFDA | 25076 | 2.20 | - | 2.47 µg/L | - |



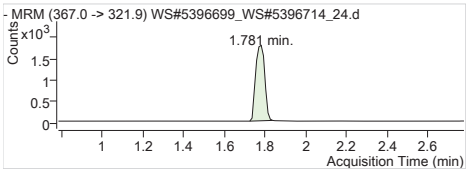



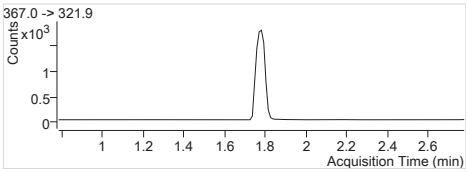

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



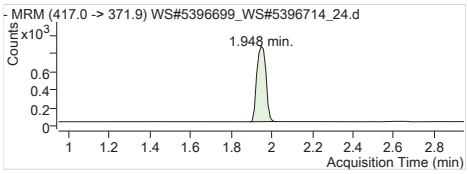



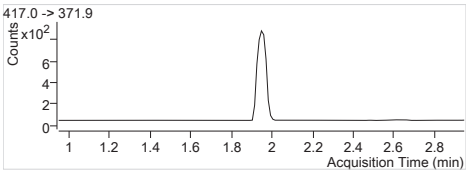

**MPFHxS** Internal Standard
RT (Exp. RT): 1.724 (1.735)
Concentration: 1 µg/L
Sample type: Sample



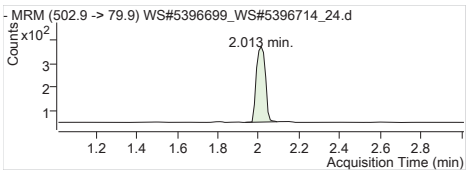



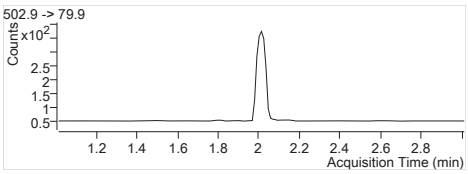

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Sample



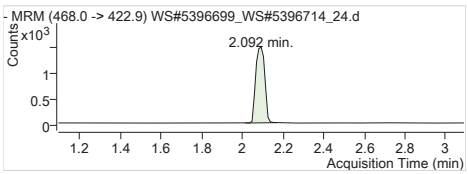



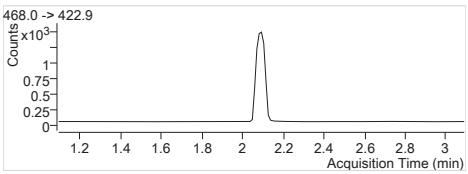

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: Sample



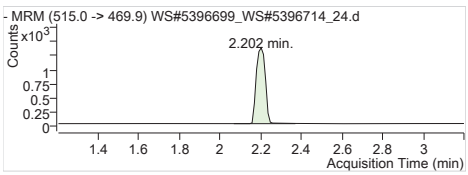



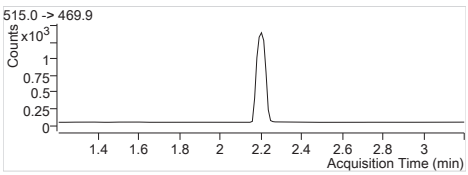

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Sample



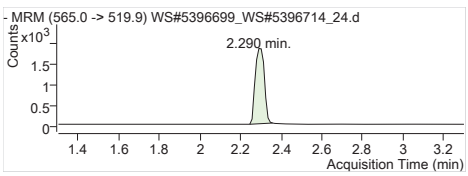



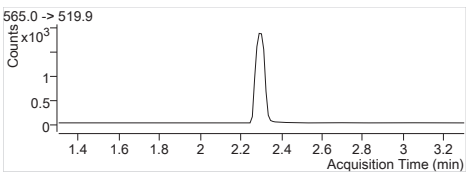

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Sample



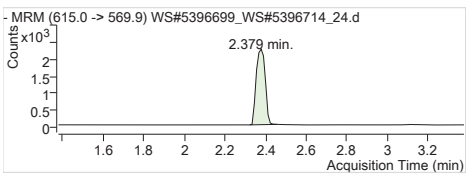



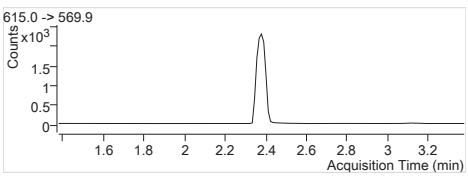

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



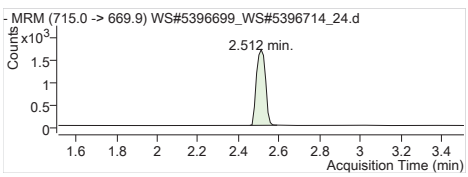



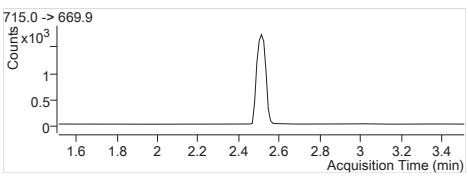

**MPFUnA** Internal Standard
RT (Exp. RT): 2.290 (2.302)
Concentration: 1 µg/L
Sample type: Sample



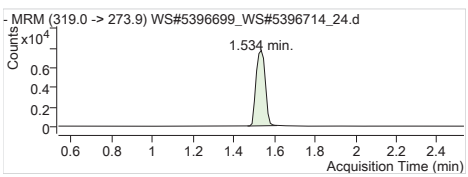



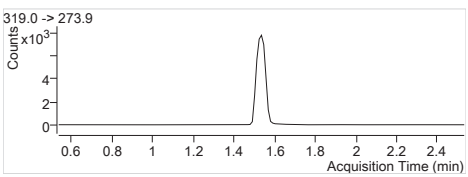

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Sample



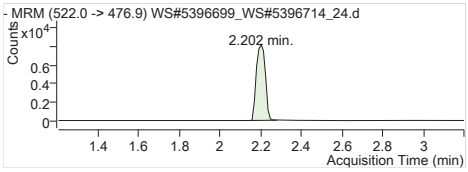



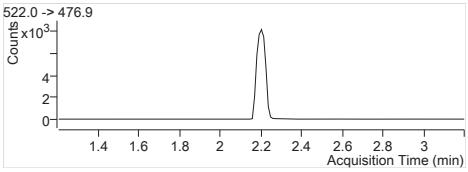

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Sample



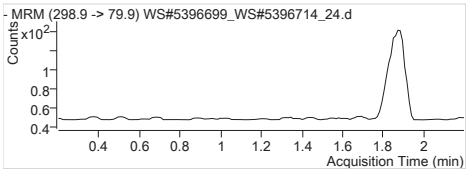



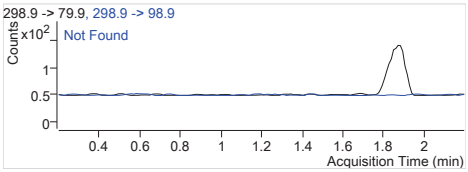

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Sample



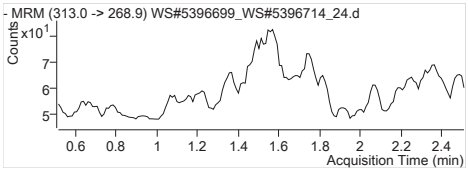



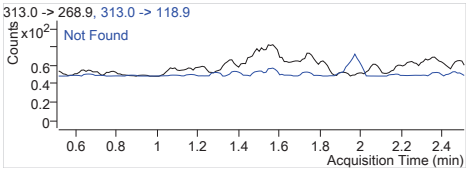

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



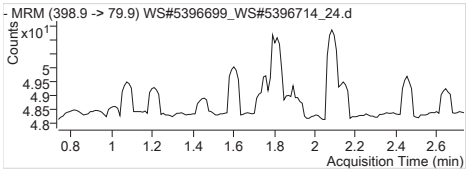



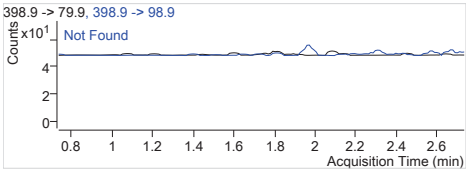

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.199)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



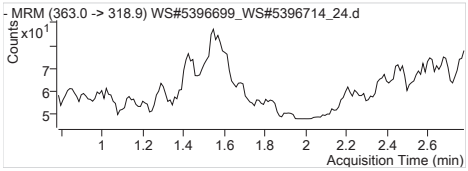



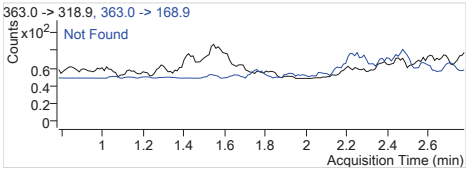

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.512)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



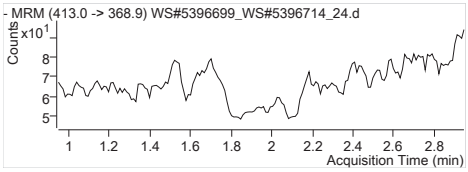



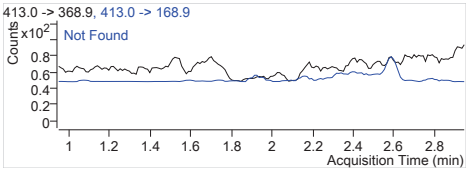

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.735)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



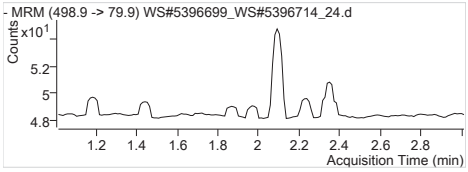



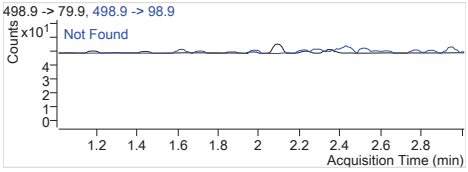

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.781)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



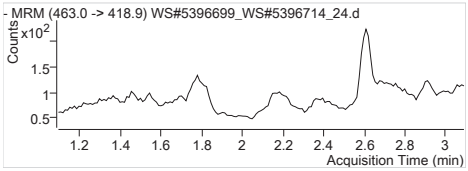



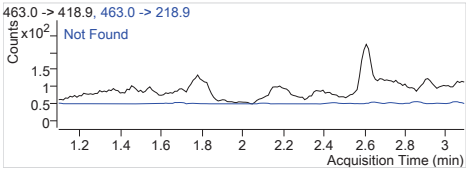

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.948)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



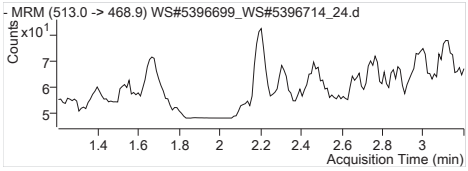



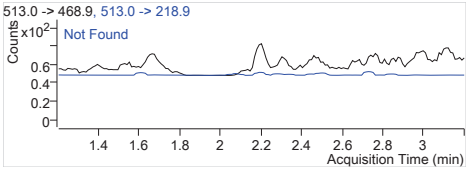

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (2.013)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



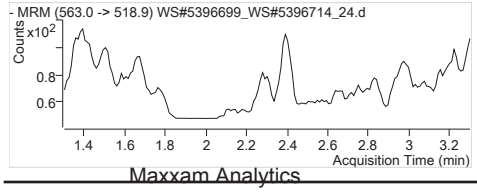



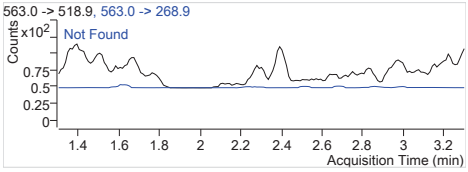

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.092)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



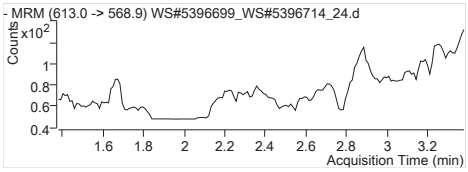



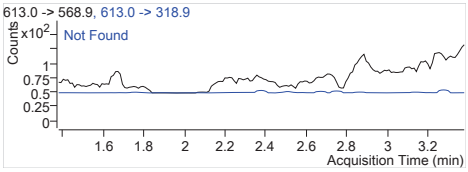

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.203)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



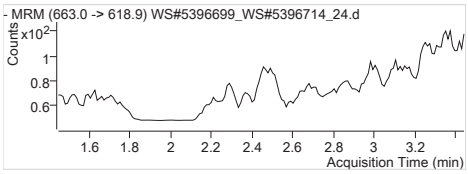



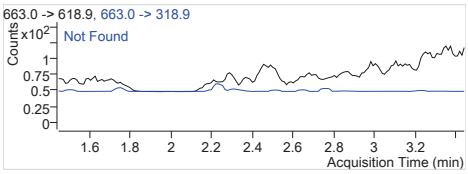

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.302)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



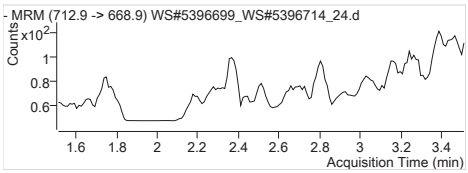



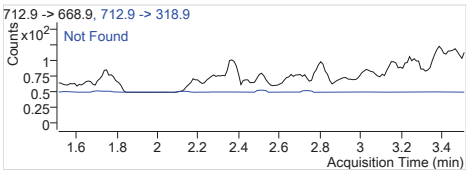

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.379) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



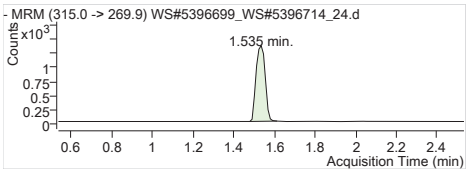



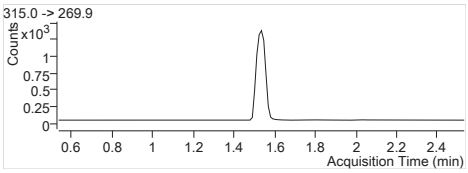

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.445) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



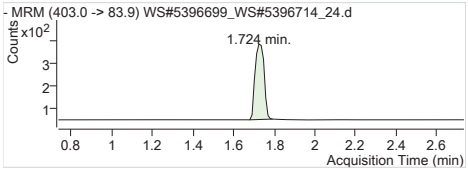



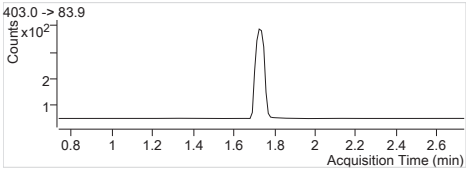

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.512) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



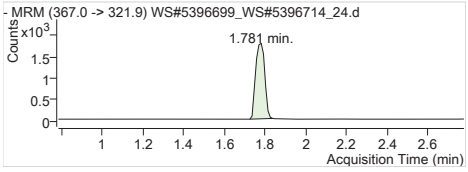



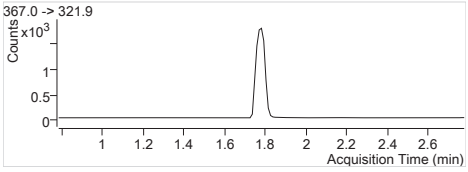

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 73.18 µg/L |
| Area ratio: | 0.17236 |
| Sample type: | Sample |



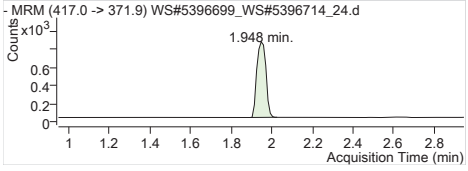



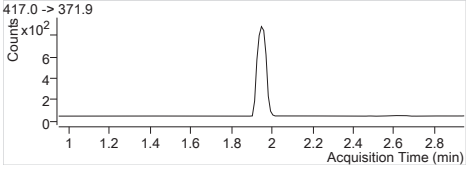

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.724 (1.735) |
| Calc. conc. | 78.81 µg/L |
| Area ratio: | 0.04327 |
| Sample type: | Sample |



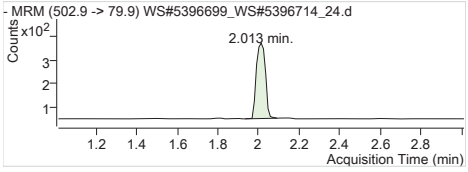



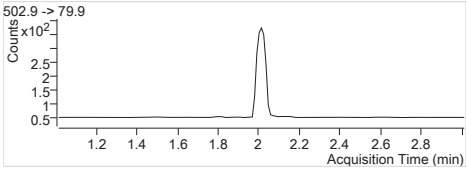

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 80.40 µg/L |
| Area ratio: | 0.22595 |
| Sample type: | Sample |



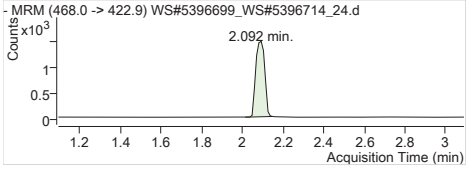



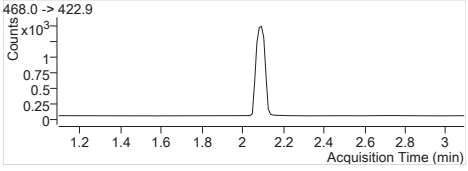

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.948 (1.948) |
| Calc. conc. | 40.01 µg/L |
| Area ratio: | 0.10672 |
| Sample type: | Sample |



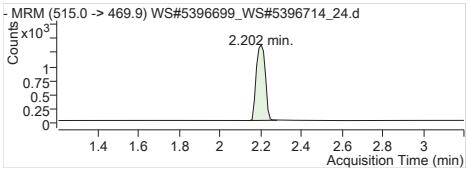



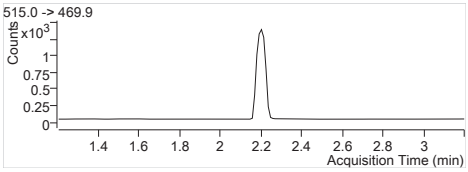

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 67.49 µg/L |
| Area ratio: | 0.04162 |
| Sample type: | Sample |



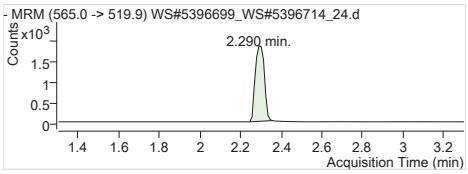



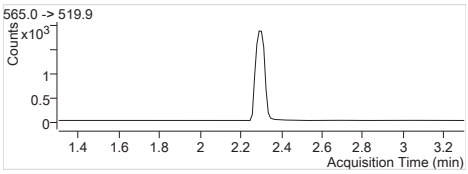

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 73.86 µg/L |
| Area ratio: | 0.18384 |
| Sample type: | Sample |



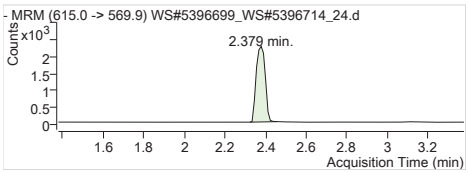



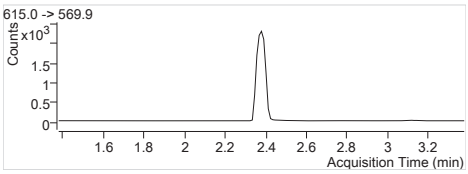

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 90.74 µg/L
Area ratio: 0.16478
Sample type: Sample



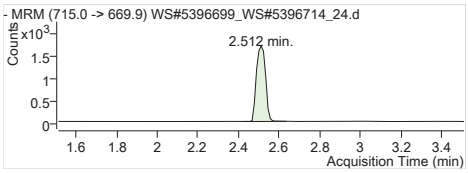



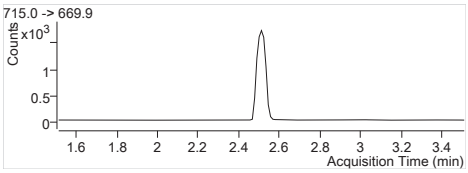

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.290 (2.302)
Calc. conc. 97.21 µg/L
Area ratio: 0.22855
Sample type: Sample



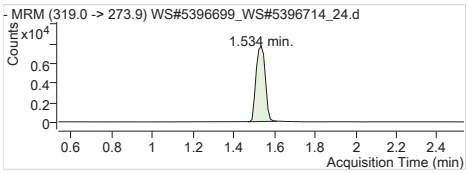



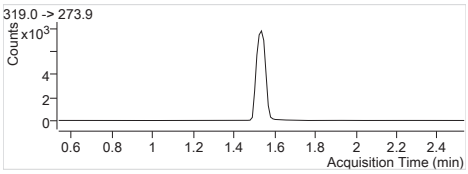

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 90.67 µg/L
Area ratio: 0.27748
Sample type: Sample



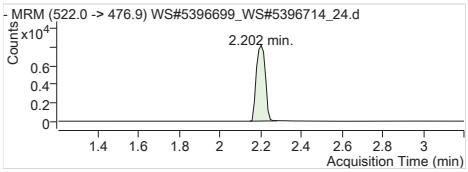



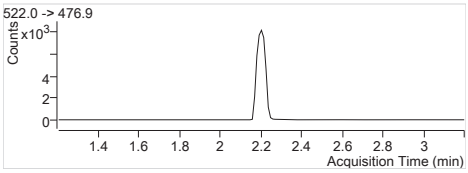

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 77.02 µg/L
Area ratio: 0.20837
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 2.37 µg/L
Area ratio: 0
Sample type: Sample



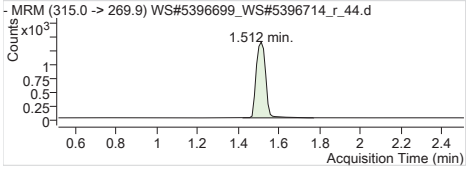

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 2.47 µg/L
Area ratio: 0
Sample type: Sample

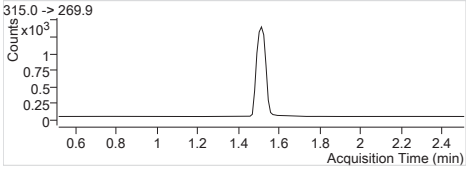
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5396699:FZA802-01:R** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_r_44.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-C5 |
| **Acq. Date** | 2018/02/16 8:52:45 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | Reported for PFOA | | |

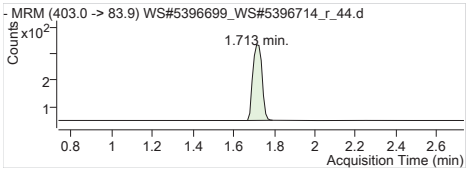
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 4374 | 1.51 | 1 µg/L | | |
| MPFHxS | 903 | 1.71 | 1 µg/L | | |
| MPFHpA | 5922 | 1.76 | 1 µg/L | | |
| MPFOA | 3734 | 1.94 | 1 µg/L | | |
| MPFOS | 1040 | 2.00 | 1 µg/L | | |
| MPFNA | 4715 | 2.07 | 1 µg/L | | |
| MPFDA | 4937 | 2.18 | 1 µg/L | | |
| MPFUnA | 6510 | 2.28 | 1 µg/L | | |
| MPFDoA | 8549 | 2.37 | 1 µg/L | | |
| MPFTeDA | 6304 | 2.50 | 1 µg/L | | |
| 13C6-PFHxA IS | 25069 | 1.51 | 1 µg/L | | |
| 13C9-PFDA IS | 28934 | 2.19 | 1 µg/L | | |

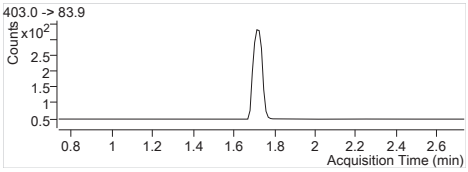
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 4233 | 1.51 | - | 71.69 µg/L | - |
| 18O2-PFHxS | 903 | 1.71 | - | 65.61 µg/L | - |
| 13C4-PFHpA | 5922 | 1.76 | - | 84.06 µg/L | - |
| 13C4-PFOA | 3734 | 1.94 | - | 55.83 µg/L | - |
| 13C4-PFOS | 1040 | 2.00 | - | 67.28 µg/L | - |
| 13C5-PFNA | 4692 | 2.07 | - | 75.20 µg/L | - |
| 13C2-PFDA | 4867 | 2.18 | - | 92.63 µg/L | - |
| 13C2-PFUnA | 6510 | 2.28 | - | 95.70 µg/L | - |
| 13C2-PFDoA | 8549 | 2.37 | - | 96.55 µg/L | - |
| 13C2-PFTeDA | 6405 | 2.50 | - | 81.83 µg/L | - |
| 13C6-PFHxA | 25069 | 1.51 | - | 2.45 µg/L | - |
| 13C9-PFDA | 28934 | 2.19 | - | 2.85 µg/L | - |



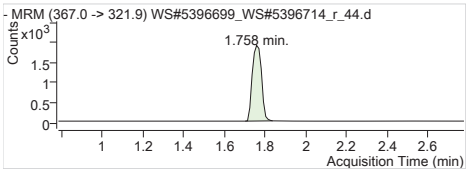



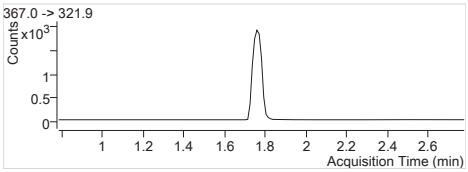

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.512 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



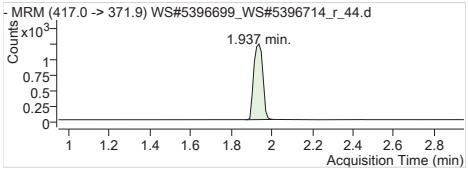



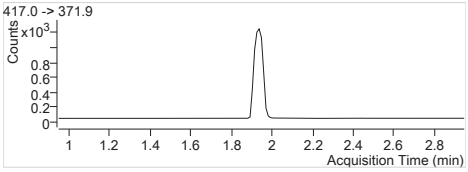

**MPFHxS** Internal Standard
RT (Exp. RT): 1.713 (1.735)
Concentration: 1 µg/L
Sample type: Sample



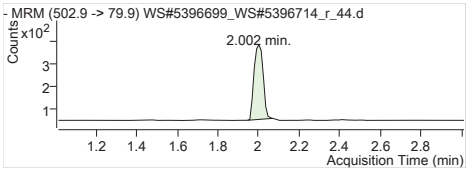



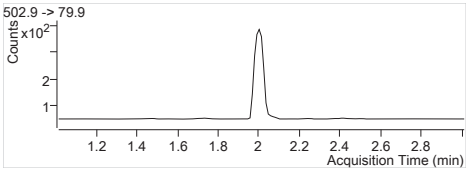

**MPFHpA** Internal Standard
RT (Exp. RT): 1.758 (1.781)
Concentration: 1 µg/L
Sample type: Sample



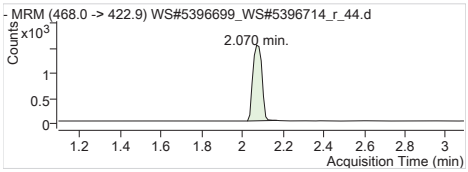



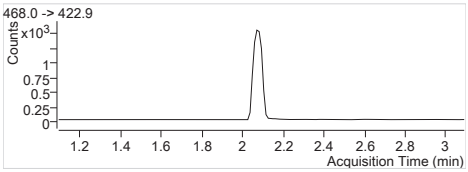

**MPFOA** Internal Standard
RT (Exp. RT): 1.937 (1.948)
Concentration: 1 µg/L
Sample type: Sample



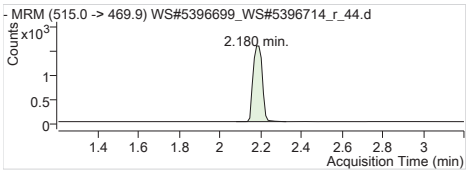



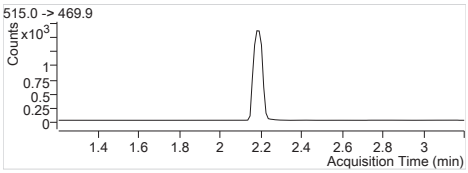

**MPFOS** Internal Standard
RT (Exp. RT): 2.002 (2.013)
Concentration: 1 µg/L
Sample type: Sample



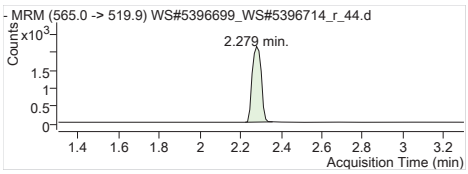



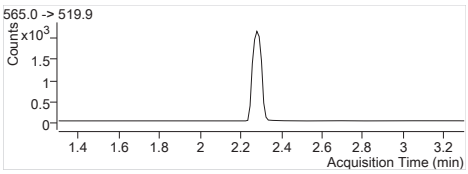

**MPFNA** Internal Standard
RT (Exp. RT): 2.070 (2.092)
Concentration: 1 µg/L
Sample type: Sample



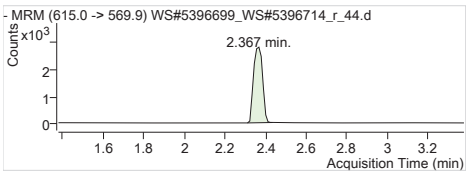



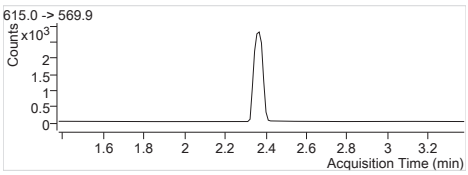

**MPFDA** Internal Standard
RT (Exp. RT): 2.180 (2.202)
Concentration: 1 µg/L
Sample type: Sample



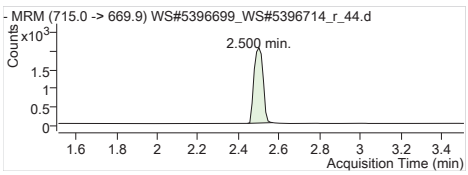



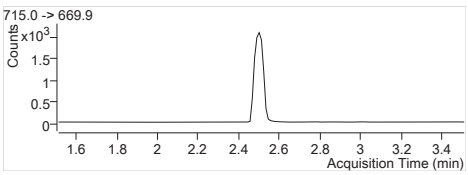

**MPFUnA** Internal Standard
RT (Exp. RT): 2.279 (2.302)
Concentration: 1 µg/L
Sample type: Sample



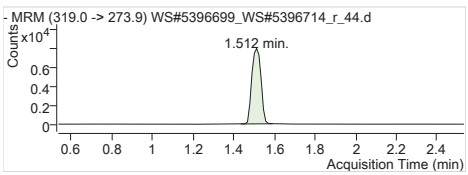



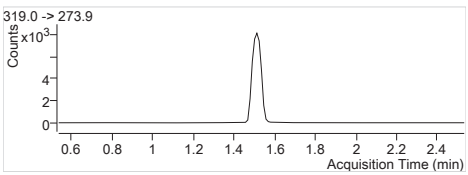

**MPFDoA** Internal Standard
RT (Exp. RT): 2.367 (2.379)
Concentration: 1 µg/L
Sample type: Sample



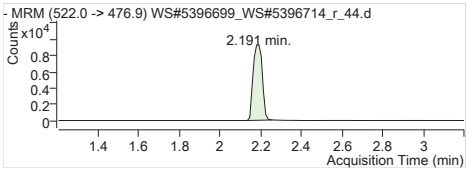



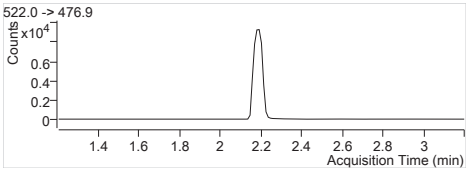

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.500 (2.512)
Concentration: 1 µg/L
Sample type: Sample



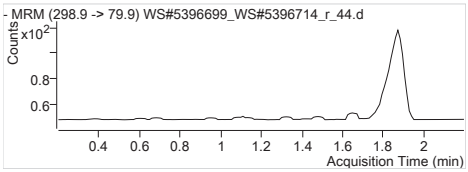



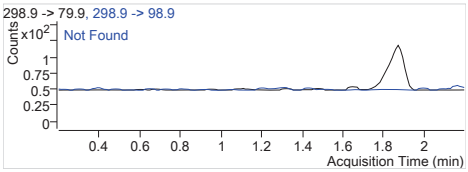

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.512 (1.534)
Concentration: 1 µg/L
Sample type: Sample



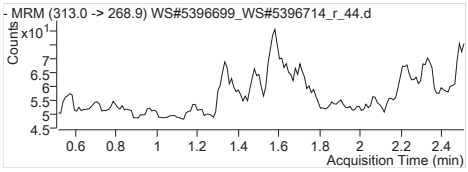



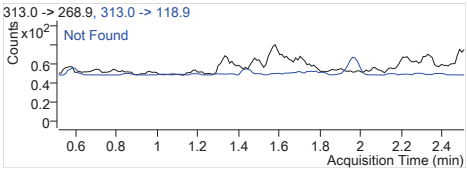

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.191 (2.202)
Concentration: 1 µg/L
Sample type: Sample



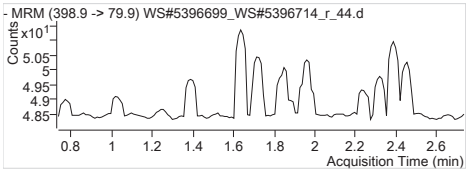



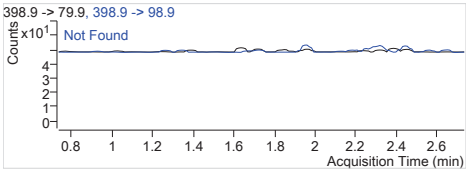

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.199)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



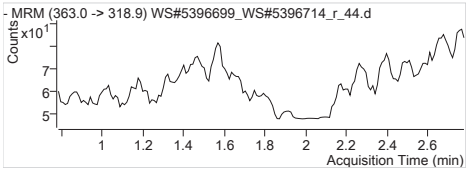



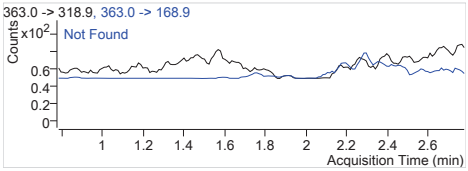

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.512)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



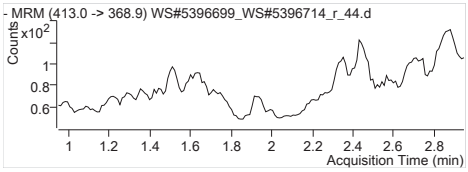



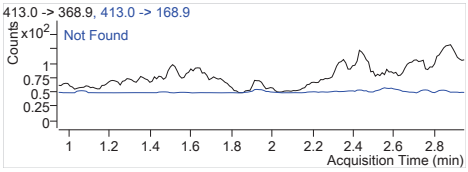

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.735)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



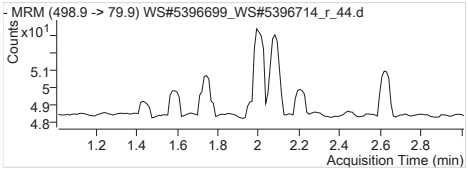



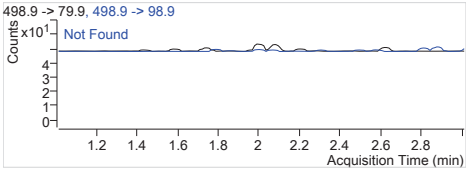

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.781)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



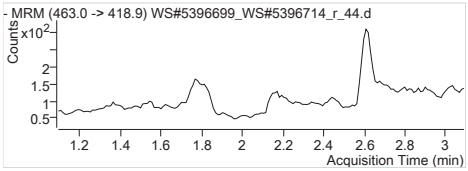



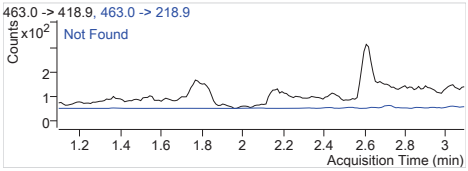

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.948)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



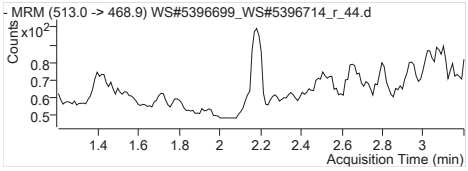



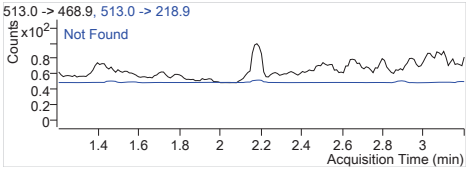

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (2.013)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



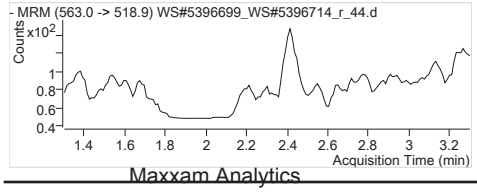



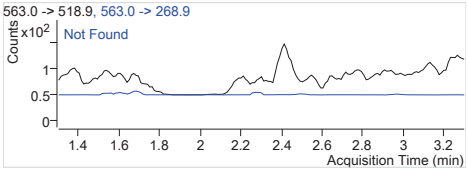

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.092)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



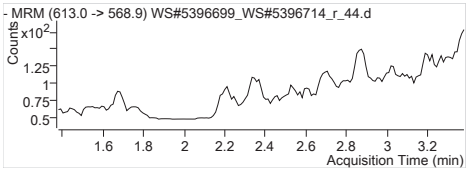



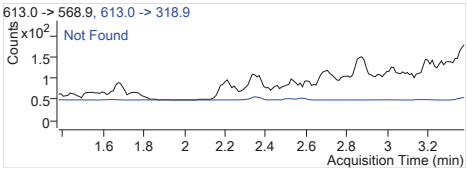

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.203)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



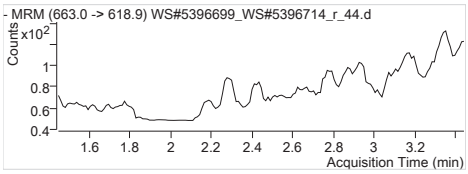



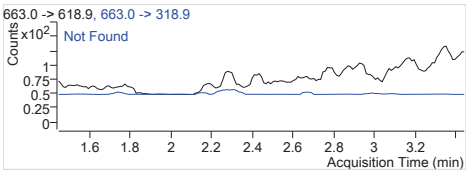

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.302)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



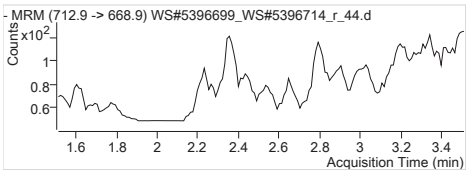



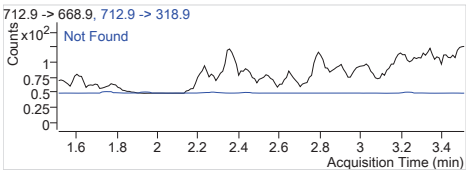

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.379)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



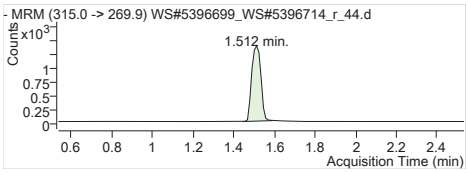



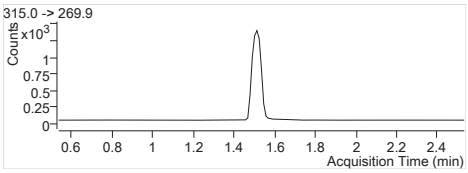

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.445)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



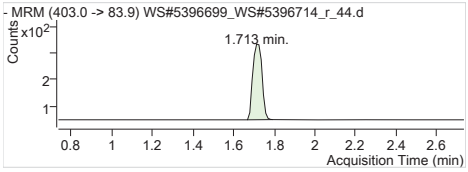



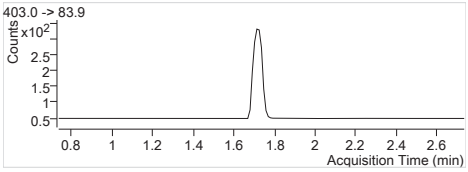

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.512)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



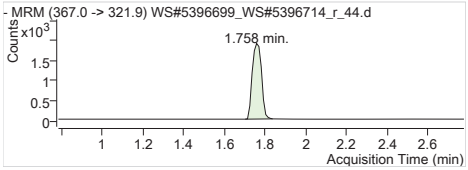



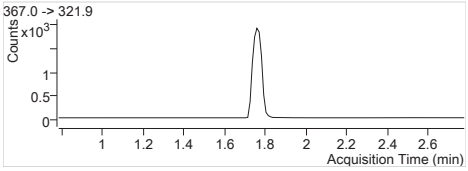

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.512 (1.535)
Calc. conc. 71.69 µg/L
Area ratio: 0.16885
Sample type: Sample



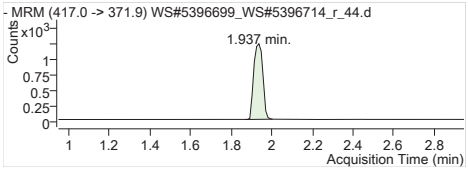



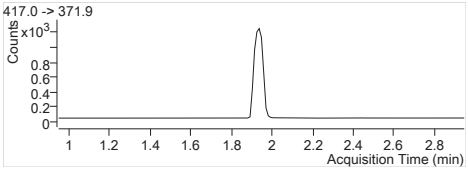

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.713 (1.735)
Calc. conc. 65.61 µg/L
Area ratio: 0.03602
Sample type: Sample



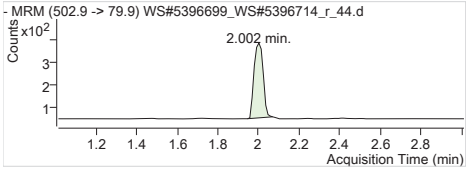



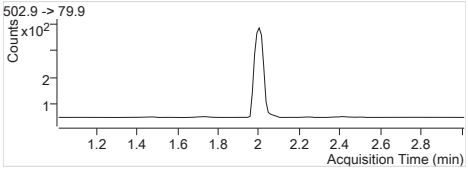

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.758 (1.781)
Calc. conc. 84.06 µg/L
Area ratio: 0.23623
Sample type: Sample



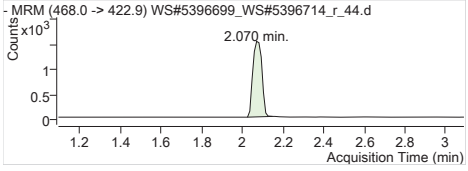



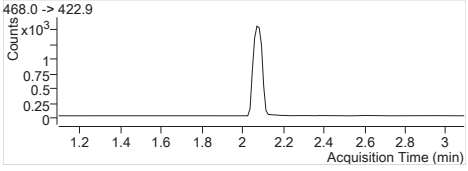

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.937 (1.948)
Calc. conc. 55.83 µg/L
Area ratio: 0.14895
Sample type: Sample



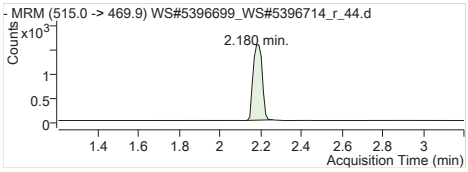



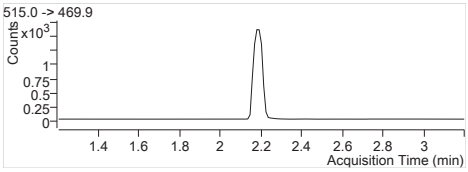

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 2.002 (2.013)
Calc. conc. 67.28 µg/L
Area ratio: 0.04149
Sample type: Sample



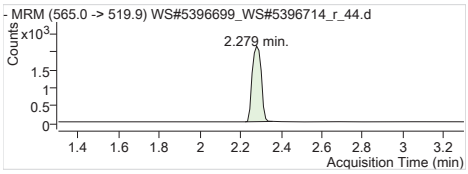



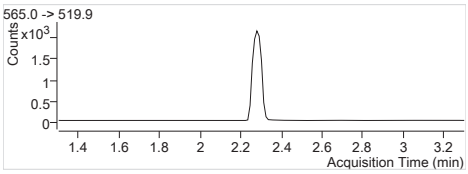

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.070 (2.092)
Calc. conc. 75.20 µg/L
Area ratio: 0.18716
Sample type: Sample



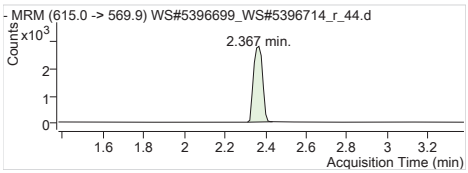



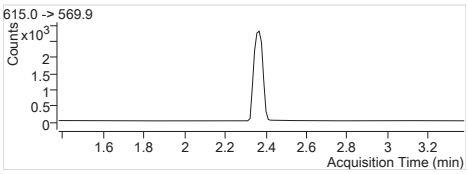

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.180 (2.202)
Calc. conc. 92.63 µg/L
Area ratio: 0.16821
Sample type: Sample



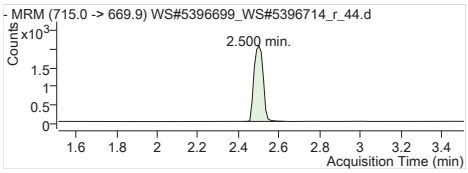



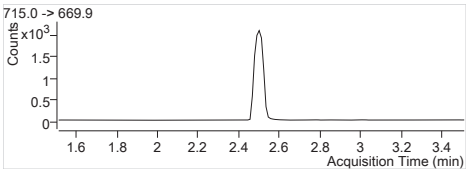

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.279 (2.302)
Calc. conc. 95.70 µg/L
Area ratio: 0.22499
Sample type: Sample



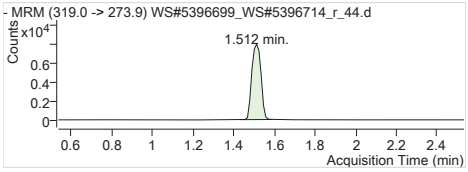



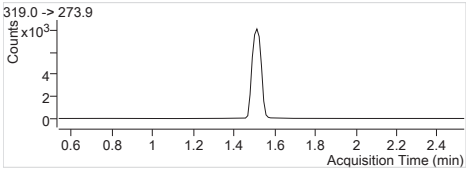

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.367 (2.379)
Calc. conc. 96.55 µg/L
Area ratio: 0.29547
Sample type: Sample



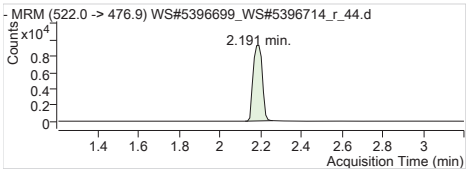



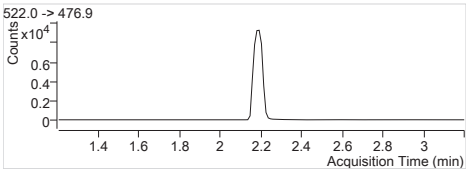

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.500 (2.512)
Calc. conc. 81.83 µg/L
Area ratio: 0.22137
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.512 (1.534)
Calc. conc. 2.45 µg/L
Area ratio: 0
Sample type: Sample




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.191 (2.202)
Calc. conc. 2.85 µg/L
Area ratio: 0
Sample type: Sample

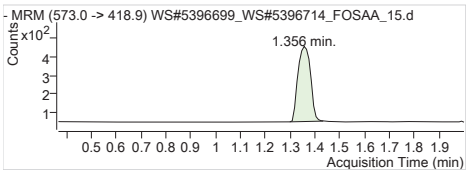
# Quantitation Results

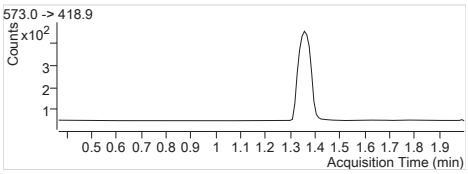
Agilent Technologies

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **5396699:FZA783-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_15.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B5 |
| **Acq. Date** | 2018/02/15 11:10:34 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

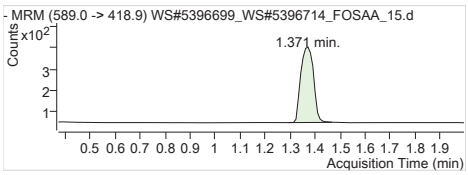
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1421 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1251 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 23363 | 1.11 | 1 µg/L | | |

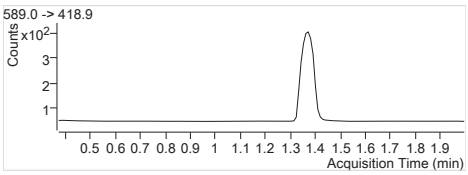
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1444 | 1.36 | - | 112.27 µg/L | - |
| D5-EtFOSAA | 1257 | 1.37 | - | 112.23 µg/L | - |
| 13C9-PFDA | 22765 | 1.11 | - | 2.06 µg/L | - |



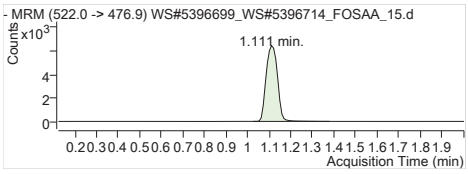



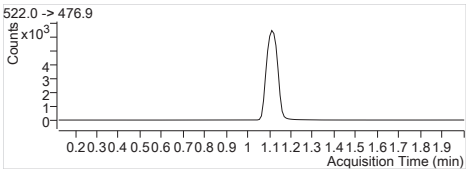

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: Sample



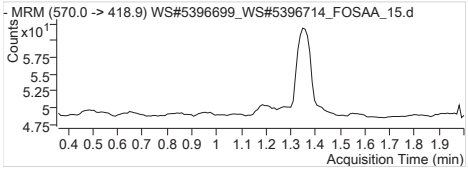



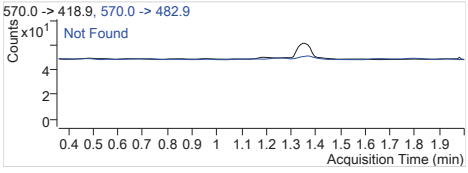

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: Sample



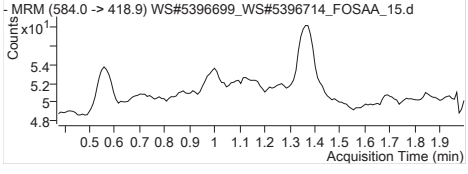



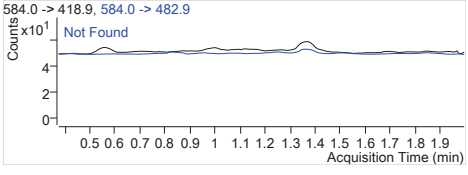

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.111 (1.121)
Concentration: 1 µg/L
Sample type: Sample



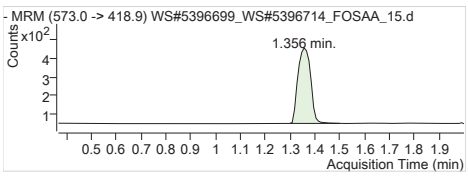



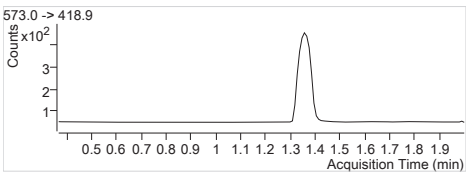

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.358)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



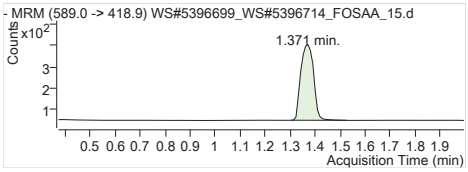



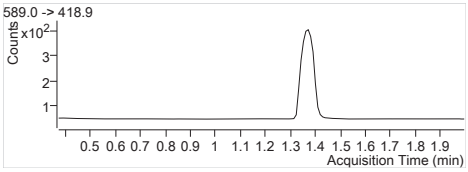

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.373)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



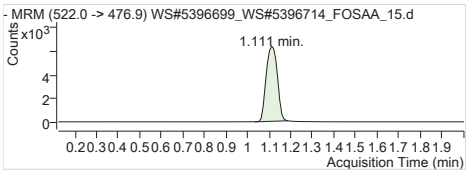



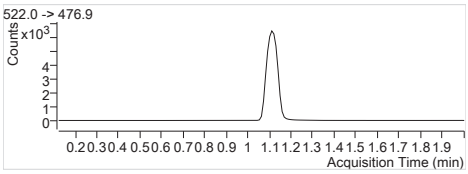

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 112.27 µg/L
Area ratio: 0.06181
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 112.23 µg/L |
| Area ratio: | 0.05380 |
| Sample type: | Sample |



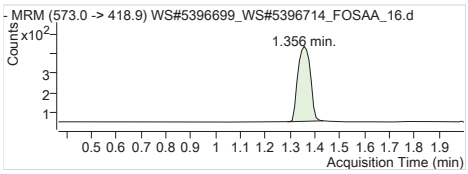



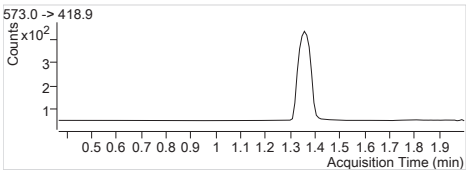

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.111 (1.121) |
| Calc. conc. | 2.06 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **5396699:FZA784-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_16.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B6 |
| **Acq. Date** | 2018/02/15 11:12:58 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

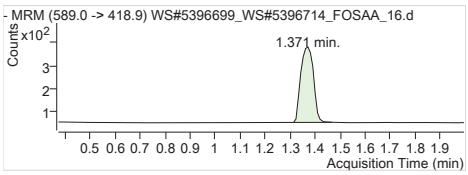
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1342 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1168 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 23860 | 1.11 | 1 µg/L | | |

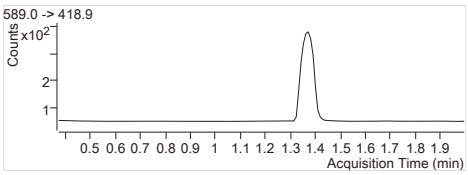
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1372 | 1.36 | - | 104.45 µg/L | - |
| D5-EtFOSAA | 1177 | 1.37 | - | 102.90 µg/L | - |
| 13C9-PFDA | 23234 | 1.11 | - | 2.10 µg/L | - |



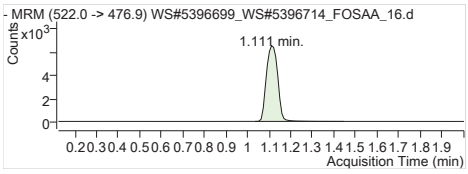



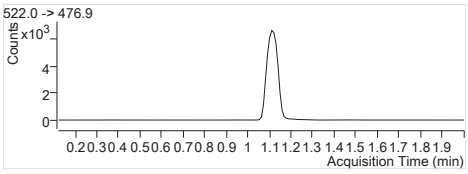

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: Sample



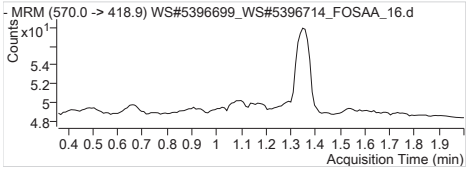



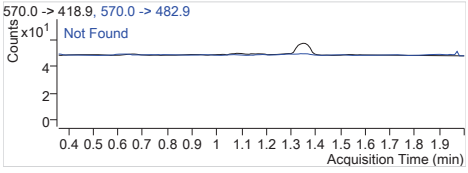

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: Sample



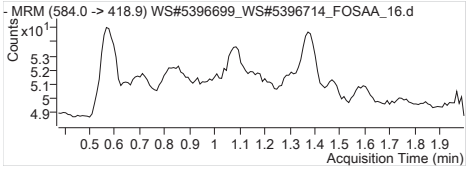



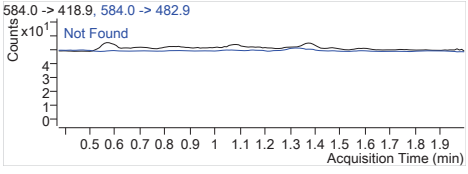

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.111 (1.121)
Concentration: 1 µg/L
Sample type: Sample



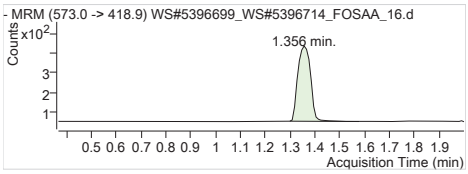



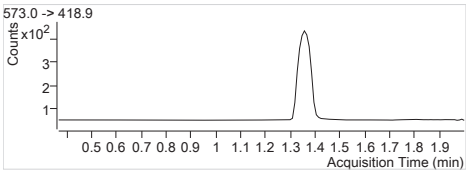

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.358)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



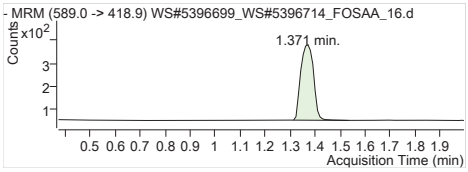



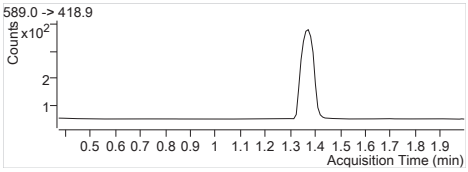

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.373)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



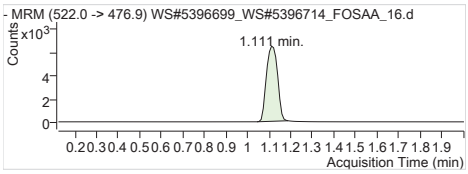



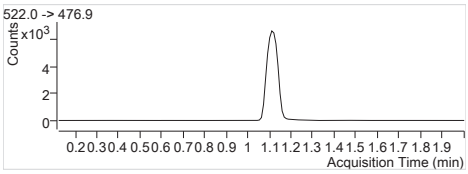

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 104.45 µg/L
Area ratio: 0.05750
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 102.90 µg/L |
| Area ratio: | 0.04933 |
| Sample type: | Sample |



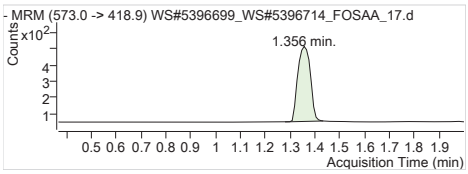



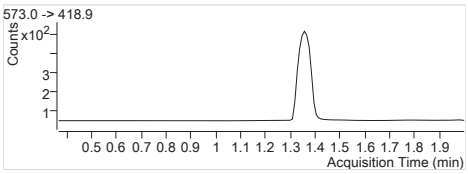

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.111 (1.121) |
| Calc. conc. | 2.10 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **5396699:FZA785-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_17.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B7 |
| **Acq. Date** | 2018/02/15 11:15:23 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

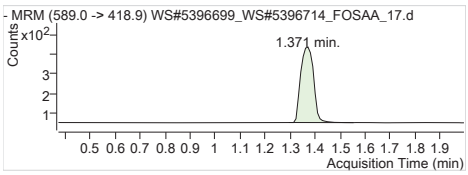
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1615 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1388 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 27890 | 1.11 | 1 µg/L | | |

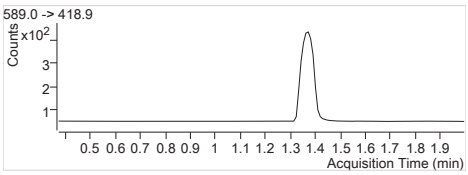
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1651 | 1.36 | - | 107.53 µg/L | - |
| D5-EtFOSAA | 1392 | 1.37 | - | 104.11 µg/L | - |
| 13C9-PFDA | 27204 | 1.11 | - | 2.46 µg/L | - |



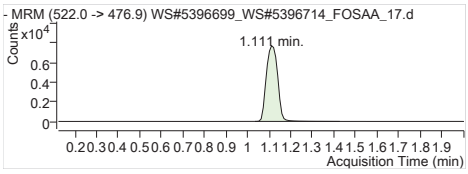



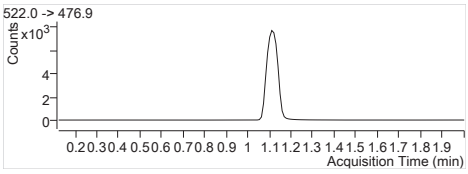

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: Sample



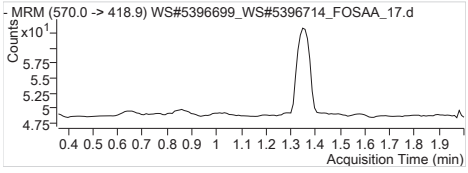



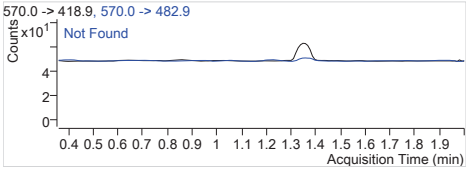

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: Sample



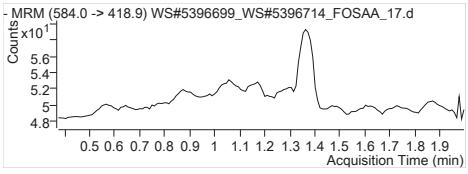



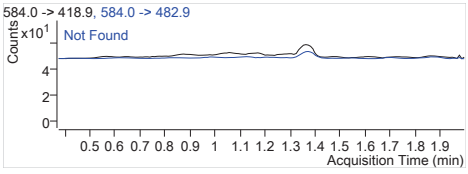

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.111 (1.121)
Concentration: 1 µg/L
Sample type: Sample



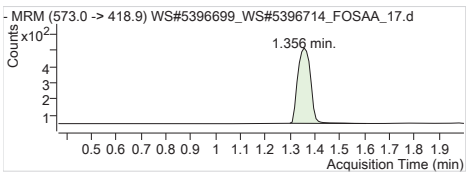



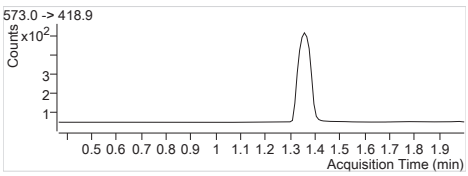

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.358)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



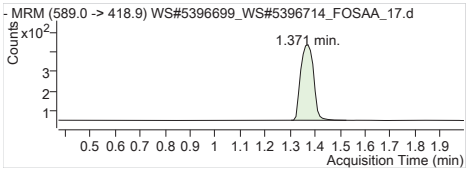



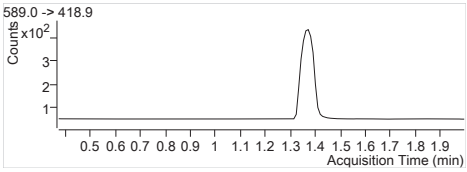

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.373)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



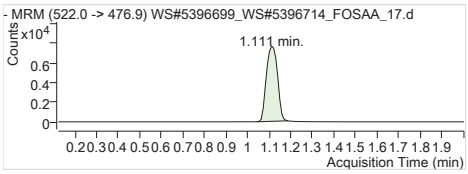



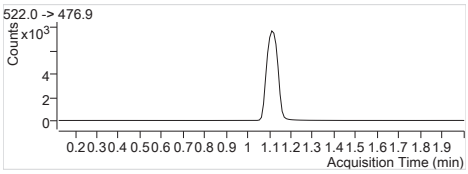

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 107.53 µg/L
Area ratio: 0.05920
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 104.11 µg/L |
| Area ratio: | 0.04991 |
| Sample type: | Sample |



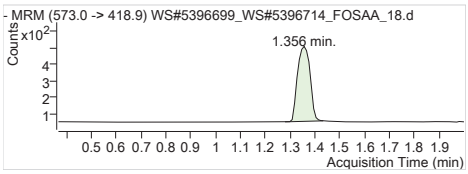



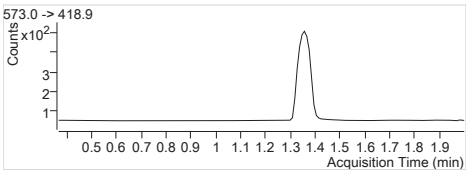

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.111 (1.121) |
| Calc. conc. | 2.46 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **5396699:FZA786-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_18.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B8 |
| **Acq. Date** | 2018/02/15 11:17:49 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

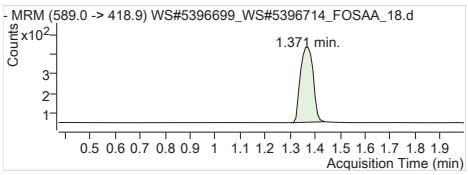
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1598 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1365 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 25662 | 1.11 | 1 µg/L | | |

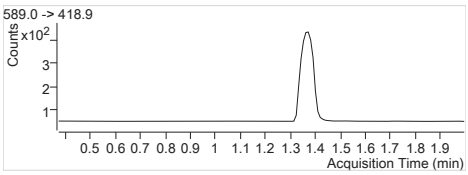
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1632 | 1.36 | - | 115.52 µg/L | - |
| D5-EtFOSAA | 1386 | 1.37 | - | 112.66 µg/L | - |
| 13C9-PFDA | 25048 | 1.11 | - | 2.26 µg/L | - |



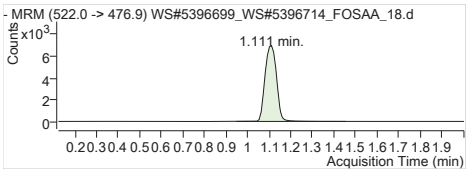



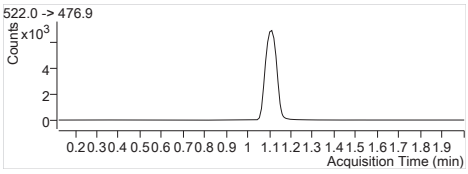

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: Sample



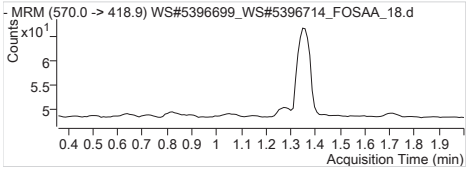



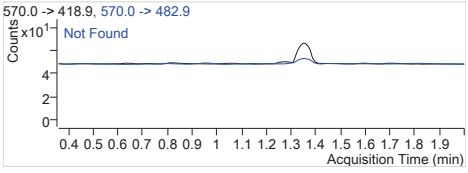

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: Sample



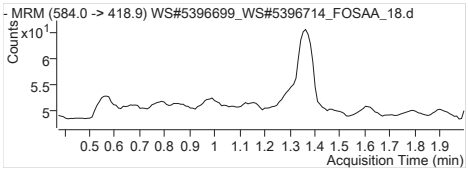



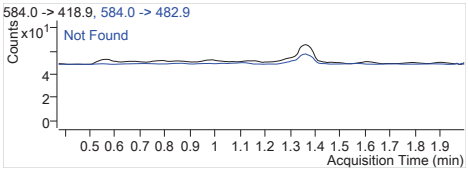

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.111 (1.121)
Concentration: 1 µg/L
Sample type: Sample



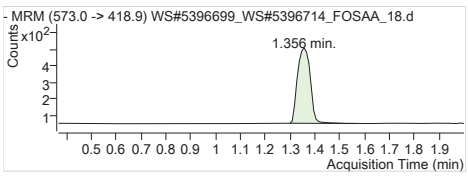



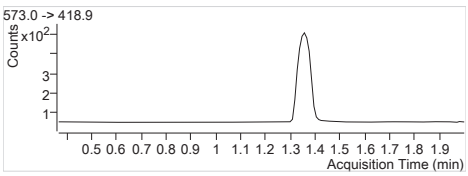

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.358)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



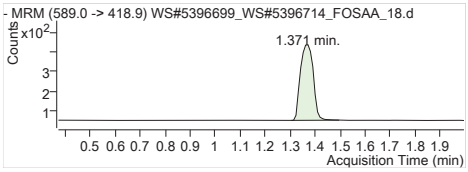



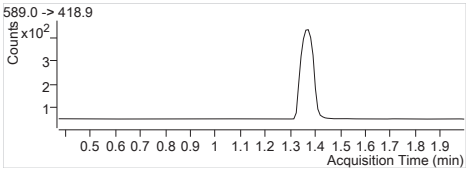

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.373)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



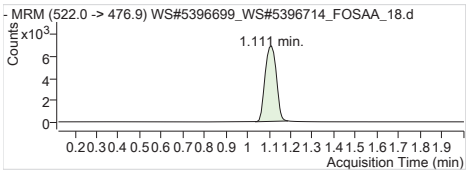



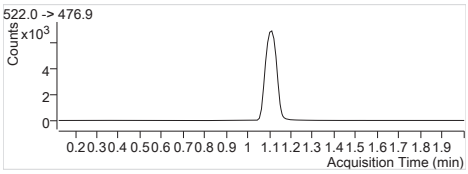

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 115.52 µg/L
Area ratio: 0.06360
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 112.66 µg/L |
| Area ratio: | 0.05401 |
| Sample type: | Sample |



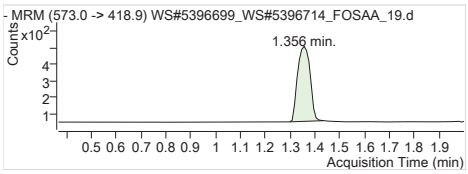



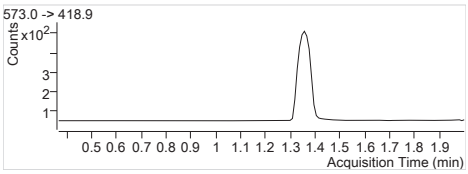

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.111 (1.121) |
| Calc. conc. | 2.26 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **5396699:FZA788-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_19.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B9 |
| **Acq. Date** | 2018/02/15 11:20:14 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

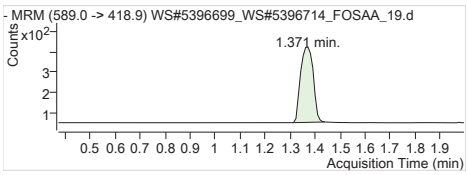
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1600 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1321 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 27993 | 1.11 | 1 µg/L | | |

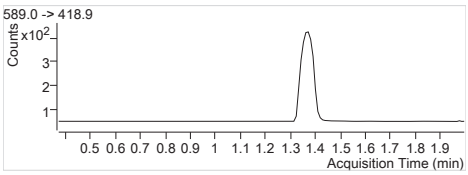
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1631 | 1.36 | - | 105.84 µg/L | - |
| D5-EtFOSAA | 1330 | 1.37 | - | 99.11 µg/L | - |
| 13C9-PFDA | 27275 | 1.11 | - | 2.47 µg/L | - |



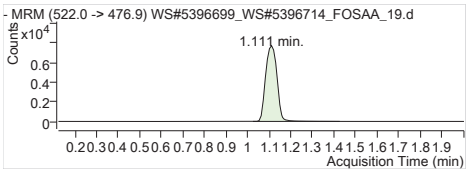



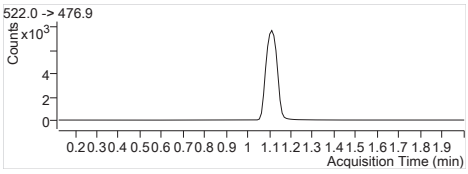

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: Sample



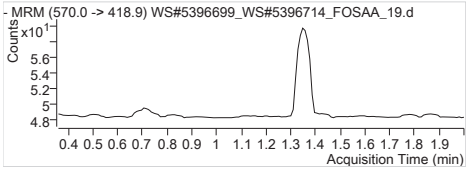



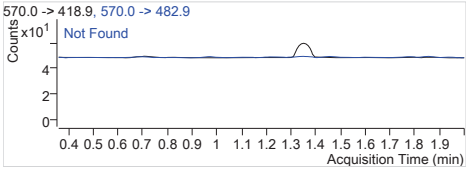

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: Sample



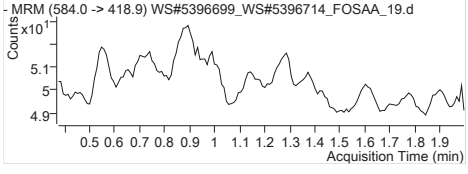



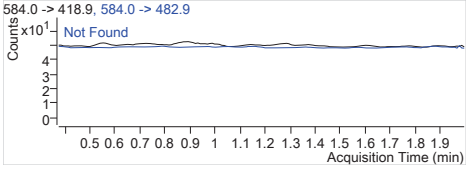

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.111 (1.121)
Concentration: 1 µg/L
Sample type: Sample



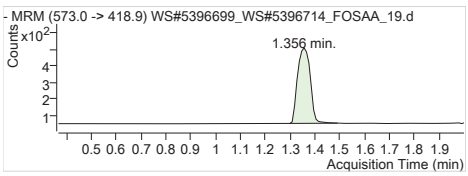



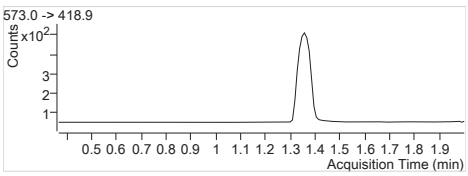

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.358)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



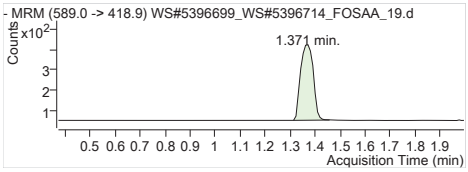



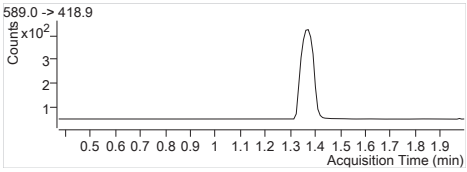

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.373)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



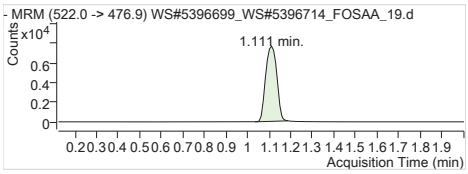



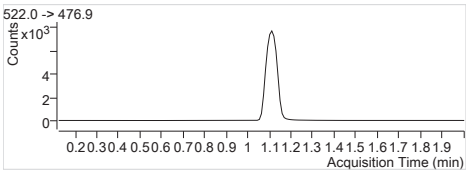

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 105.84 µg/L
Area ratio: 0.05826
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 99.11 µg/L |
| Area ratio: | 0.04751 |
| Sample type: | Sample |



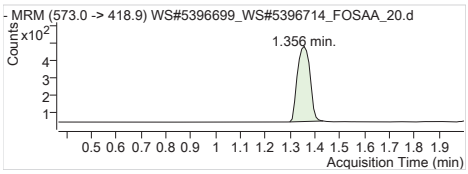



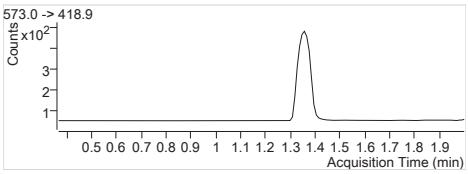

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.111 (1.121) |
| Calc. conc. | 2.47 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **5396699:FZA789-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_20.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-C1 |
| **Acq. Date** | 2018/02/15 11:22:39 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

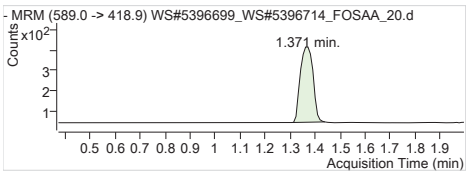
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1531 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1286 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 28087 | 1.11 | 1 µg/L | | |

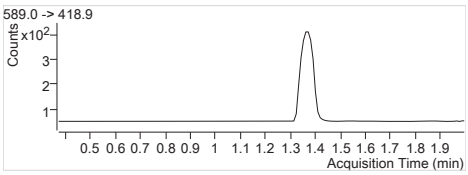
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1553 | 1.36 | - | 100.44 µg/L | - |
| D5-EtFOSAA | 1302 | 1.37 | - | 96.70 µg/L | - |
| 13C9-PFDA | 27385 | 1.11 | - | 2.47 µg/L | - |



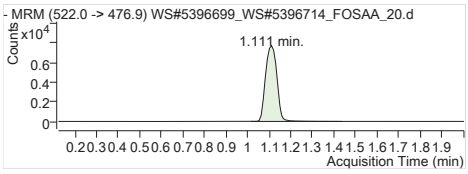



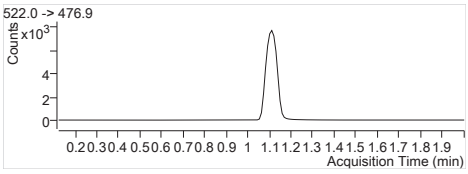

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: Sample



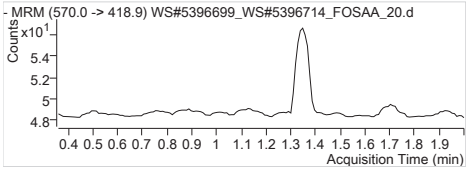



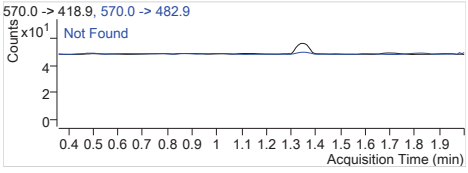

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: Sample



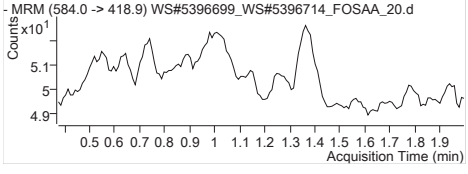



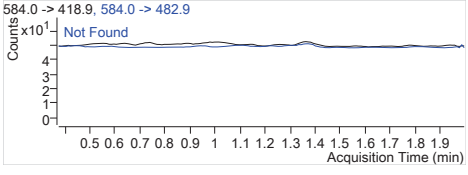

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.111 (1.121)
Concentration: 1 µg/L
Sample type: Sample



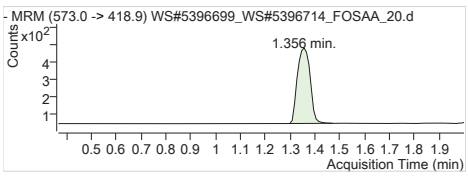



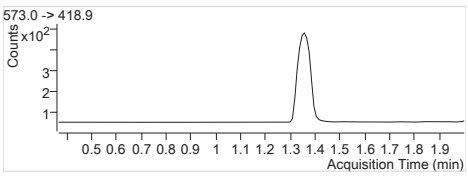

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.358)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



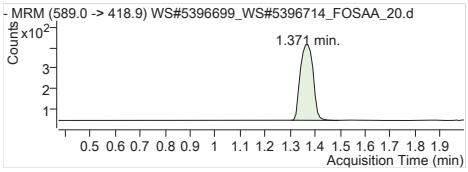



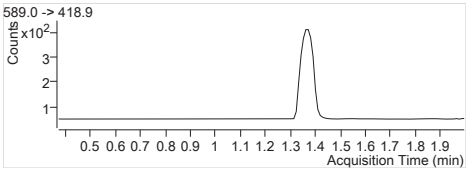

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.373)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



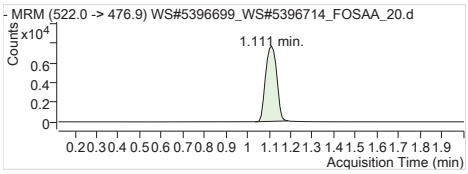



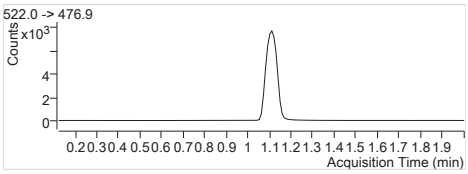

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 100.44 µg/L
Area ratio: 0.05529
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 96.70 µg/L |
| Area ratio: | 0.04636 |
| Sample type: | Sample |



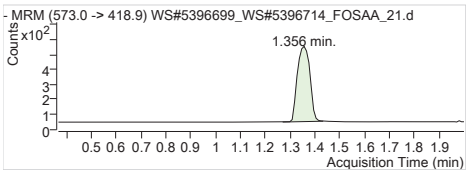



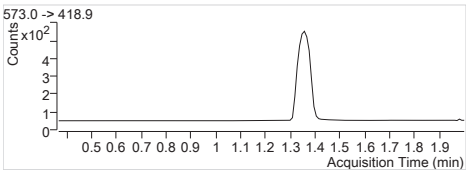

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.111 (1.121) |
| Calc. conc. | 2.47 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **5396699:FZA790-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_21.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-C2 |
| **Acq. Date** | 2018/02/15 11:25:01 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

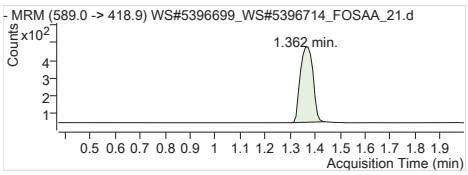
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1761 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1505 | 1.36 | 1 µg/L | | |
| 13C9-PFDA IS | 26220 | 1.11 | 1 µg/L | | |

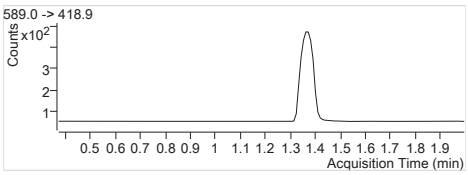
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1782 | 1.36 | - | 123.46 µg/L | - |
| D5-EtFOSAA | 1536 | 1.36 | - | 122.20 µg/L | - |
| 13C9-PFDA | 25620 | 1.11 | - | 2.32 µg/L | - |



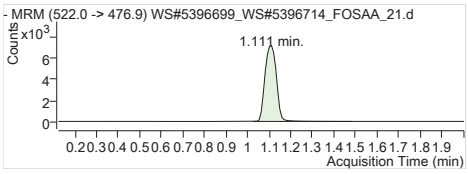



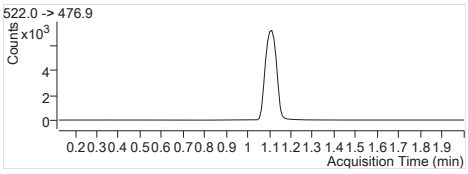

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: Sample



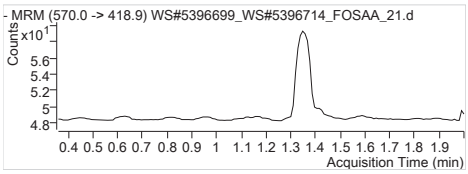



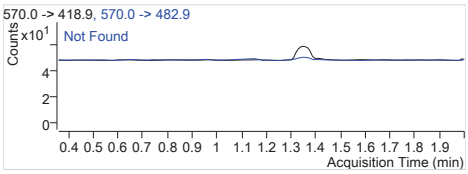

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.362 (1.371)
Concentration: 1 µg/L
Sample type: Sample



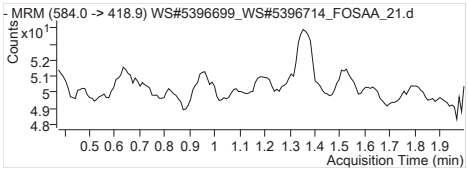



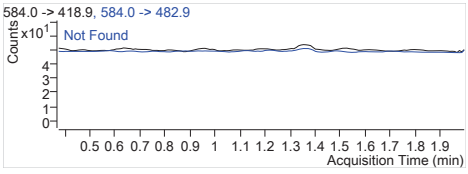

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.111 (1.121)
Concentration: 1 µg/L
Sample type: Sample



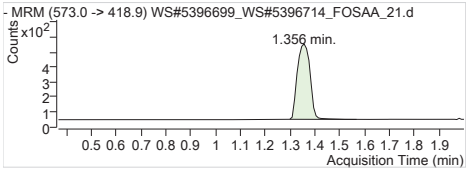



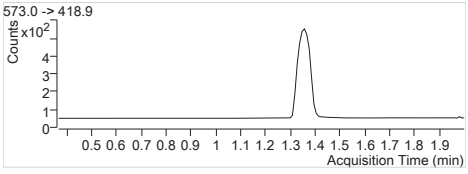

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.358)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



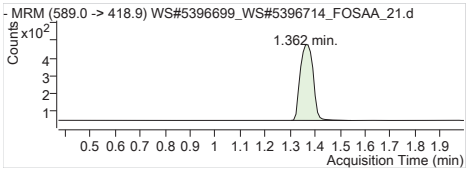



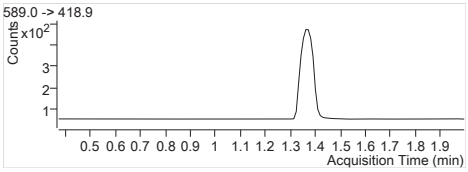

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.373)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



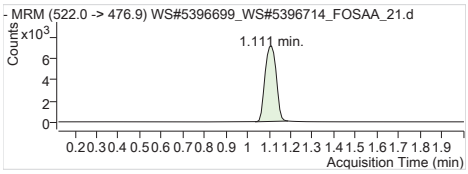



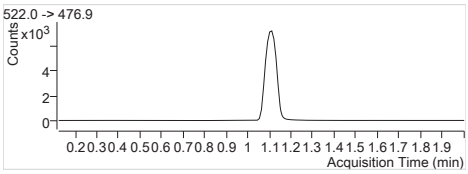

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 123.46 µg/L
Area ratio: 0.06796
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.362 (1.371) |
| Calc. conc. | 122.20 µg/L |
| Area ratio: | 0.05858 |
| Sample type: | Sample |



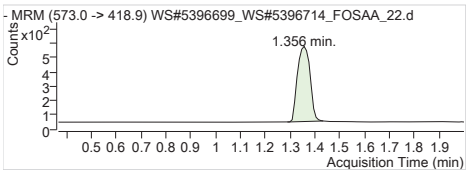



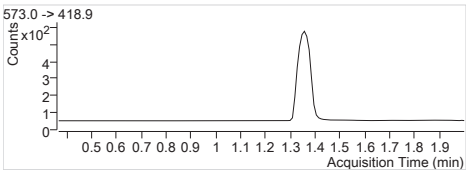

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.111 (1.121) |
| Calc. conc. | 2.32 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **5396699:FZA791-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_22.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-C3 |
| **Acq. Date** | 2018/02/15 11:27:27 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

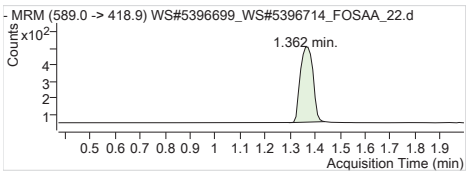
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1858 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1610 | 1.36 | 1 µg/L | | |
| 13C9-PFDA IS | 29188 | 1.11 | 1 µg/L | | |

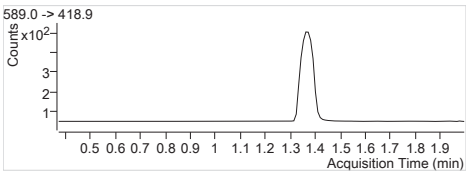
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1879 | 1.36 | - | 116.94 µg/L | - |
| D5-EtFOSAA | 1638 | 1.36 | - | 117.06 µg/L | - |
| 13C9-PFDA | 28521 | 1.11 | - | 2.58 µg/L | - |



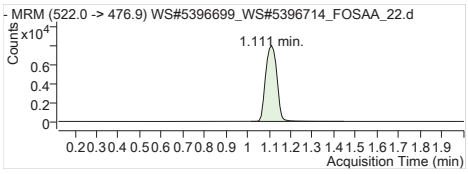



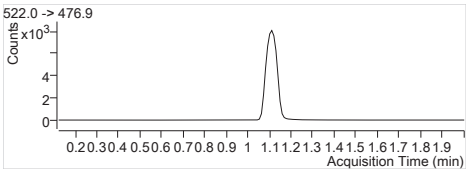

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: Sample



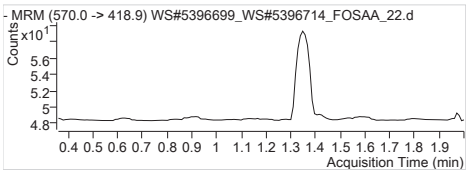



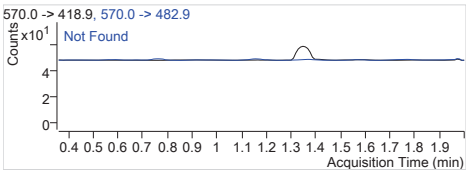

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.362 (1.371)
Concentration: 1 µg/L
Sample type: Sample



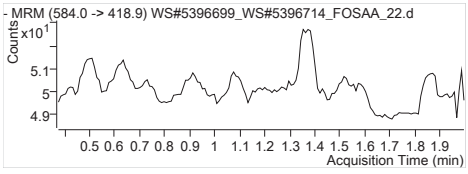



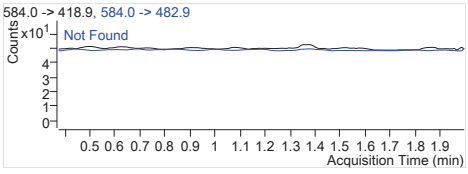

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.111 (1.121)
Concentration: 1 µg/L
Sample type: Sample



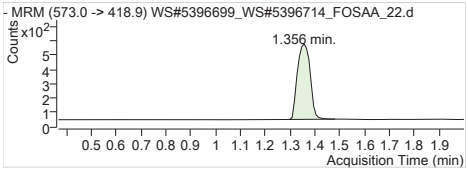



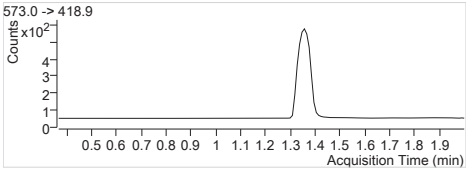

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.358)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



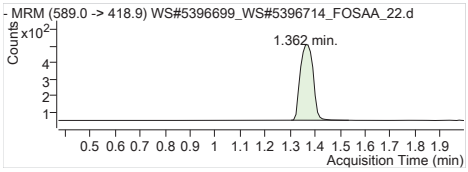



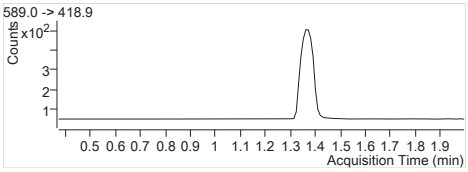

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.373)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



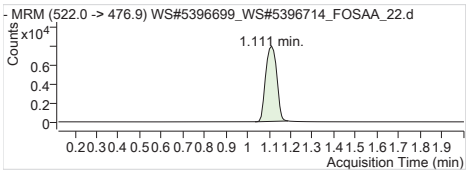



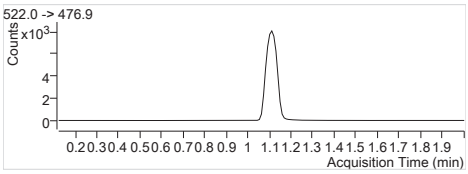

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 116.94 µg/L
Area ratio: 0.06438
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.362 (1.371) |
| Calc. conc. | 117.06 µg/L |
| Area ratio: | 0.05612 |
| Sample type: | Sample |



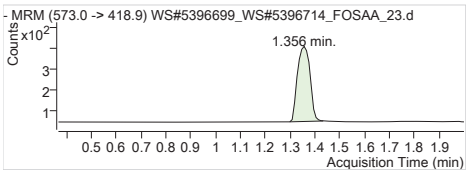



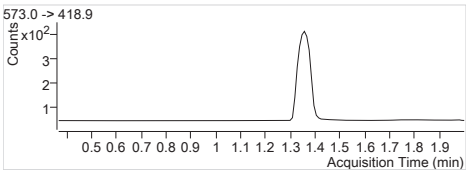

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.111 (1.121) |
| Calc. conc. | 2.58 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **5396699:FZA792-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_23.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-C4 |
| **Acq. Date** | 2018/02/15 11:29:49 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

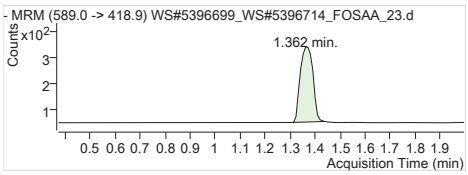
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1261 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1026 | 1.36 | 1 µg/L | | |
| 13C9-PFDA IS | 30529 | 1.11 | 1 µg/L | | |

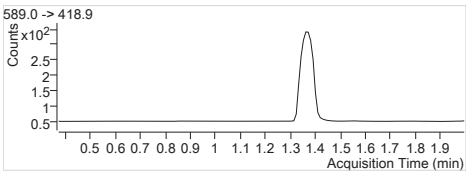
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1274 | 1.36 | - | 75.80 µg/L | - |
| D5-EtFOSAA | 1047 | 1.36 | - | 71.54 µg/L | - |
| 13C9-PFDA | 29751 | 1.11 | - | 2.69 µg/L | - |



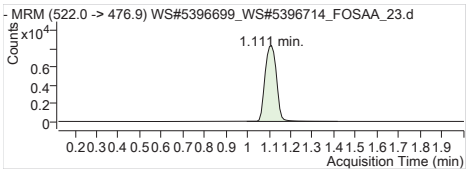



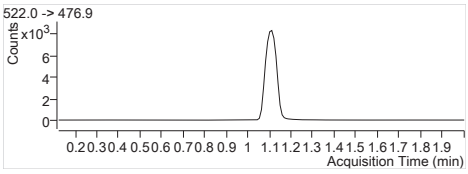

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: Sample



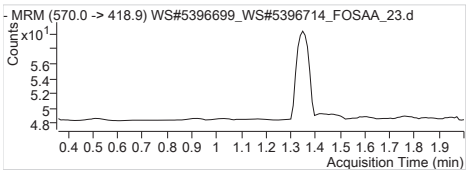



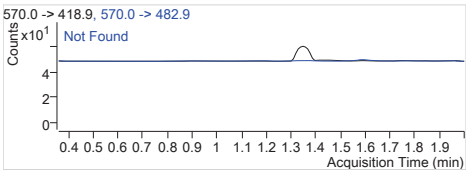

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.362 (1.371)
Concentration: 1 µg/L
Sample type: Sample



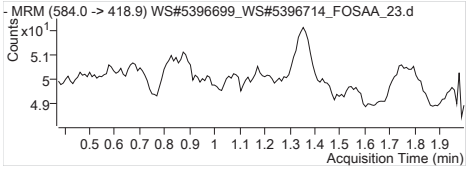



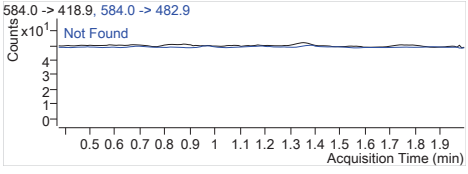

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.111 (1.121)
Concentration: 1 µg/L
Sample type: Sample



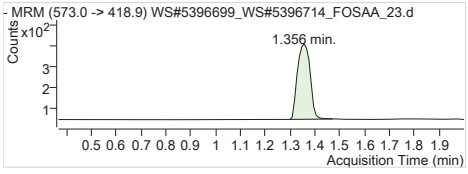



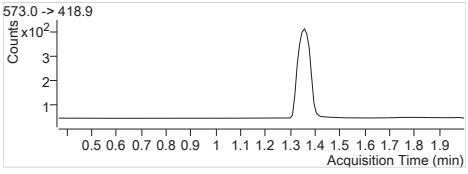

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.358)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



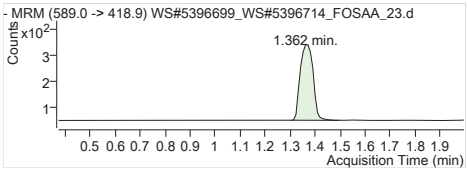



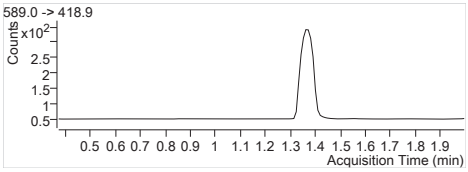

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.373)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



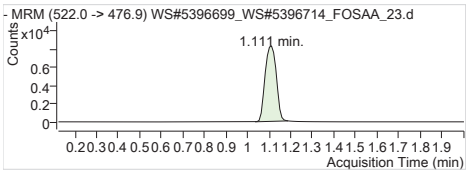



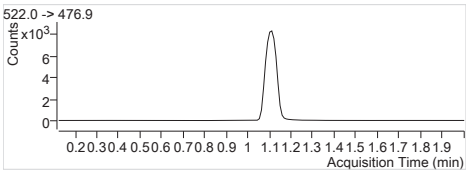

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 75.80 µg/L
Area ratio: 0.04173
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.362 (1.371) |
| Calc. conc. | 71.54 µg/L |
| Area ratio: | 0.03430 |
| Sample type: | Sample |



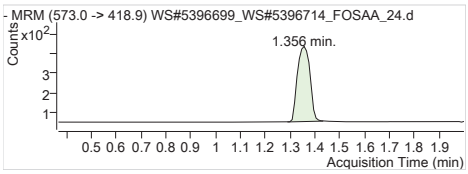



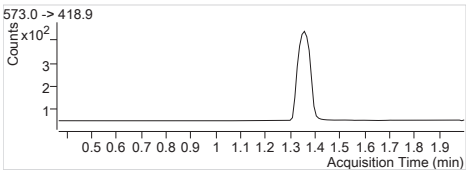

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.111 (1.121) |
| Calc. conc. | 2.69 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **5396699:FZA802-01** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_24.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-C5 |
| **Acq. Date** | 2018/02/15 11:32:15 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

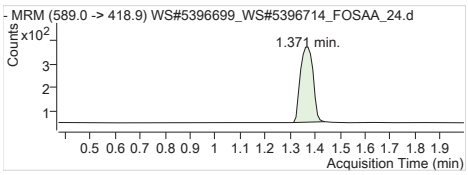
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1362 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1137 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 27559 | 1.11 | 1 µg/L | | |

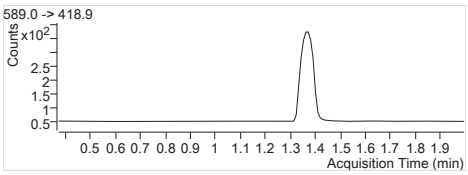
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1374 | 1.36 | - | 90.56 µg/L | - |
| D5-EtFOSAA | 1158 | 1.37 | - | 87.65 µg/L | - |
| 13C9-PFDA | 26888 | 1.11 | - | 2.43 µg/L | - |



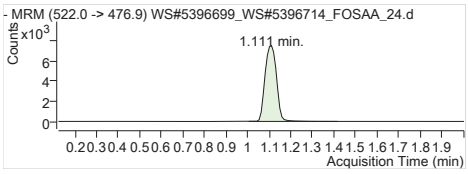



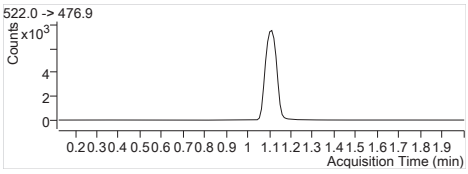

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: Sample



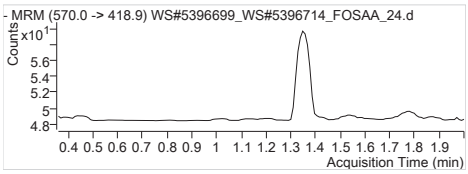



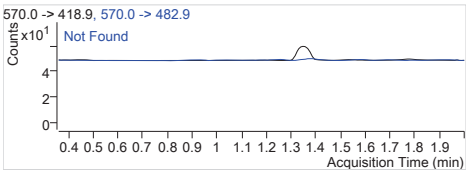

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: Sample



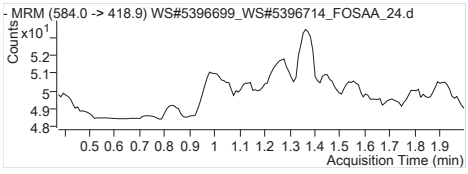



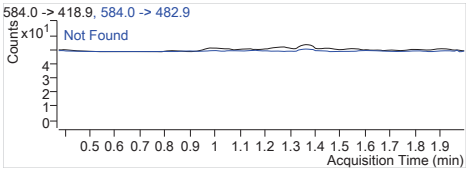

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.111 (1.121)
Concentration: 1 µg/L
Sample type: Sample



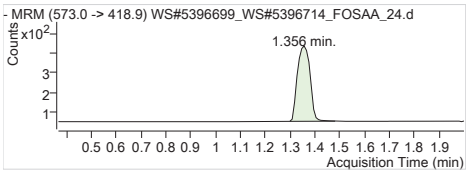



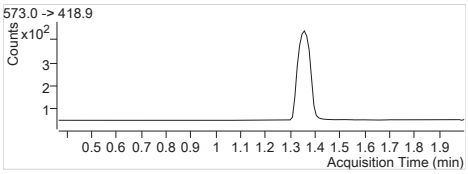

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.358)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



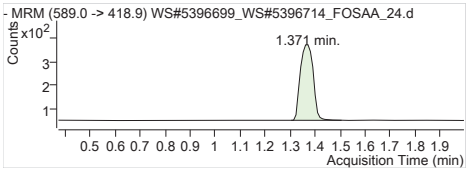



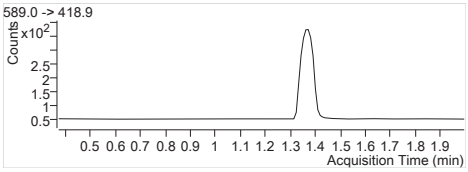

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.373)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



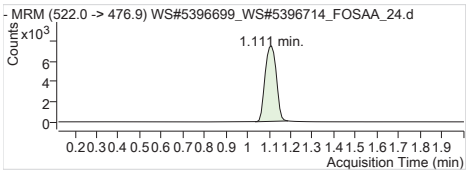



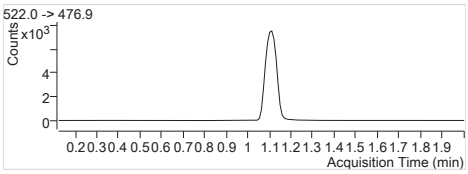

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 90.56 µg/L
Area ratio: 0.04986
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 87.65 µg/L |
| Area ratio: | 0.04202 |
| Sample type: | Sample |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.111 (1.121) |
| Calc. conc. | 2.43 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |



# 4. QA/QC Data

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

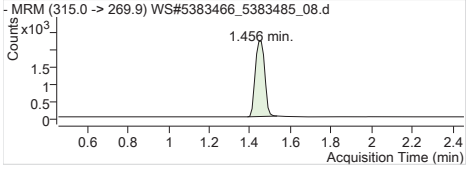
# Quantitation Results

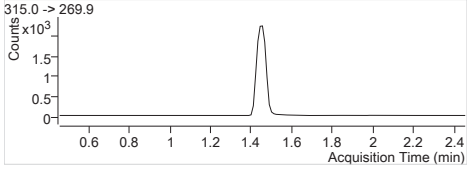
Agilent Technologies

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_ETOxics | | |
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_08.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A8 |
| **Acq. Date** | 2018/02/06 6:41:25 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

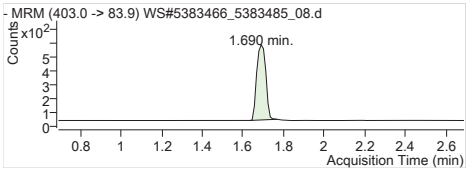
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 7067 | 1.46 | 1 µg/L | | |
| MPFHxS | 1679 | 1.69 | 1 µg/L | | |
| MPFHpA | 8797 | 1.71 | 1 µg/L | | |
| MPFOA | 8726 | 1.89 | 1 µg/L | | |
| MPFOS | 2052 | 1.99 | 1 µg/L | | |
| MPFNA | 9059 | 2.04 | 1 µg/L | | |
| MPFDA | 7282 | 2.15 | 1 µg/L | | |
| MPFUnA | 8608 | 2.25 | 1 µg/L | | |
| MPFDoA | 11464 | 2.33 | 1 µg/L | | |
| MPFTeDA | 13573 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 29106 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 37296 | 2.15 | 1 µg/L | | |

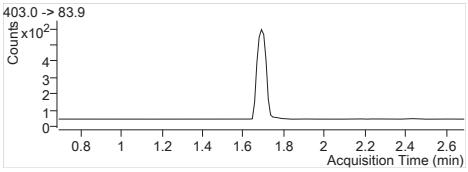
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 7067 | 1.46 | - | 102.48 µg/L | - |
| 18O2-PFHxS | 1679 | 1.69 | - | 99.27 µg/L | - |
| 13C4-PFHpA | 8797 | 1.71 | - | 103.45 µg/L | - |
| 13C4-PFOA | 8726 | 1.89 | - | 95.51 µg/L | - |
| 13C4-PFOS | 2052 | 1.99 | - | 102.14 µg/L | - |
| 13C5-PFNA | 8984 | 2.04 | - | 99.80 µg/L | - |
| 13C2-PFDA | 7172 | 2.15 | - | 95.83 µg/L | - |
| 13C2-PFUnA | 8608 | 2.25 | - | 95.42 µg/L | - |
| 13C2-PFDoA | 11464 | 2.33 | - | 95.48 µg/L | - |
| 13C2-PFTeDA | 14048 | 2.48 | - | 102.69 µg/L | - |
| 13C6-PFHxA | 29106 | 1.46 | - | 2.46 µg/L | - |
| 13C9-PFDA | 37296 | 2.15 | - | 2.50 µg/L | - |



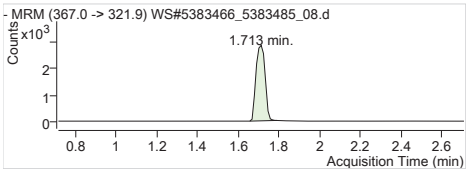



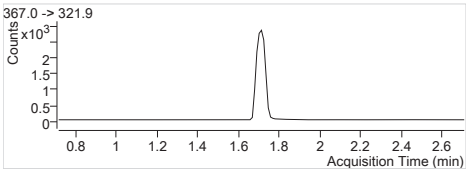

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



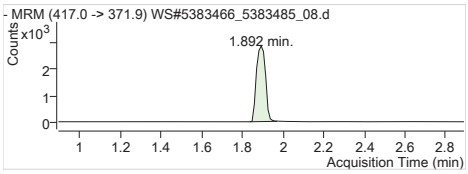



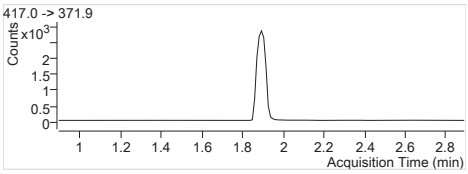

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



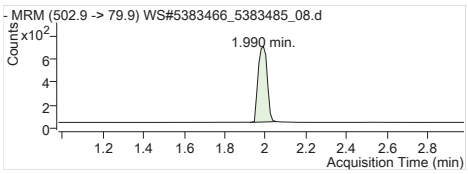



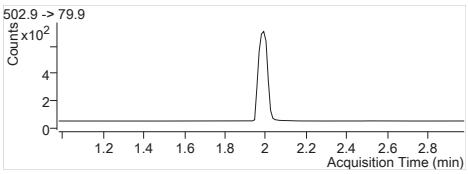

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Sample



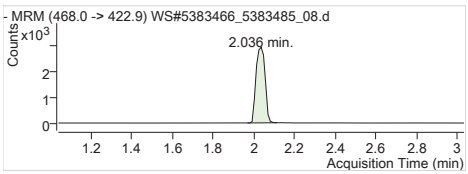



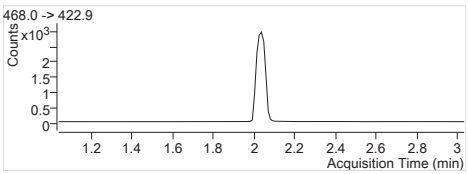

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Sample



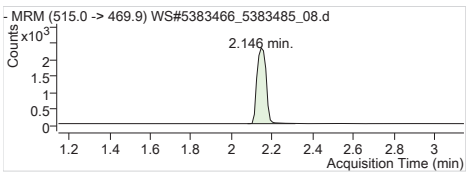



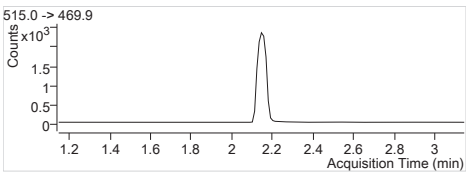

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Sample



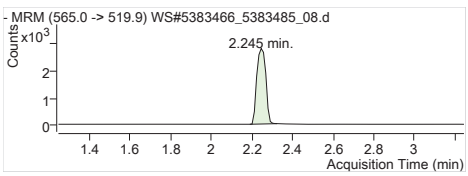



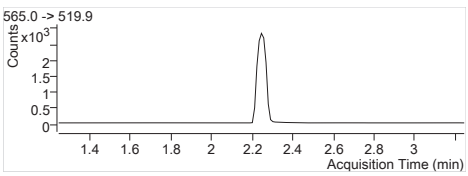

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Sample



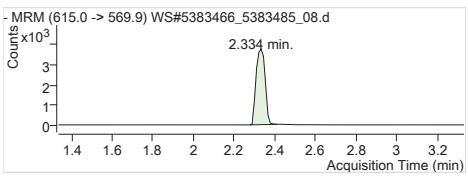



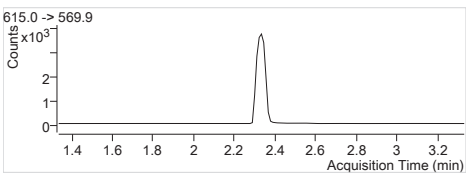

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



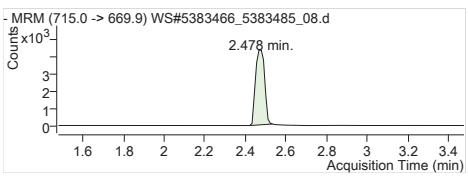



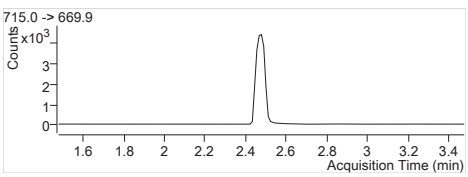

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



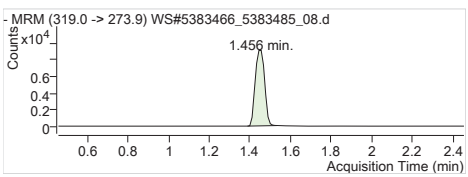



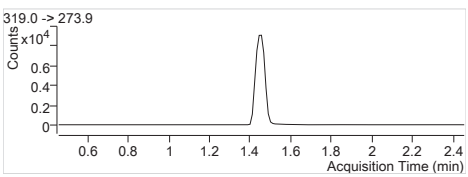

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Sample



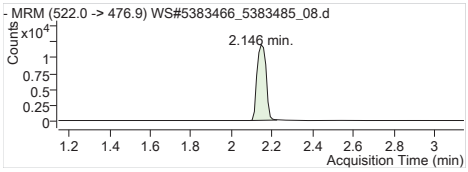



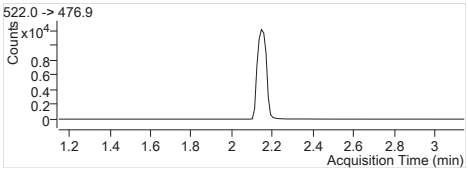

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Sample



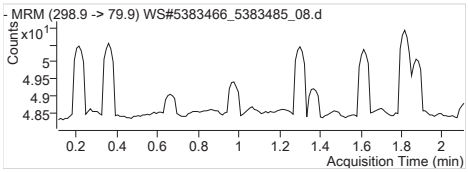



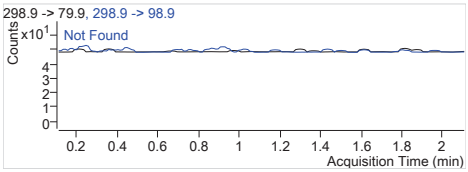

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: Sample



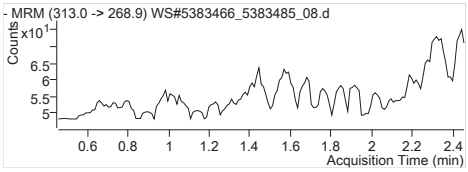



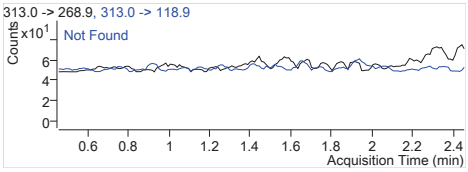

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



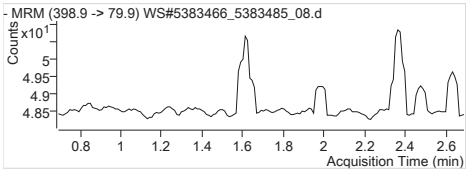



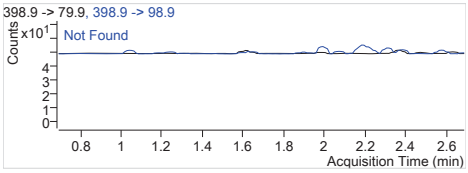

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.109)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



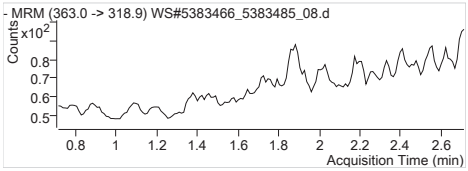



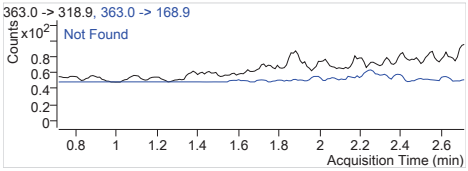

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.456)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



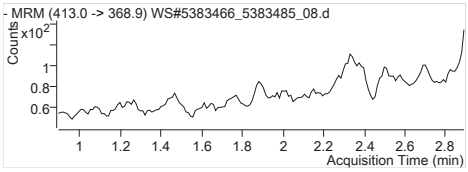



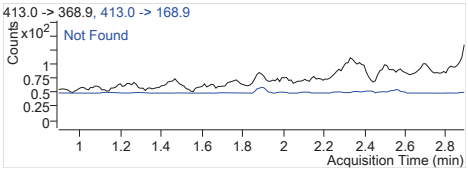

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



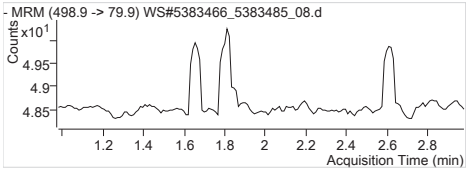



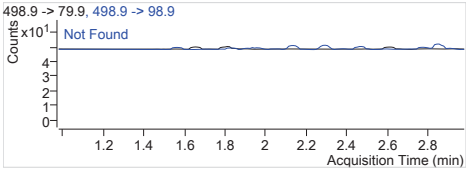

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.713)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



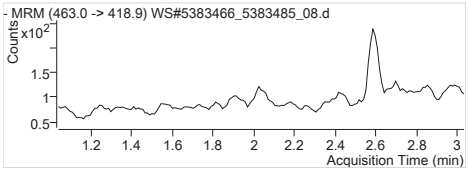



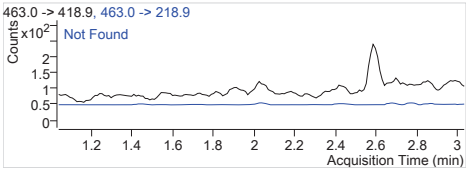

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.892)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



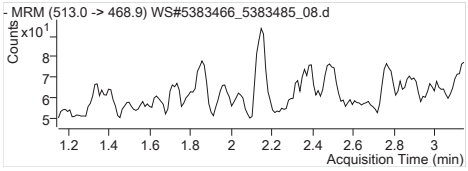



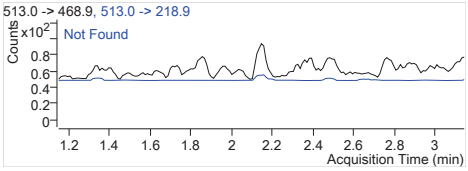

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



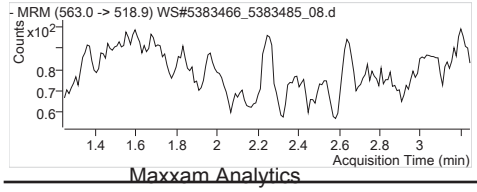



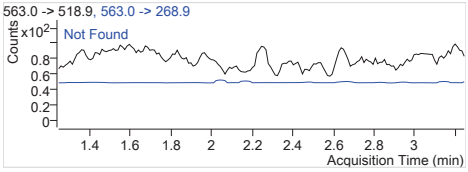

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.036)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



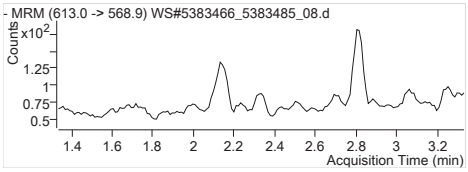



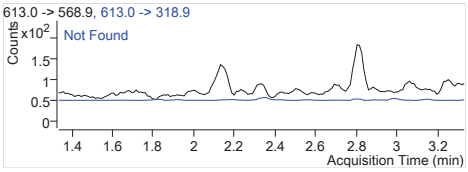

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.147)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



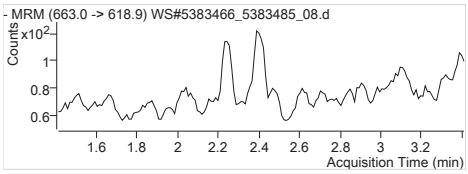



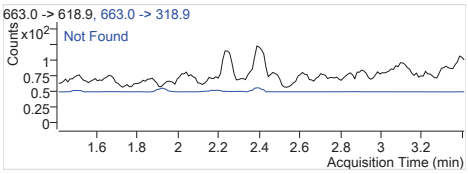

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



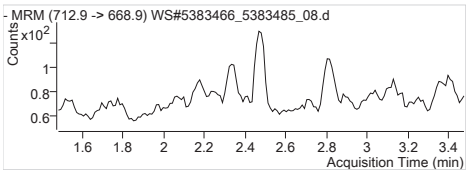



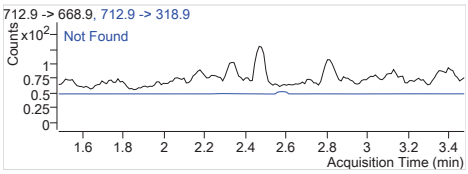

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.334)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



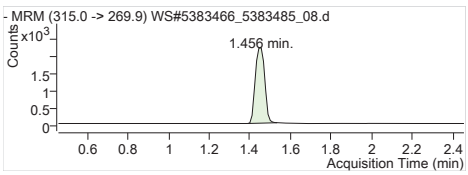



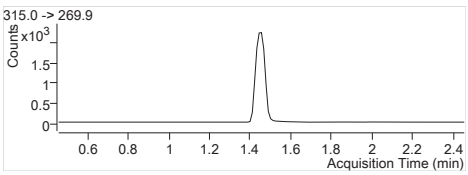

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.411)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



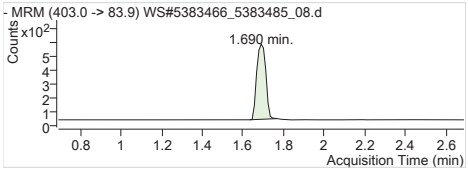



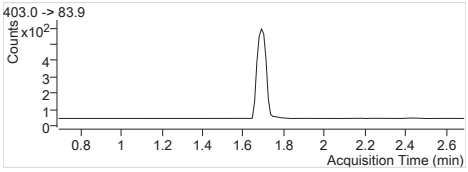

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.478)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



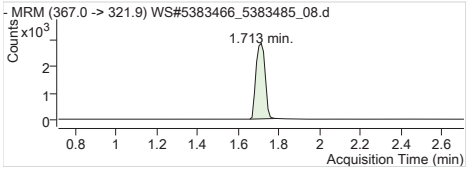



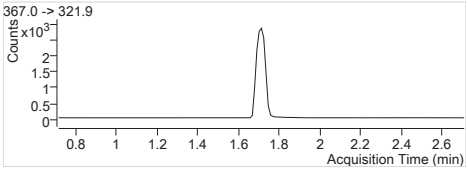

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 102.48 µg/L
Area ratio: 0.24280
Sample type: Sample



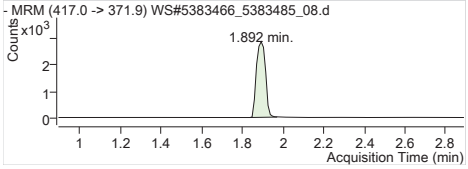



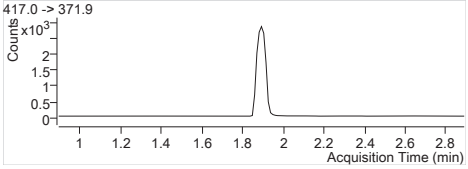

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 99.27 µg/L
Area ratio: 0.05769
Sample type: Sample



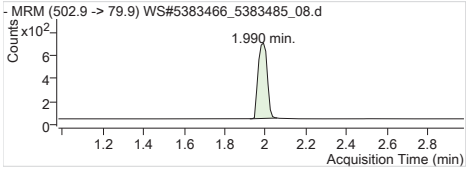



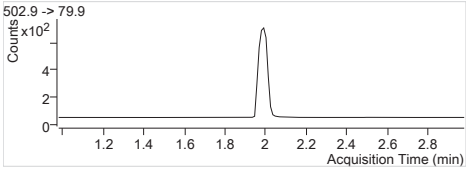

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 103.45 µg/L
Area ratio: 0.30224
Sample type: Sample



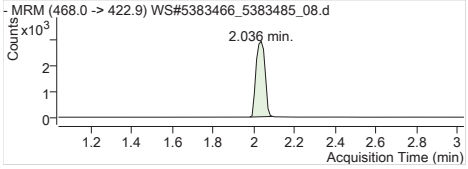



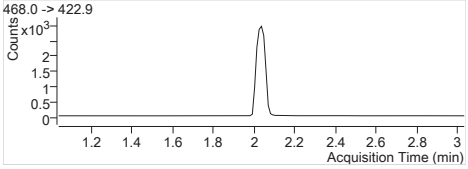

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 95.51 µg/L
Area ratio: 0.29980
Sample type: Sample



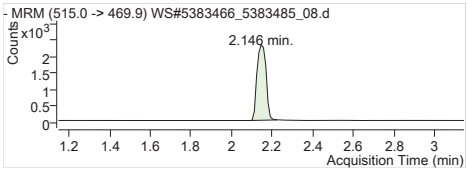



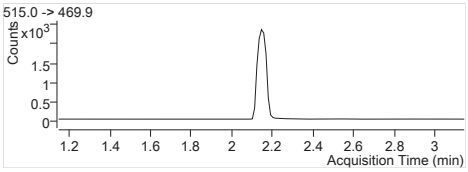

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.990 (1.979)
Calc. conc. 102.14 µg/L
Area ratio: 0.07050
Sample type: Sample



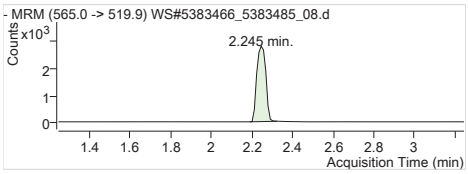



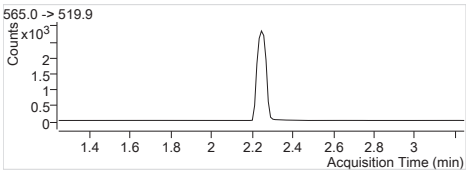

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 99.80 µg/L
Area ratio: 0.30866
Sample type: Sample



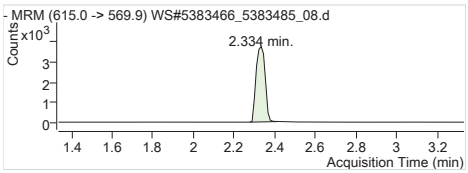



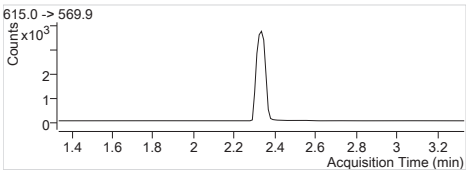

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 95.83 µg/L
Area ratio: 0.19230
Sample type: Sample



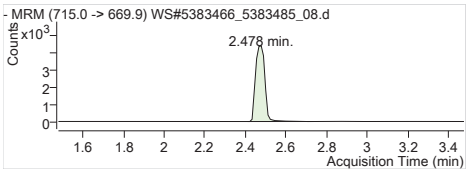



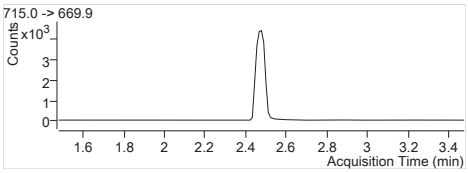

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 95.42 µg/L
Area ratio: 0.23080
Sample type: Sample



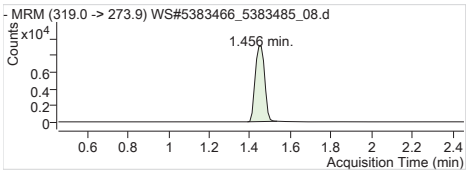



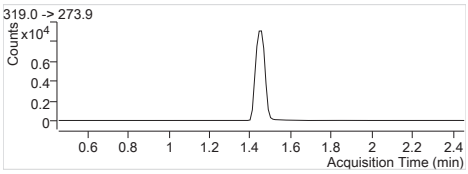

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 95.48 µg/L
Area ratio: 0.30738
Sample type: Sample



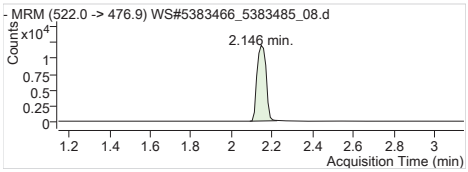



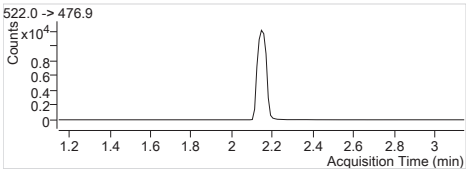

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 102.69 µg/L
Area ratio: 0.37666
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 2.46 µg/L
Area ratio: 0
Sample type: Sample



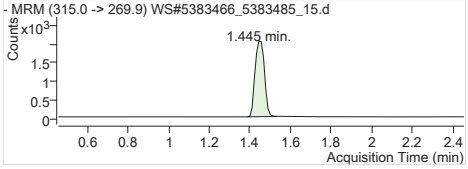

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.50 µg/L
Area ratio: 0
Sample type: Sample

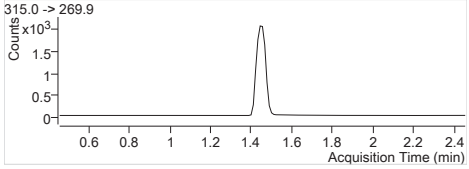
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_15.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A8 |
| **Acq. Date** | 2018/02/06 7:16:04 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

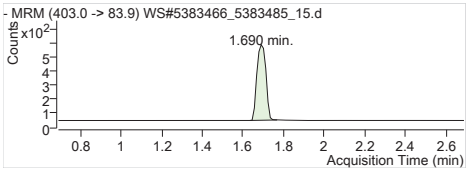
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6540 | 1.44 | 1 µg/L | | |
| MPFHxS | 1661 | 1.69 | 1 µg/L | | |
| MPFHpA | 8757 | 1.71 | 1 µg/L | | |
| MPFOA | 9555 | 1.89 | 1 µg/L | | |
| MPFOS | 2176 | 1.99 | 1 µg/L | | |
| MPFNA | 8851 | 2.04 | 1 µg/L | | |
| MPFDA | 7141 | 2.15 | 1 µg/L | | |
| MPFUnA | 8800 | 2.25 | 1 µg/L | | |
| MPFDoA | 12337 | 2.33 | 1 µg/L | | |
| MPFTeDA | 13282 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 26939 | 1.44 | 1 µg/L | | |
| 13C9-PFDA IS | 38248 | 2.15 | 1 µg/L | | |

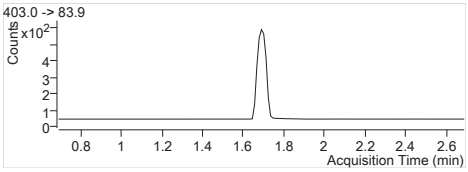
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6540 | 1.44 | - | 102.47 µg/L | - |
| 18O2-PFHxS | 1661 | 1.69 | - | 106.11 µg/L | - |
| 13C4-PFHpA | 8757 | 1.71 | - | 111.27 µg/L | - |
| 13C4-PFOA | 9555 | 1.89 | - | 113.00 µg/L | - |
| 13C4-PFOS | 2176 | 1.99 | - | 117.03 µg/L | - |
| 13C5-PFNA | 8770 | 2.04 | - | 105.26 µg/L | - |
| 13C2-PFDA | 7048 | 2.15 | - | 91.83 µg/L | - |
| 13C2-PFUnA | 8800 | 2.25 | - | 95.12 µg/L | - |
| 13C2-PFDoA | 12337 | 2.33 | - | 100.20 µg/L | - |
| 13C2-PFTeDA | 13617 | 2.48 | - | 97.06 µg/L | - |
| 13C6-PFHxA | 26939 | 1.44 | - | 2.27 µg/L | - |
| 13C9-PFDA | 38248 | 2.15 | - | 2.57 µg/L | - |



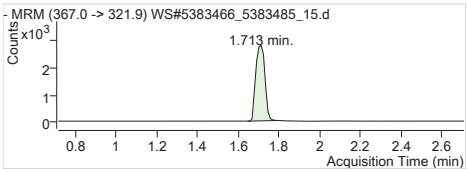



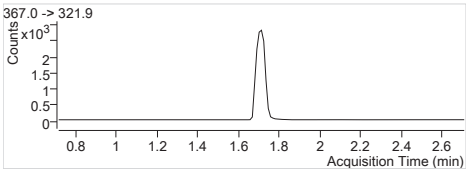

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.445 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



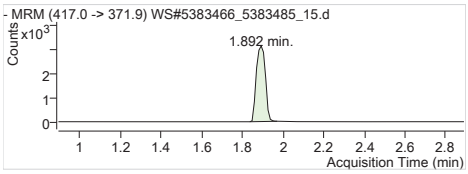



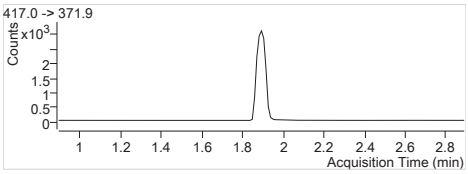

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



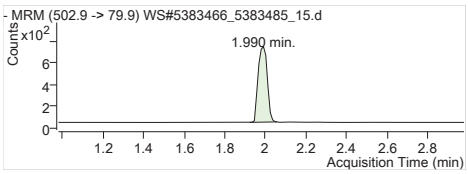



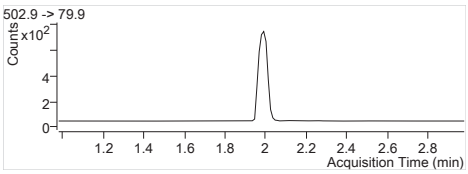

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Sample



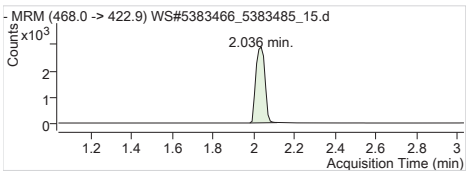



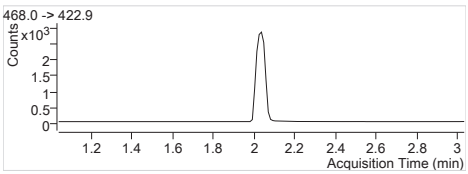

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Sample



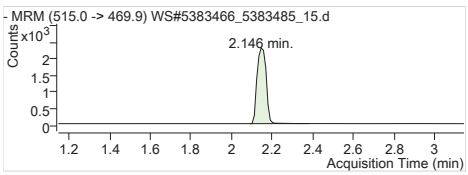



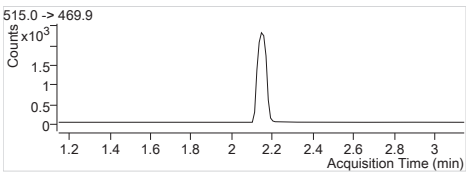

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Sample



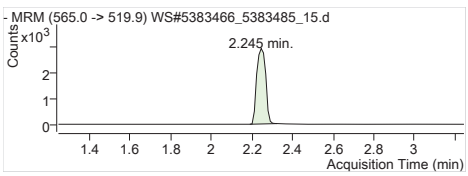



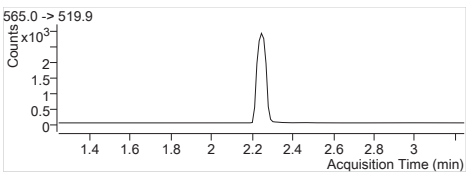

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Sample



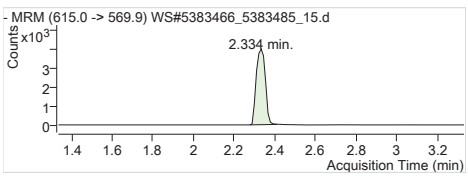



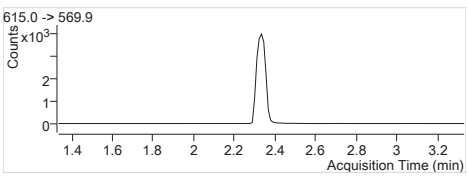

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



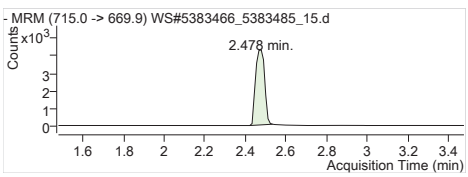



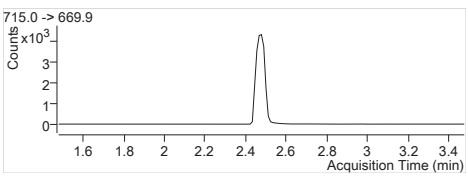

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



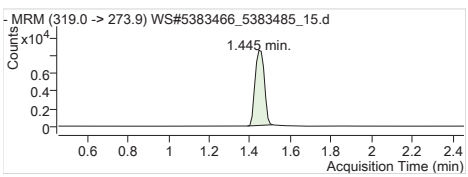



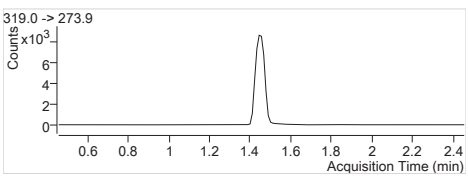

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Sample



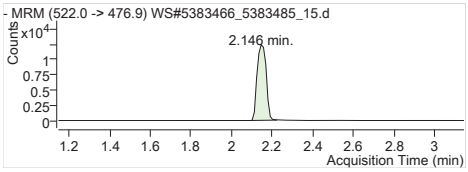



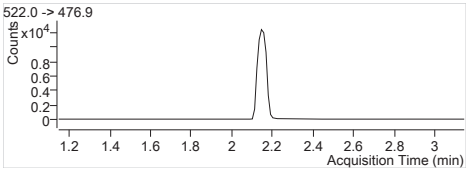

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Sample



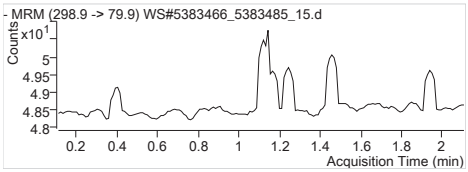



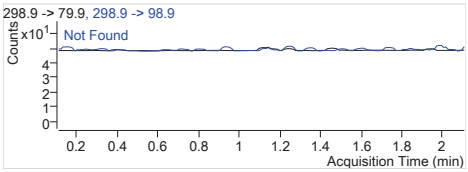

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.445 (1.456)
Concentration: 1 µg/L
Sample type: Sample



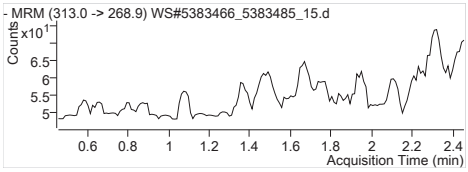



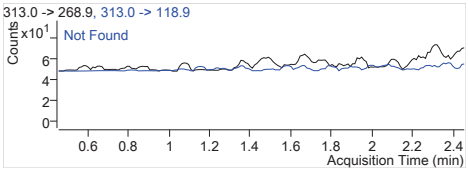

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



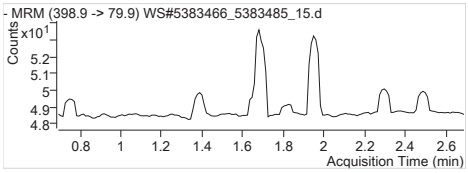



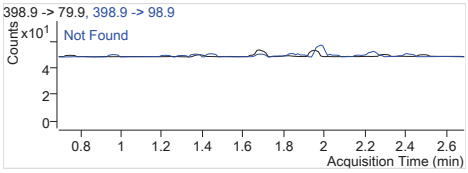

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.109)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



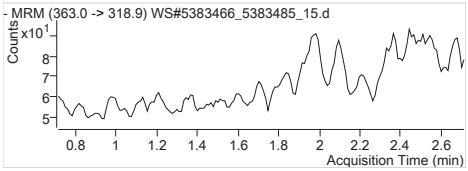



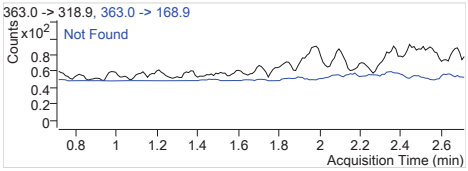

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.456)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



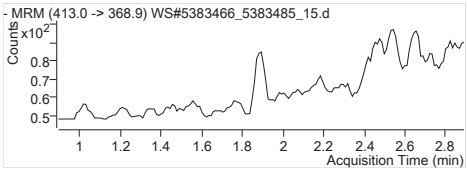



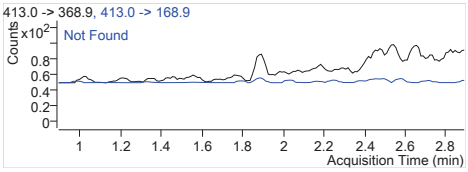

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



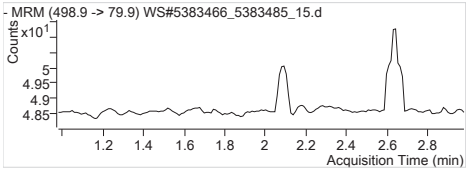



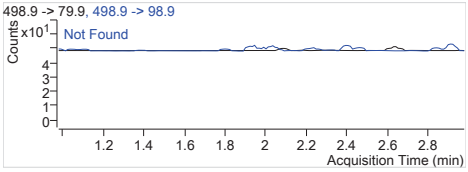

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.713)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



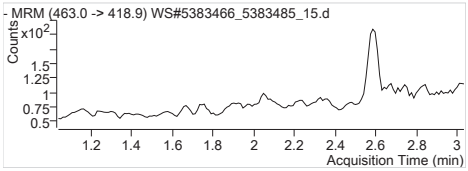



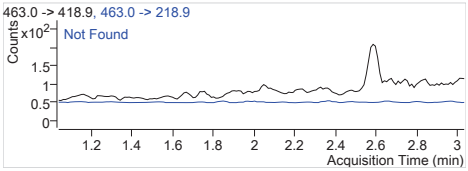

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.892)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



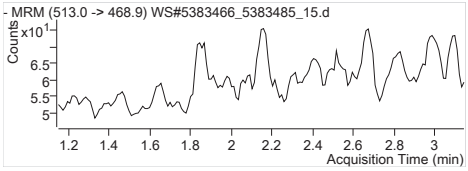



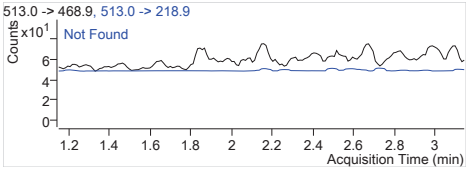

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



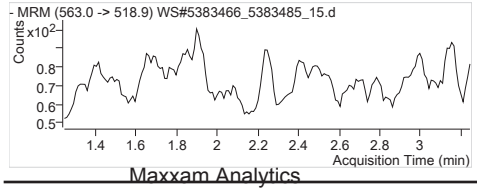



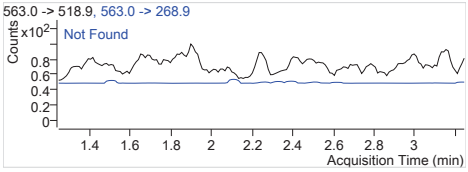

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.036)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



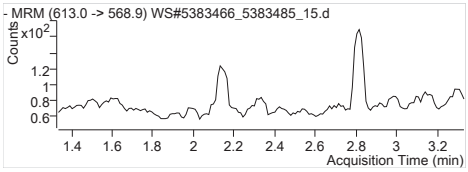



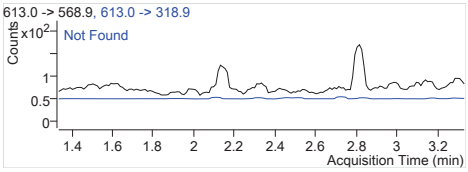

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.147)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



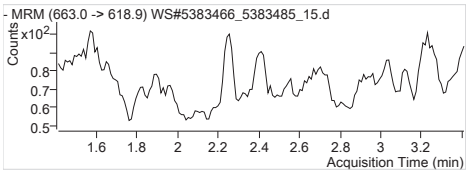



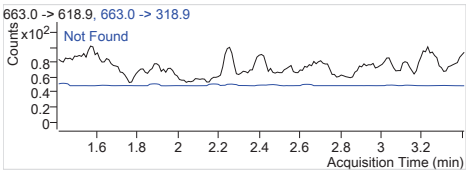

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



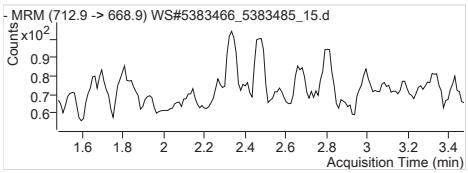



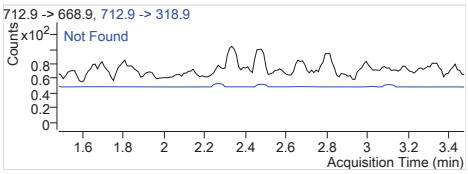

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.334)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



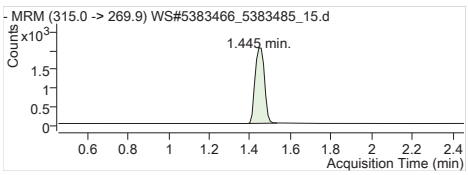



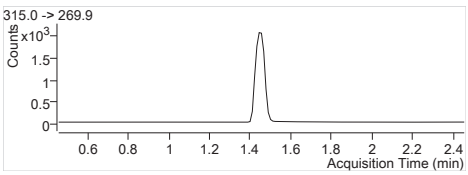

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.411)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



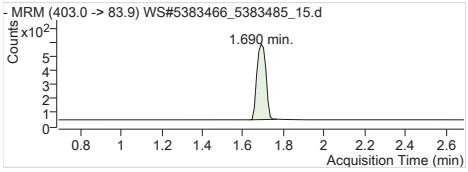



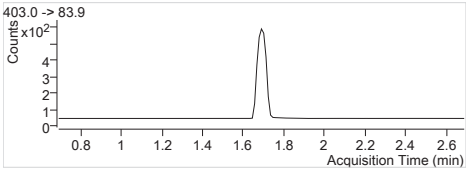

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.478)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



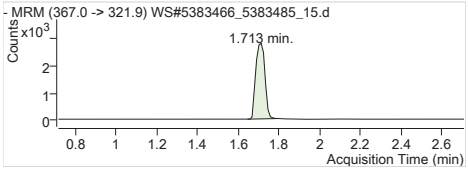



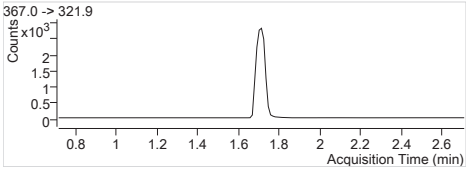

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.445 (1.456)
Calc. conc. 102.47 µg/L
Area ratio: 0.24277
Sample type: Sample



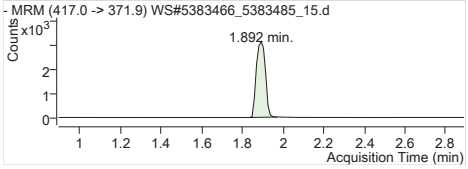



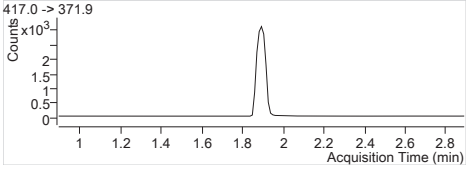

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 106.11 µg/L
Area ratio: 0.06166
Sample type: Sample



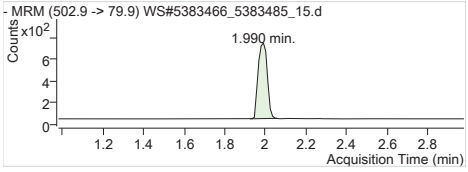



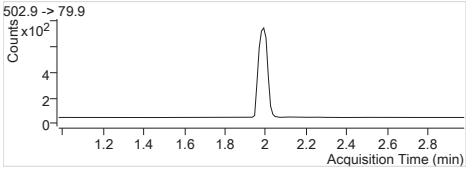

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 111.27 µg/L
Area ratio: 0.32507
Sample type: Sample



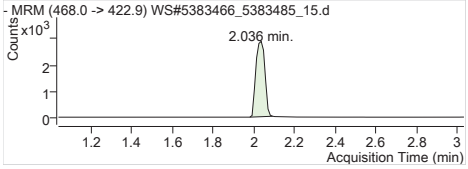



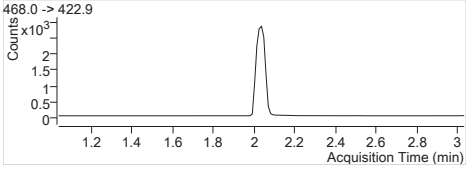

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 113.00 µg/L
Area ratio: 0.35469
Sample type: Sample



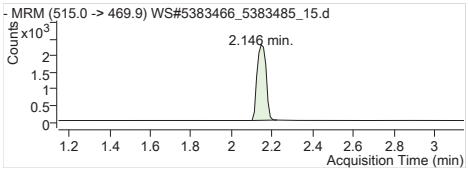



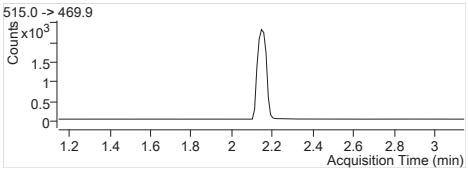

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.990 (1.979)
Calc. conc. 117.03 µg/L
Area ratio: 0.08078
Sample type: Sample



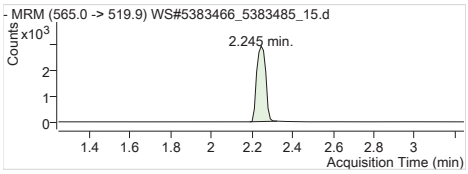



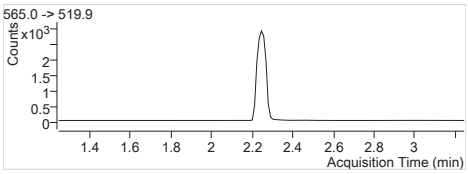

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 105.26 µg/L
Area ratio: 0.32555
Sample type: Sample



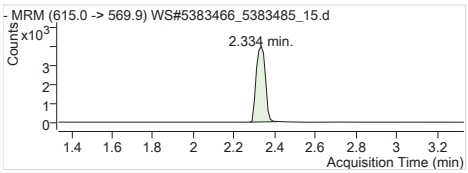



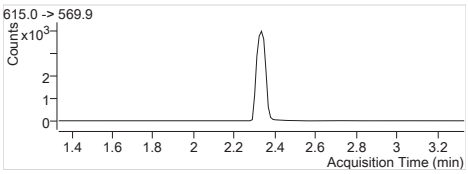

| | |
|---|---|
| **13C2-PFDA** | 515.0 -> 469.9 |
| RT (Exp. RT): | 2.146 (2.146) |
| Calc. conc. | 91.83 µg/L |
| Area ratio: | 0.18427 |
| Sample type: | Sample |



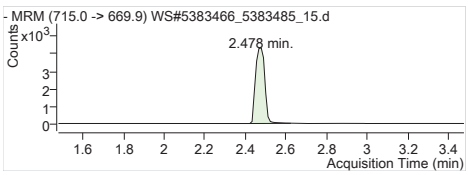



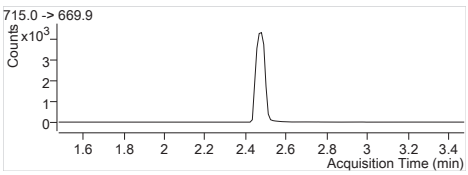

| | |
|---|---|
| **13C2-PFUnA** | 565.0 -> 519.9 |
| RT (Exp. RT): | 2.245 (2.245) |
| Calc. conc. | 95.12 µg/L |
| Area ratio: | 0.23008 |
| Sample type: | Sample |



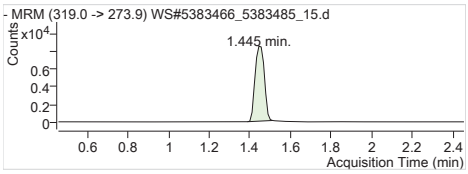



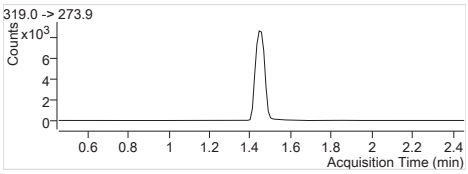

| | |
|---|---|
| **13C2-PFDoA** | 615.0 -> 569.9 |
| RT (Exp. RT): | 2.334 (2.334) |
| Calc. conc. | 100.20 µg/L |
| Area ratio: | 0.32255 |
| Sample type: | Sample |



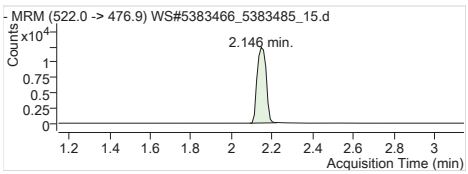



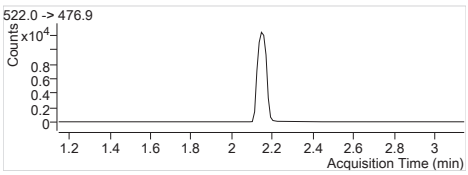

| | |
|---|---|
| **13C2-PFTeDA** | 715.0 -> 669.9 |
| RT (Exp. RT): | 2.478 (2.478) |
| Calc. conc. | 97.06 µg/L |
| Area ratio: | 0.35602 |
| Sample type: | Sample |




| | |
|---|---|
| **13C6-PFHxA** | 319.0 -> 273.9 |
| RT (Exp. RT): | 1.445 (1.456) |
| Calc. conc. | 2.27 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 2.146 (2.146) |
| Calc. conc. | 2.57 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

# Quantitation Results

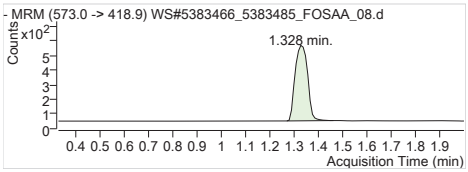
Agilent Technologies

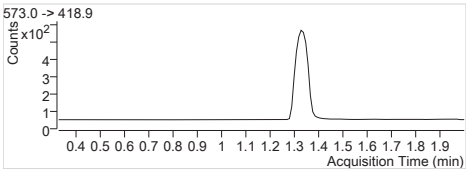
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_08.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A8 |
| **Acq. Date** | 2018/02/06 12:42:33 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

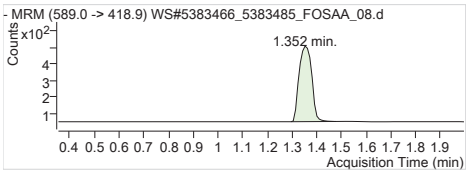
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1855 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1636 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 28601 | 0.96 | 1 µg/L | | |

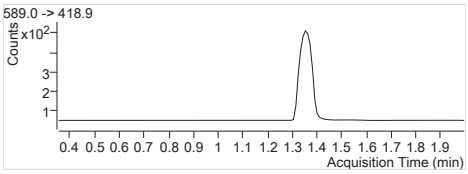
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1855 | 1.33 | - | 98.73 µg/L | - |
| D5-EtFOSAA | 1636 | 1.35 | - | 101.07 µg/L | - |
| 13C9-PFDA | 28656 | 0.96 | - | 2.44 µg/L | - |



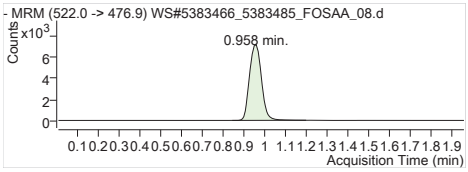



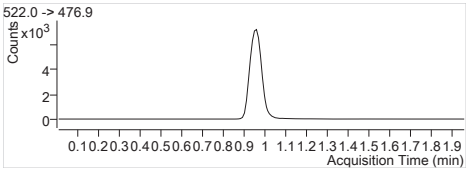

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Sample



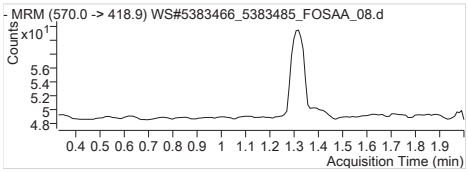



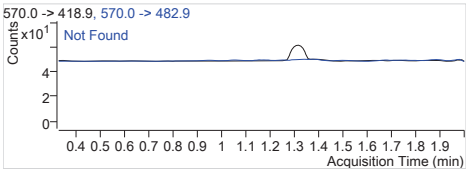

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Sample



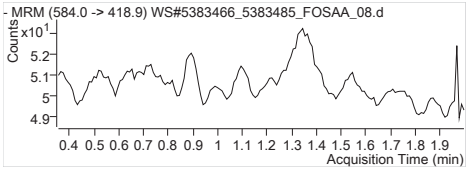



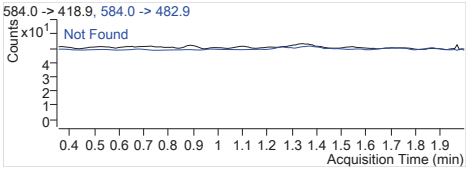

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.958 (0.958)
Concentration: 1 µg/L
Sample type: Sample



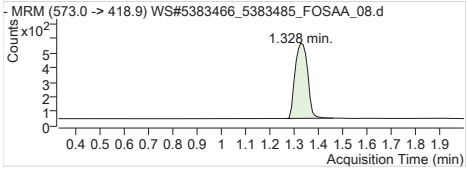



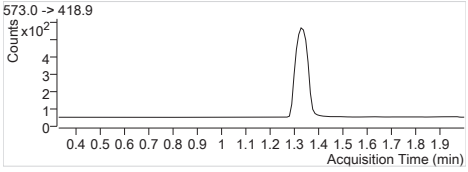

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.329)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



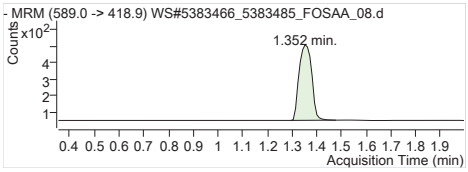



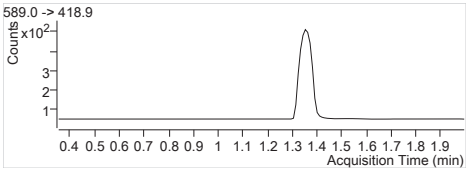

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.354)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



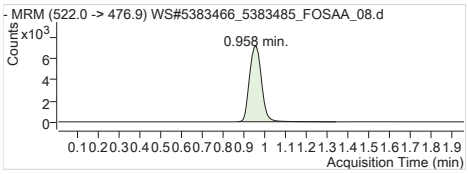



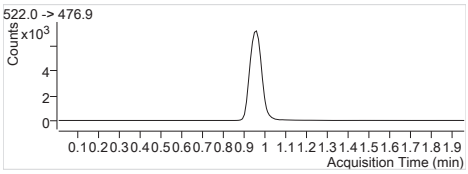

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 98.73 µg/L
Area ratio: 0.06486
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 101.07 µg/L |
| Area ratio: | 0.05720 |
| Sample type: | Sample |



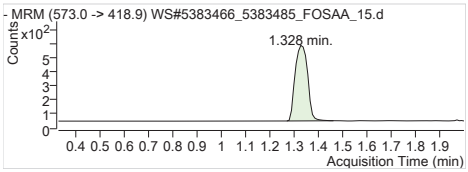

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.958 (0.958) |
| Calc. conc. | 2.44 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

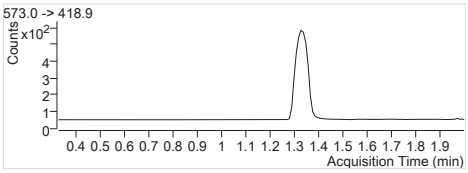
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_15.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A8 |
| **Acq. Date** | 2018/02/06 12:59:27 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

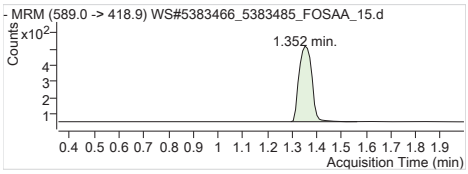
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1917 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1683 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 28610 | 0.96 | 1 µg/L | | |

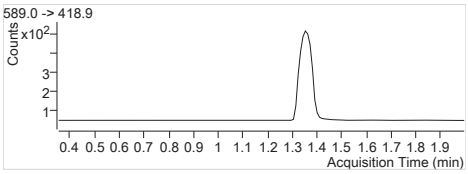
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1917 | 1.33 | - | 102.00 µg/L | - |
| D5-EtFOSAA | 1683 | 1.35 | - | 103.94 µg/L | - |
| 13C9-PFDA | 28486 | 0.96 | - | 2.43 µg/L | - |



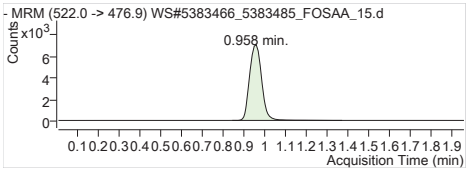



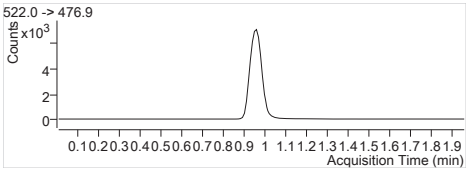

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Sample



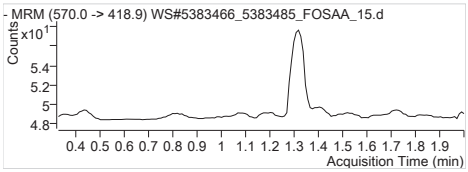



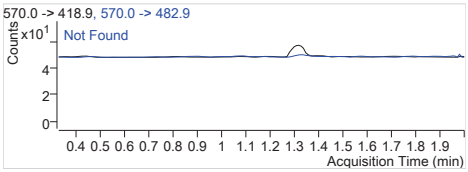

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Sample



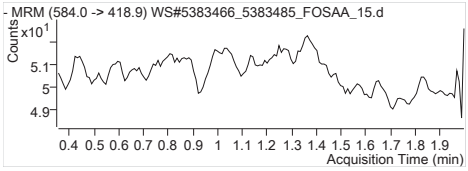



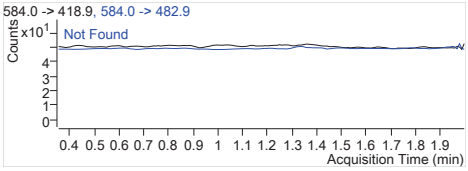

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.958 (0.958)
Concentration: 1 µg/L
Sample type: Sample



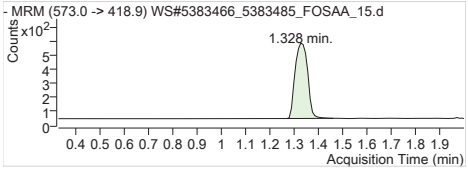



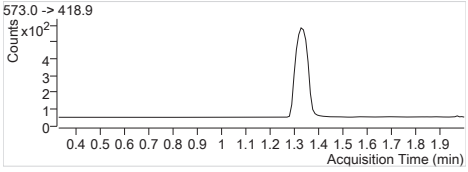

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.329)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



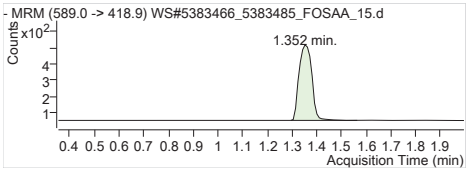



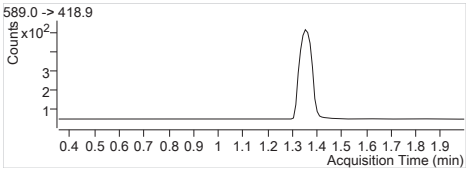

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.354)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



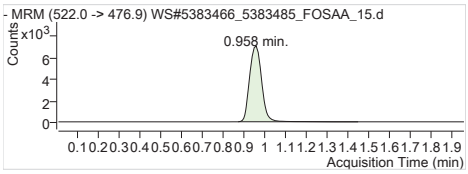



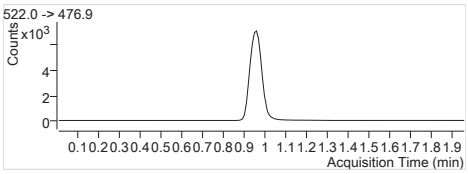

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 102.00 µg/L
Area ratio: 0.06700
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 103.94 µg/L |
| Area ratio: | 0.05883 |
| Sample type: | Sample |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.958 (0.958) |
| Calc. conc. | 2.43 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

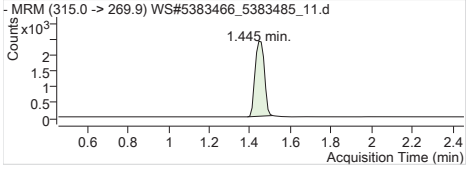
# Quantitation Results

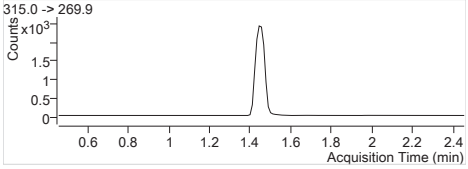
Agilent Technologies

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics | | |
| **Sample Name** | **5383466:BLANK** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_11.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B1 |
| **Acq. Date** | 2018/02/06 6:56:12 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

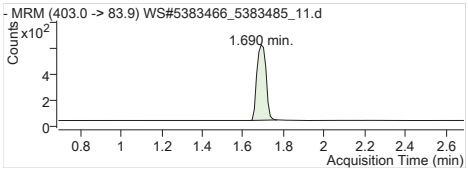
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 7513 | 1.44 | 1 µg/L | | |
| MPFHxS | 1798 | 1.69 | 1 µg/L | | |
| MPFHpA | 9539 | 1.71 | 1 µg/L | | |
| MPFOA | 10044 | 1.89 | 1 µg/L | | |
| MPFOS | 2153 | 1.99 | 1 µg/L | | |
| MPFNA | 9560 | 2.04 | 1 µg/L | | |
| MPFDA | 6823 | 2.15 | 1 µg/L | | |
| MPFUnA | 5340 | 2.25 | 1 µg/L | | |
| MPFDoA | 6041 | 2.33 | 1 µg/L | | |
| MPFTeDA | 7450 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 29859 | 1.44 | 1 µg/L | | |
| 13C9-PFDA IS | 39886 | 2.15 | 1 µg/L | | |

| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 7513 | 1.44 | - | 106.20 µg/L | - |
| 18O2-PFHxS | 1798 | 1.69 | - | 103.63 µg/L | - |
| 13C4-PFHpA | 9539 | 1.71 | - | 109.35 µg/L | - |
| 13C4-PFOA | 10044 | 1.89 | - | 107.16 µg/L | - |
| 13C4-PFOS | 2153 | 1.99 | - | 104.46 µg/L | - |
| 13C5-PFNA | 9559 | 2.04 | - | 103.51 µg/L | - |
| 13C2-PFDA | 6767 | 2.15 | - | 84.55 µg/L | - |
| 13C2-PFUnA | 5340 | 2.25 | - | 55.35 µg/L | - |
| 13C2-PFDoA | 6041 | 2.33 | - | 47.05 µg/L | - |
| 13C2-PFTeDA | 7595 | 2.48 | - | 51.92 µg/L | - |
| 13C6-PFHxA | 29859 | 1.44 | - | 2.52 µg/L | - |
| 13C9-PFDA | 39886 | 2.15 | - | 2.68 µg/L | - |

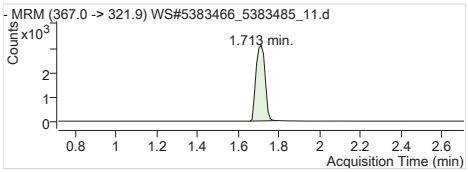


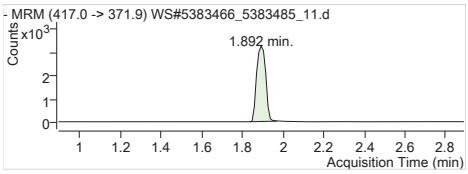

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.445 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



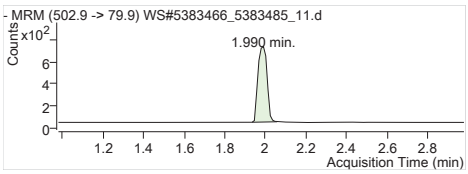

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



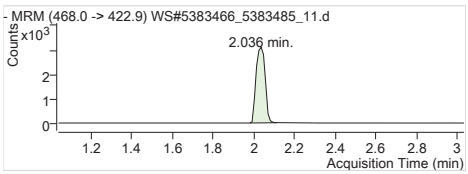

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Sample



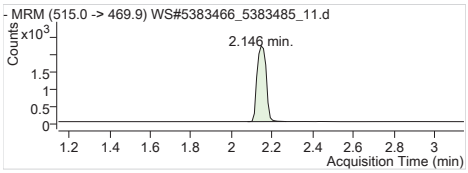

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Sample



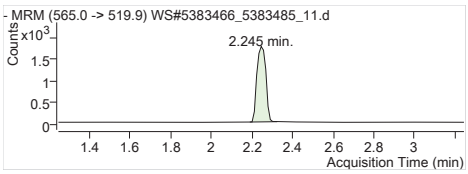

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Sample



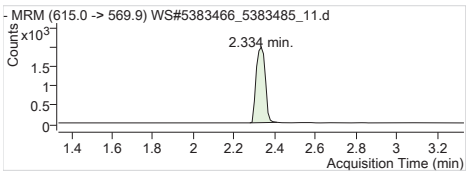

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Sample



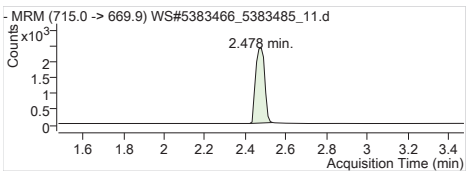

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



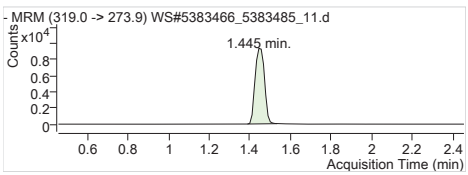

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



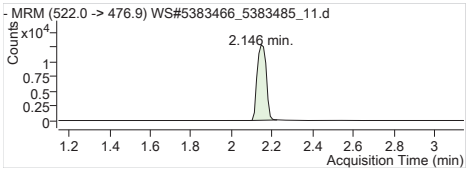

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Sample

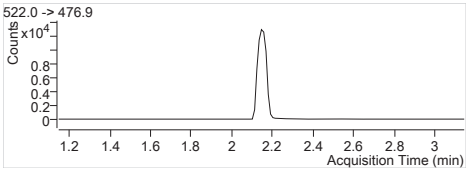



**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Sample

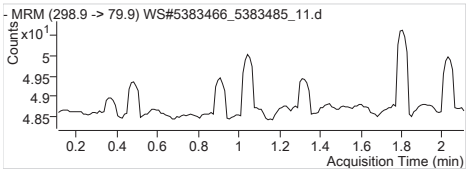


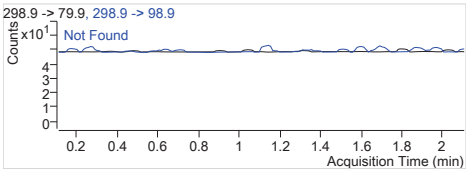

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.445 (1.456)
Concentration: 1 µg/L
Sample type: Sample



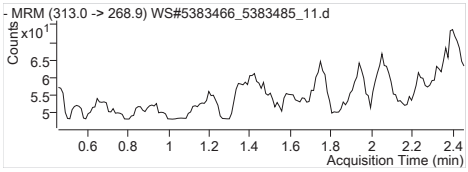



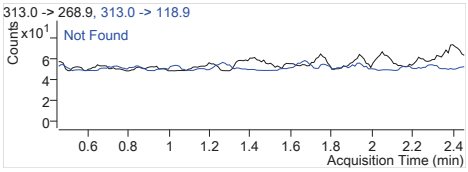

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



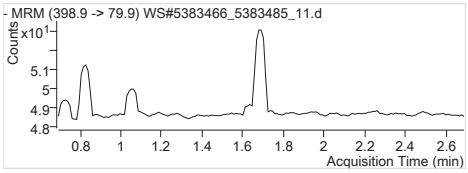



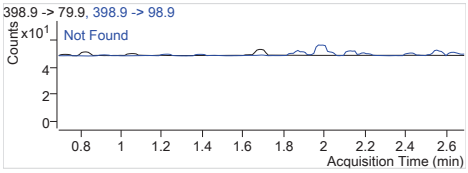

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.109)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



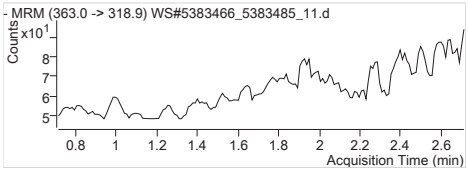



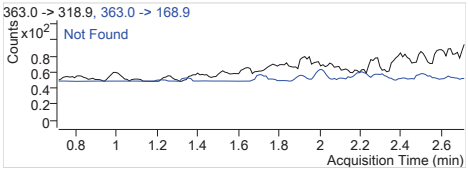

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.456)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



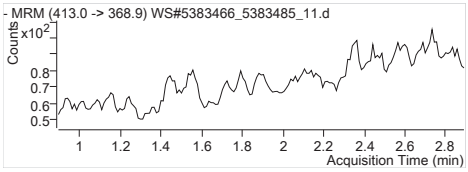



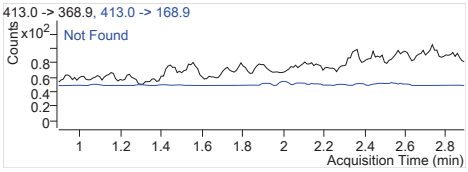

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



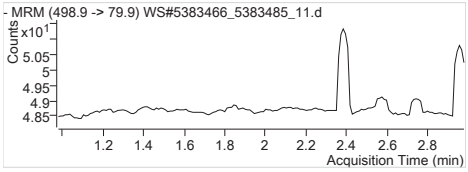



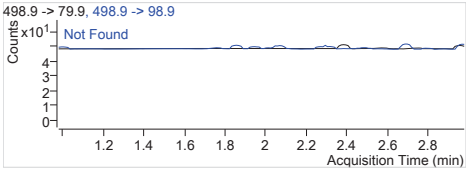

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.713)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



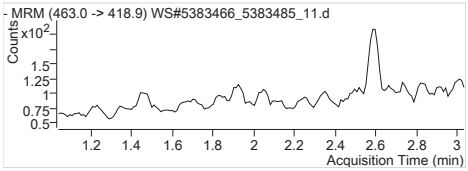



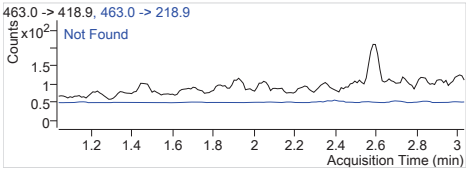

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.892)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



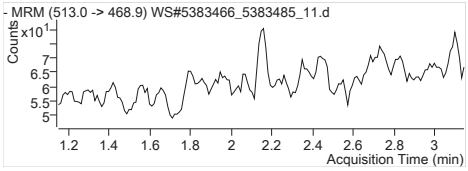



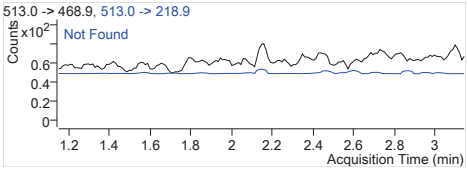

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



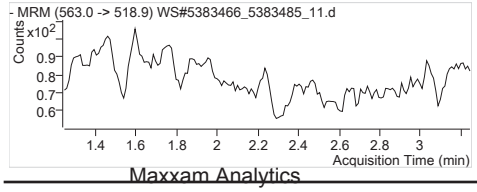



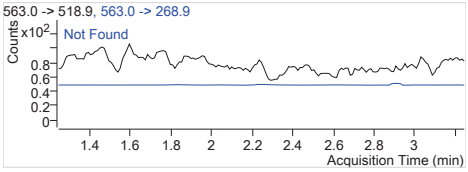

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.036)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



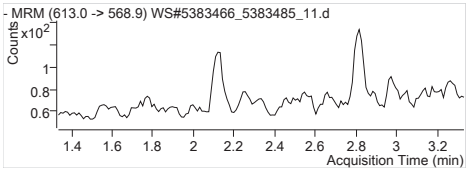



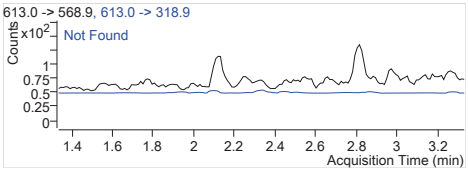

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.147)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



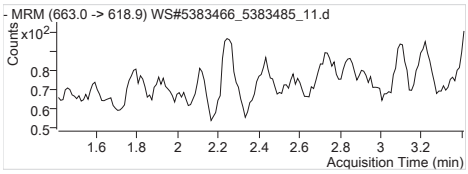



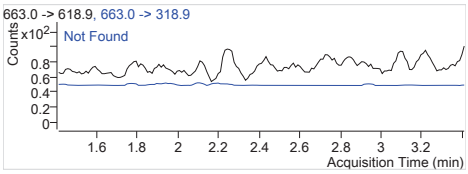

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



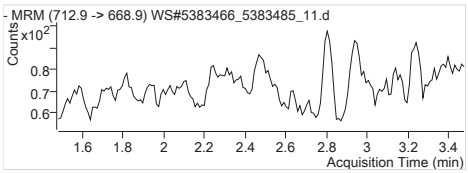



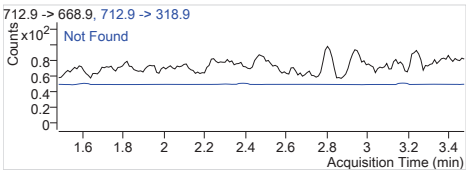

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.334) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



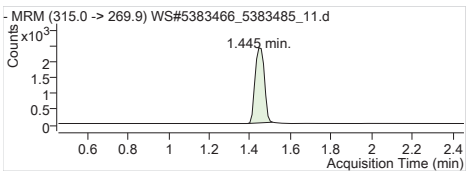



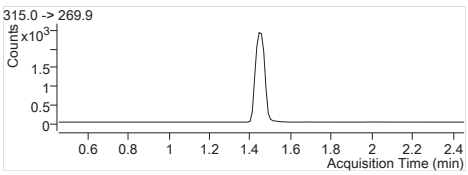

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.411) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



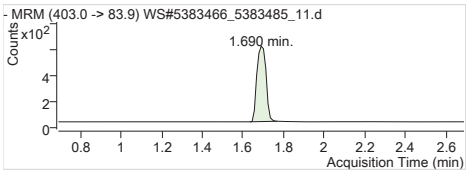



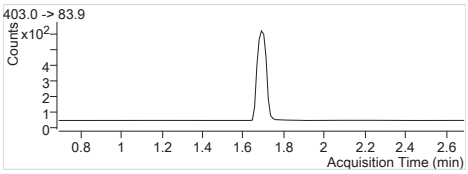

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.478) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



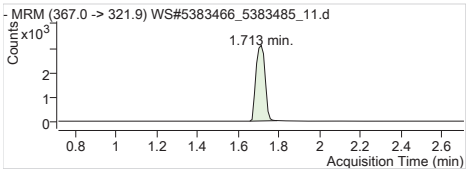



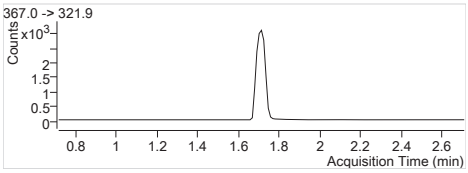

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.445 (1.456) |
| Calc. conc. | 106.20 µg/L |
| Area ratio: | 0.25162 |
| Sample type: | Sample |



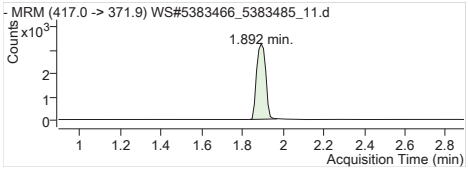



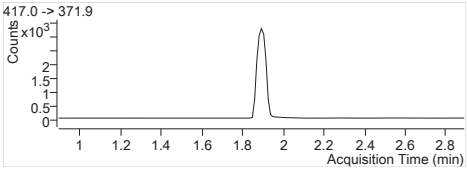

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 103.63 µg/L |
| Area ratio: | 0.06022 |
| Sample type: | Sample |



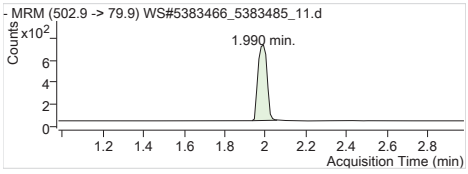



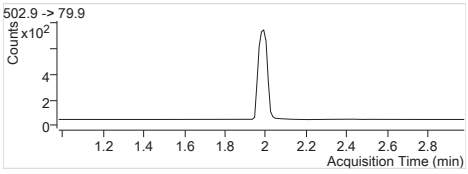

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.713 (1.713) |
| Calc. conc. | 109.35 µg/L |
| Area ratio: | 0.31947 |
| Sample type: | Sample |



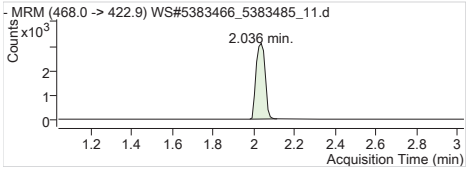



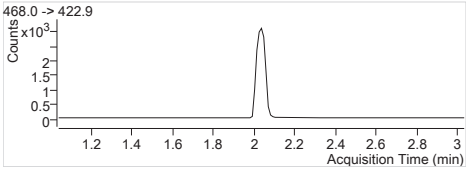

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.892 (1.892) |
| Calc. conc. | 107.16 µg/L |
| Area ratio: | 0.33638 |
| Sample type: | Sample |



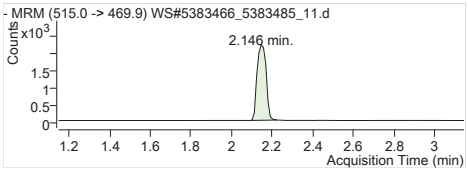



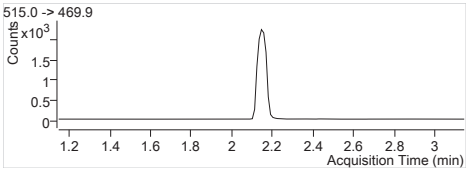

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.990 (1.979) |
| Calc. conc. | 104.46 µg/L |
| Area ratio: | 0.07211 |
| Sample type: | Sample |



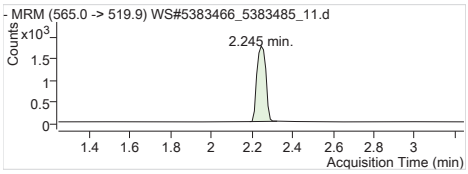



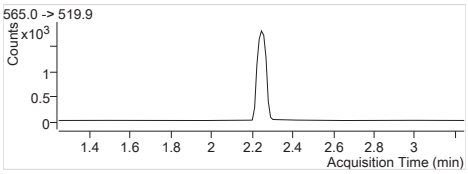

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.036 (2.036) |
| Calc. conc. | 103.51 µg/L |
| Area ratio: | 0.32014 |
| Sample type: | Sample |



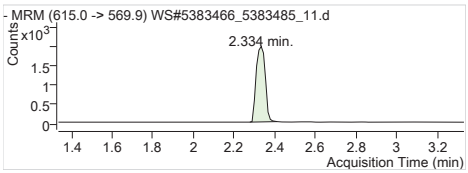



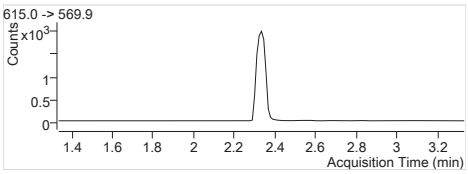

| | |
|---|---|
| **13C2-PFDA** | 515.0 -> 469.9 |
| RT (Exp. RT): | 2.146 (2.146) |
| Calc. conc. | 84.55 µg/L |
| Area ratio: | 0.16966 |
| Sample type: | Sample |



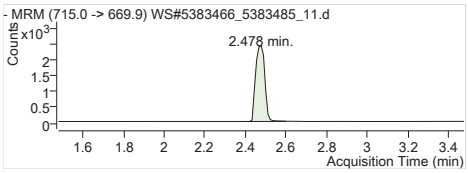



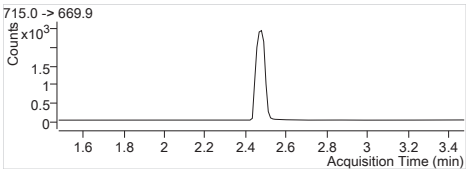

| | |
|---|---|
| **13C2-PFUnA** | 565.0 -> 519.9 |
| RT (Exp. RT): | 2.245 (2.245) |
| Calc. conc. | 55.35 µg/L |
| Area ratio: | 0.13388 |
| Sample type: | Sample |



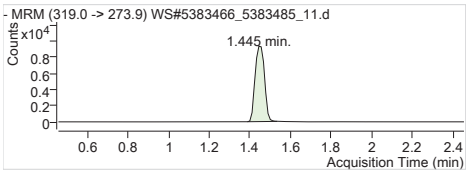



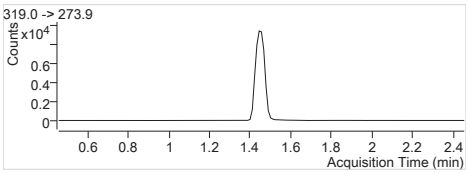

| | |
|---|---|
| **13C2-PFDoA** | 615.0 -> 569.9 |
| RT (Exp. RT): | 2.334 (2.334) |
| Calc. conc. | 47.05 µg/L |
| Area ratio: | 0.15146 |
| Sample type: | Sample |



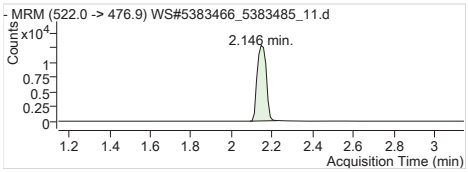



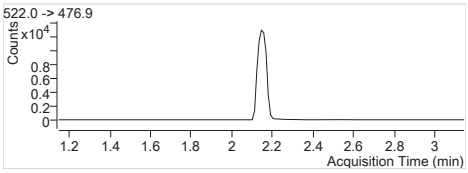

| | |
|---|---|
| **13C2-PFTeDA** | 715.0 -> 669.9 |
| RT (Exp. RT): | 2.478 (2.478) |
| Calc. conc. | 51.92 µg/L |
| Area ratio: | 0.19042 |
| Sample type: | Sample |




| | |
|---|---|
| **13C6-PFHxA** | 319.0 -> 273.9 |
| RT (Exp. RT): | 1.445 (1.456) |
| Calc. conc. | 2.52 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 2.146 (2.146) |
| Calc. conc. | 2.68 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

# Quantitation Results

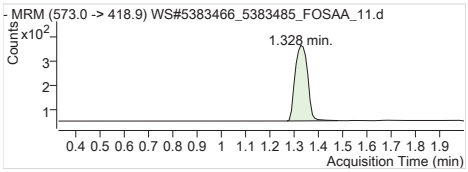
Agilent Technologies

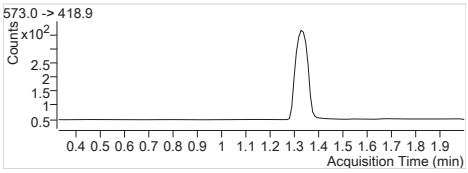
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:BLANK** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_11.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B1 |
| **Acq. Date** | 2018/02/06 12:49:48 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

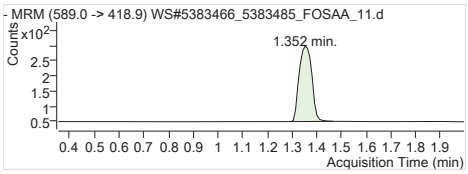
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1134 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 887 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 30346 | 0.92 | 1 µg/L | | |

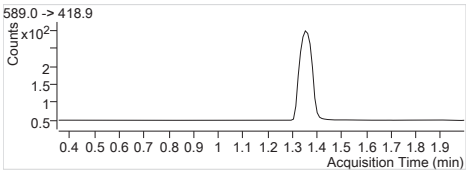
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1134 | 1.33 | - | 56.89 µg/L | - |
| D5-EtFOSAA | 887 | 1.35 | - | 51.65 µg/L | - |
| 13C9-PFDA | 30305 | 0.92 | - | 2.58 µg/L | - |



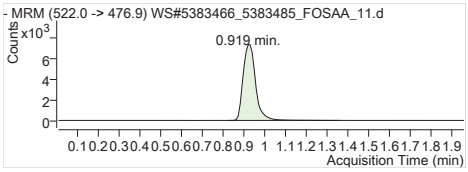



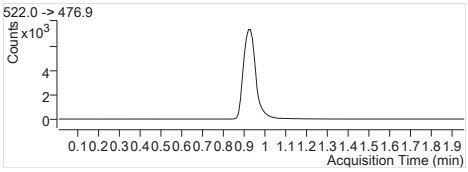

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Sample



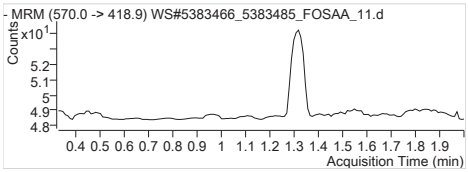



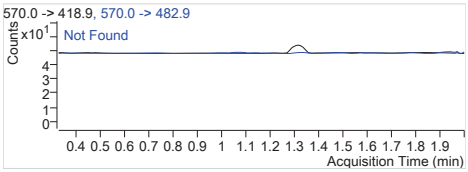

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Sample



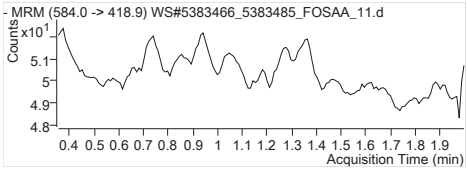



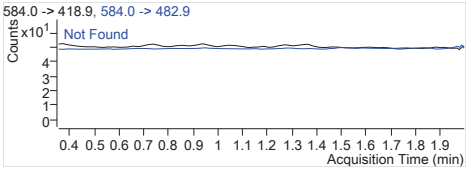

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.919 (0.958)
Concentration: 1 µg/L
Sample type: Sample



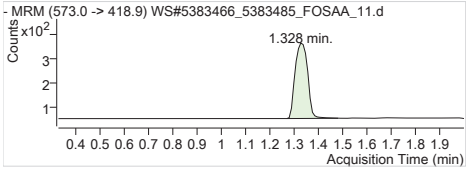



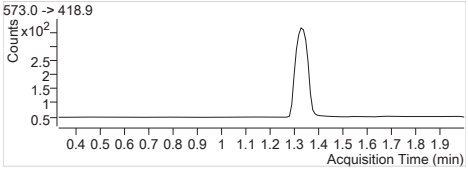

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.329)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



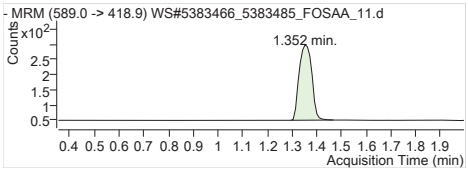



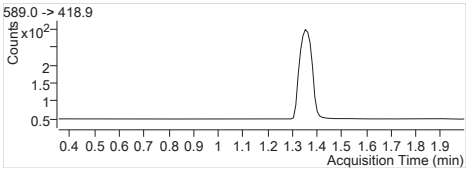

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.354)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



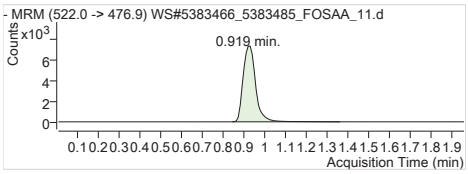



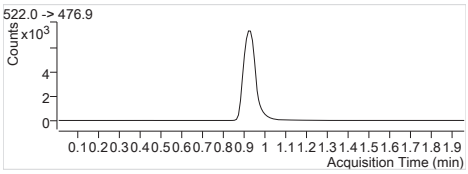

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 56.89 µg/L
Area ratio: 0.03737
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 51.65 µg/L |
| Area ratio: | 0.02923 |
| Sample type: | Sample |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.919 (0.958) |
| Calc. conc. | 2.58 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

# Quantitation Results

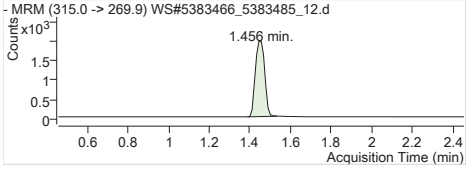
Agilent Technologies

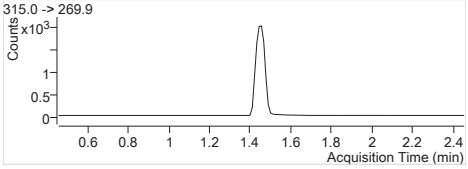
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:SPIKE** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_12.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B2 |
| **Acq. Date** | 2018/02/06 7:01:12 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

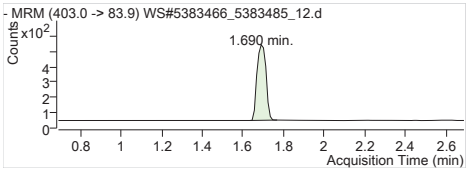
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6262 | 1.46 | 1 µg/L | | |
| MPFHxS | 1522 | 1.69 | 1 µg/L | | |
| MPFHpA | 7915 | 1.71 | 1 µg/L | | |
| MPFOA | 8277 | 1.89 | 1 µg/L | | |
| MPFOS | 1787 | 1.99 | 1 µg/L | | |
| MPFNA | 8834 | 2.04 | 1 µg/L | | |
| MPFDA | 7730 | 2.15 | 1 µg/L | | |
| MPFUnA | 10955 | 2.25 | 1 µg/L | | |
| MPFDoA | 14422 | 2.33 | 1 µg/L | | |
| MPFTeDA | 14467 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 29307 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 37003 | 2.15 | 1 µg/L | | |

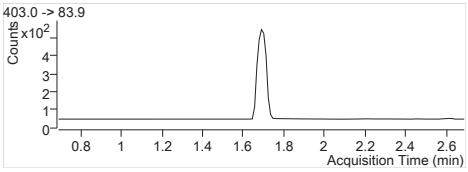
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 13870 | 1.11 | 20.80 | 0.50 µg/L | 99.84 |
| PFHxA 1 | 45963 | 1.46 | 20.80 | 0.44 µg/L | 88.65 |
| PFHxS 1 | 13611 | 1.69 | 20.80 | 0.49 µg/L | 97.36 |
| PFHpA 1 | 64423 | 1.71 | 20.80 | 0.47 µg/L | 93.76 |
| PFOA 1 | 70895 | 1.89 | 20.80 | 0.49 µg/L | 97.35 |
| PFOS 1 | 12899 | 1.98 | 20.80 | 0.50 µg/L | 101.01 |
| PFNA 1 | 63624 | 2.04 | 20.80 | 0.46 µg/L | 92.82 |
| PFDA 1 | 63169 | 2.15 | 20.80 | 0.42 µg/L | 83.63 |
| PFUnA 1 | 69678 | 2.25 | 20.80 | 0.36 µg/L | 72.20 |
| PFDoA 1 | 76068 | 2.33 | 20.80 | 0.31 µg/L | 62.28 |
| PFTrDA 1 | 81979 | 2.41 | 20.80 | 0.33 µg/L | 65.95 |
| PFTeDA 1 | 70218 | 2.48 | 20.80 | 0.34 µg/L | 67.85 |
| 13C2-PFHxA | 6262 | 1.46 | 100.00 | 90.18 µg/L | 90.18 |
| 18O2-PFHxS | 1522 | 1.69 | 100.00 | 89.37 µg/L | 89.37 |
| 13C4-PFHpA | 7915 | 1.71 | 100.00 | 92.44 µg/L | 92.44 |
| 13C4-PFOA | 8277 | 1.89 | 100.00 | 89.97 µg/L | 89.97 |
| 13C4-PFOS | 1787 | 1.99 | 100.00 | 88.34 µg/L | 88.34 |
| 13C5-PFNA | 8835 | 2.04 | 100.00 | 97.47 µg/L | 97.47 |
| 13C2-PFDA | 7629 | 2.15 | 100.00 | 102.74 µg/L | 102.74 |
| 13C2-PFUnA | 10955 | 2.25 | 100.00 | 122.40 µg/L | 122.40 |
| 13C2-PFDoA | 14422 | 2.33 | 100.00 | 121.07 µg/L | 121.07 |
| 13C2-PFTeDA | 14886 | 2.48 | 100.00 | 109.68 µg/L | 109.68 |
| 13C6-PFHxA | 29307 | 1.46 | 100.00 | 2.47 µg/L | 103.09 |
| 13C9-PFDA | 37003 | 2.15 | 100.00 | 2.48 µg/L | 103.44 |



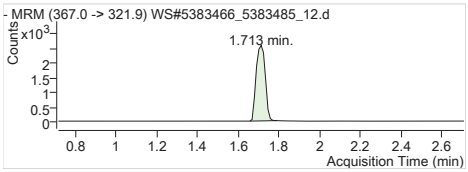



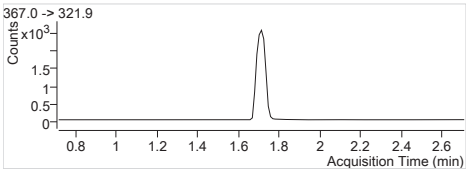

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | QC |



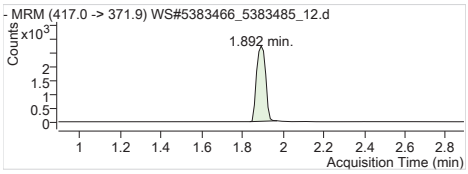



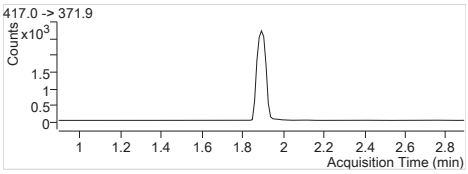

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: QC



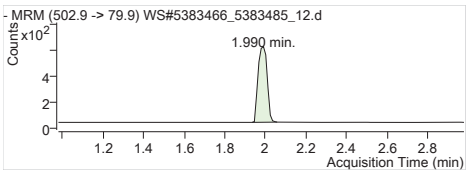



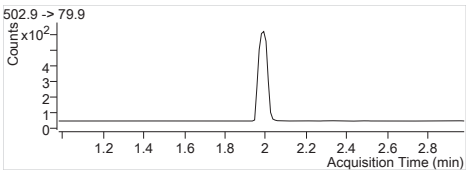

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: QC



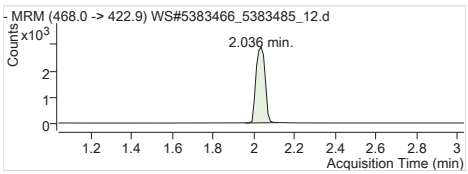



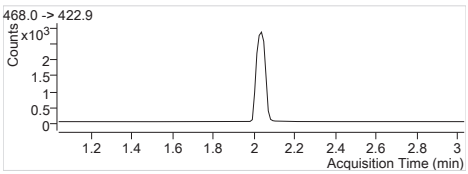

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: QC



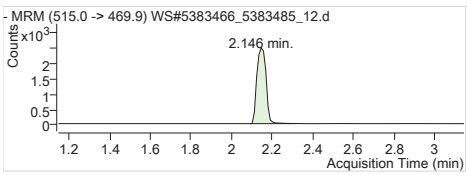



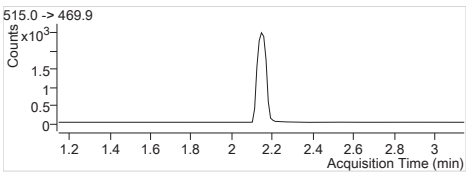

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: QC



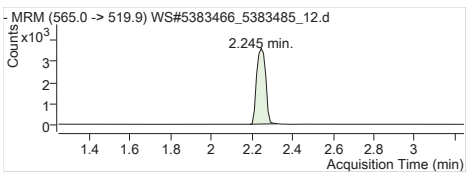



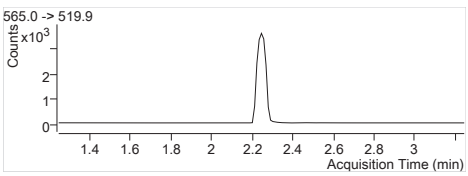

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: QC



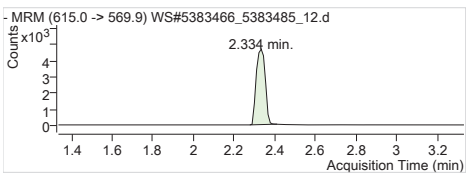



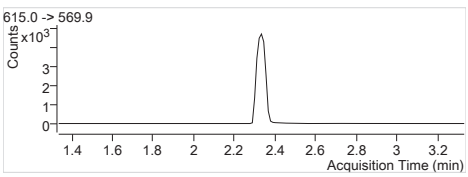

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: QC



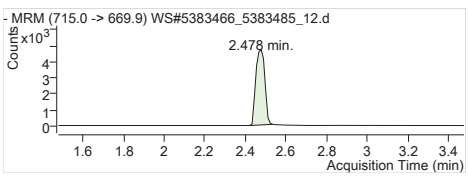



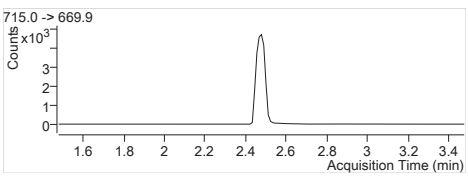

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: QC



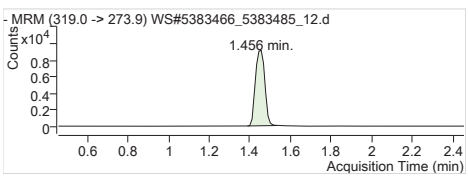



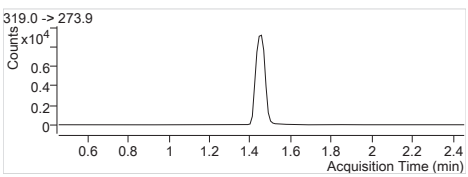

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: QC



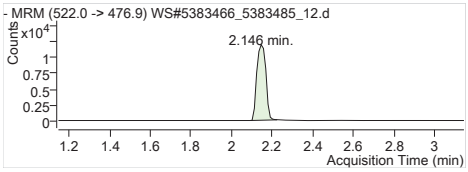



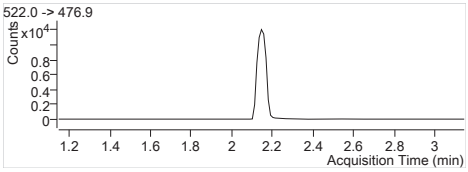

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: QC



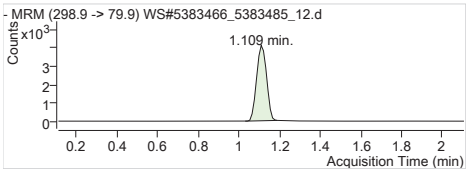



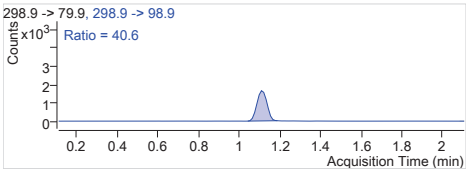

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: QC



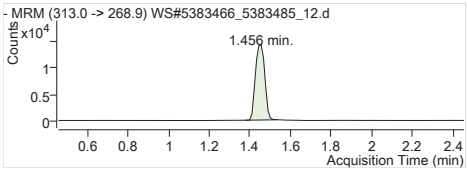



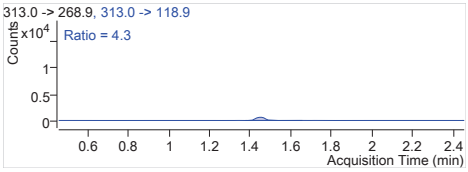

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: QC



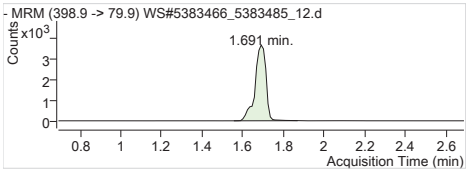



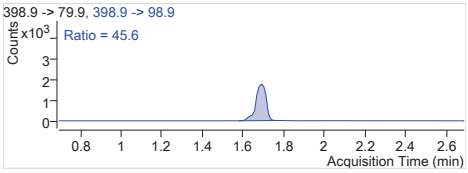

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 0.50 µg/L
Area ratio: 9.11301
Sample type: QC



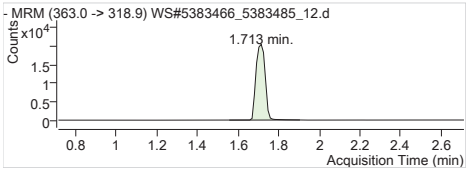



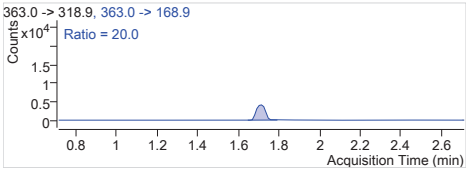

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 0.44 µg/L
Area ratio: 7.33999
Sample type: QC



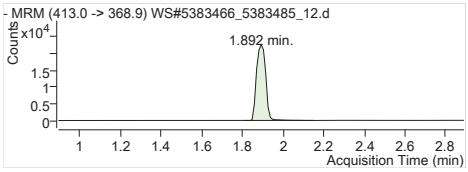



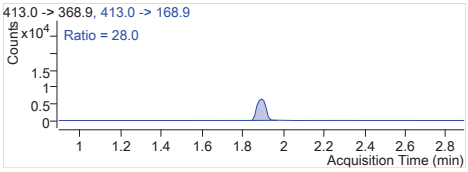

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.49 µg/L
Area ratio: 8.94284
Sample type: QC



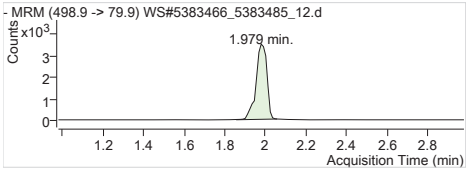



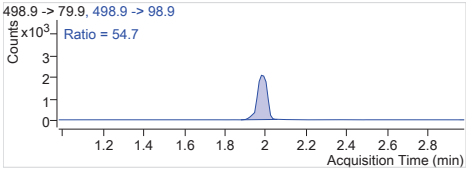

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 0.47 µg/L
Area ratio: 8.13936
Sample type: QC



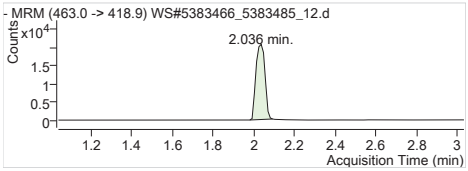



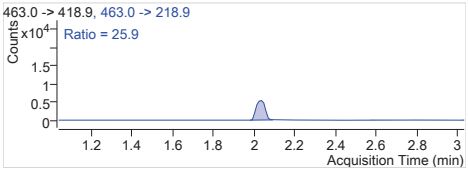

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 0.49 µg/L
Area ratio: 8.56530
Sample type: QC



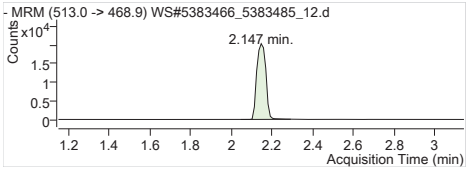



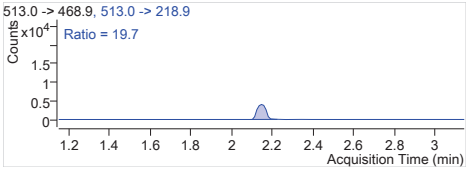

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 0.50 µg/L
Area ratio: 7.21824
Sample type: QC



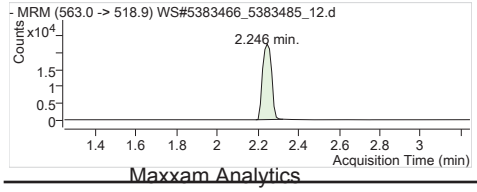



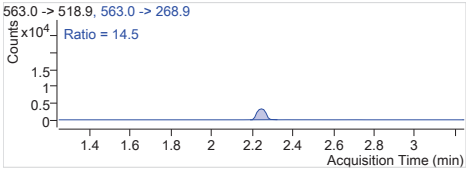

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 0.46 µg/L
Area ratio: 7.20217
Sample type: QC



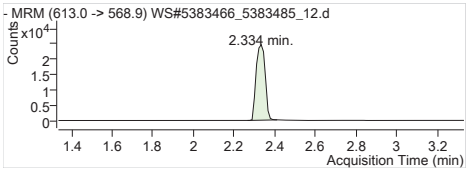



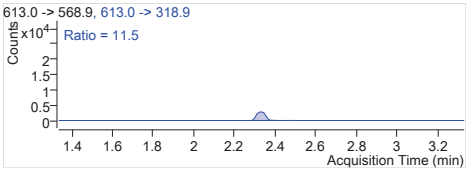

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.147)
Calc. conc. 0.42 µg/L
Area ratio: 8.17193
Sample type: QC



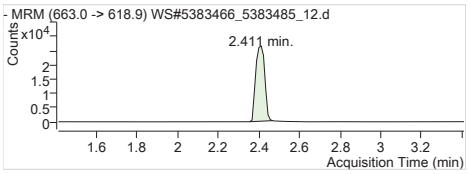



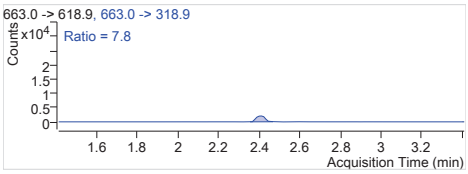

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 0.36 µg/L
Area ratio: 6.36038
Sample type: QC



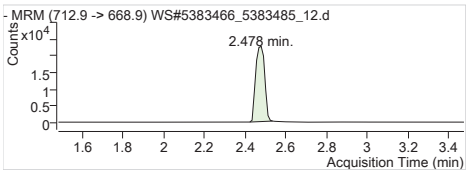



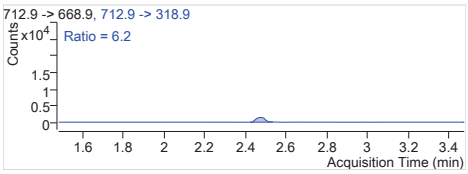

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.334 (2.334) |
| Calc. conc. | 0.31 µg/L |
| Area ratio: | 5.27444 |
| Sample type: | QC |



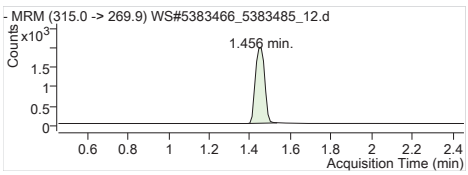



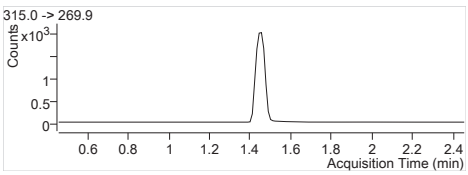

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.411 (2.411) |
| Calc. conc. | 0.33 µg/L |
| Area ratio: | 5.66662 |
| Sample type: | QC |



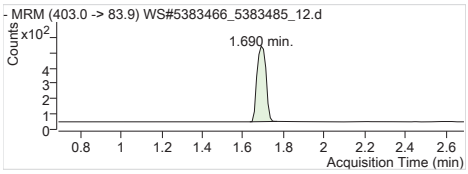



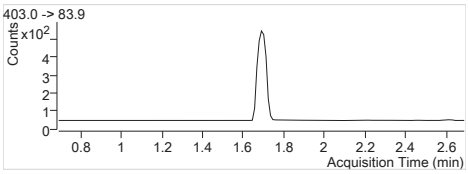

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.478 (2.478) |
| Calc. conc. | 0.34 µg/L |
| Area ratio: | 4.85367 |
| Sample type: | QC |



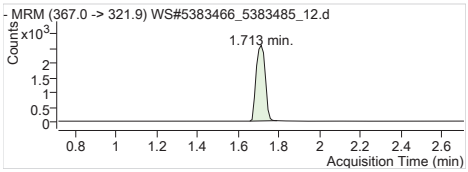



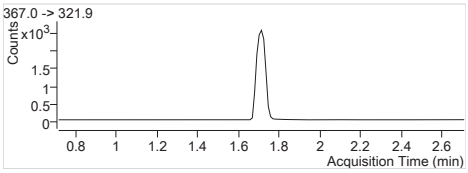

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.456 (1.456) |
| Calc. conc. | 90.18 µg/L |
| Area ratio: | 0.21367 |
| Sample type: | QC |



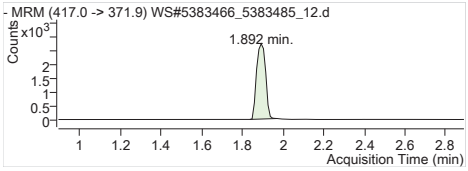



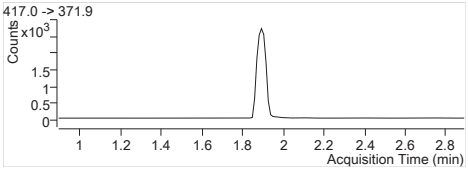

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 89.37 µg/L |
| Area ratio: | 0.05193 |
| Sample type: | QC |



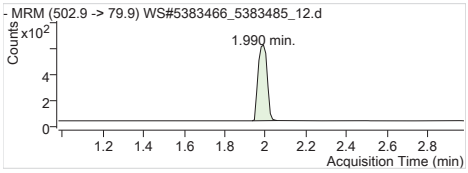



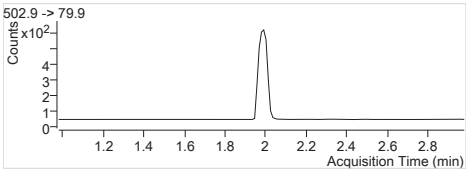

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.713 (1.713) |
| Calc. conc. | 92.44 µg/L |
| Area ratio: | 0.27007 |
| Sample type: | QC |



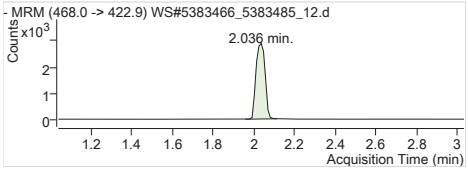



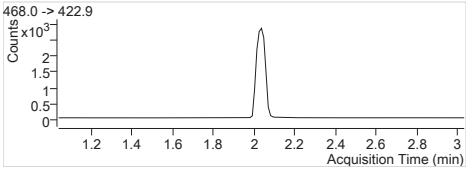

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.892 (1.892) |
| Calc. conc. | 89.97 µg/L |
| Area ratio: | 0.28242 |
| Sample type: | QC |



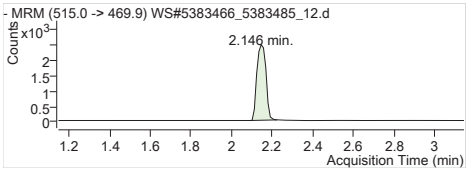



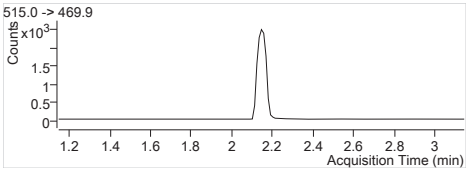

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.990 (1.979) |
| Calc. conc. | 88.34 µg/L |
| Area ratio: | 0.06098 |
| Sample type: | QC |



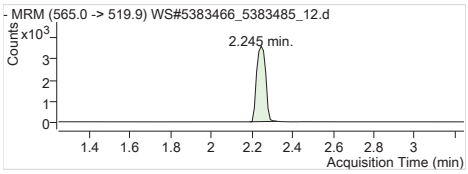



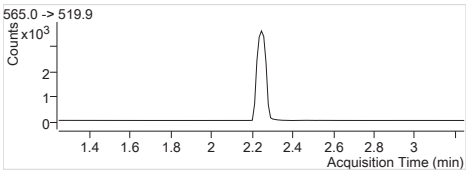

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.036 (2.036) |
| Calc. conc. | 97.47 µg/L |
| Area ratio: | 0.30146 |
| Sample type: | QC |



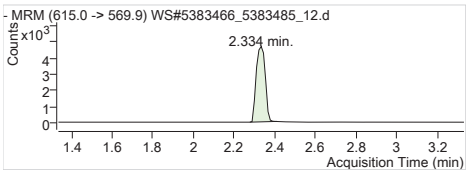



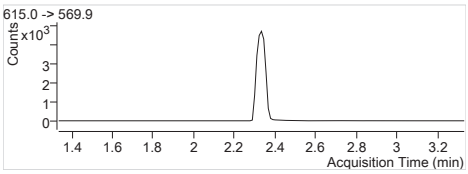

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 102.74 µg/L
Area ratio: 0.20617
Sample type: QC



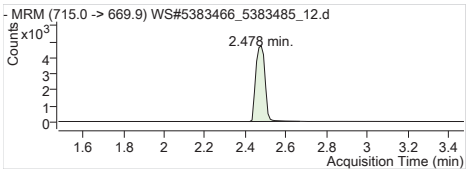



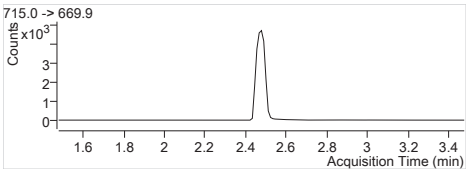

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 122.40 µg/L
Area ratio: 0.29606
Sample type: QC



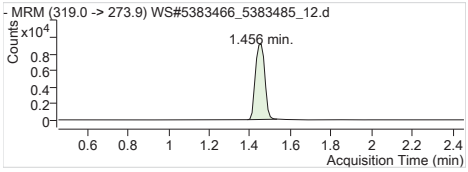



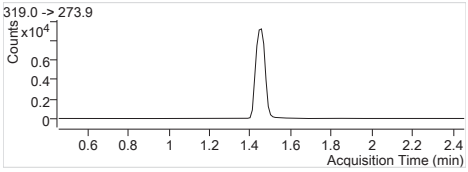

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 121.07 µg/L
Area ratio: 0.38975
Sample type: QC



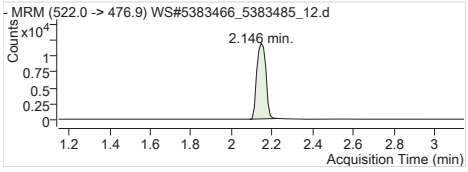



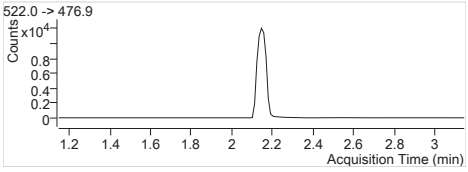

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 109.68 µg/L
Area ratio: 0.40229
Sample type: QC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 2.47 µg/L
Area ratio: 0
Sample type: QC



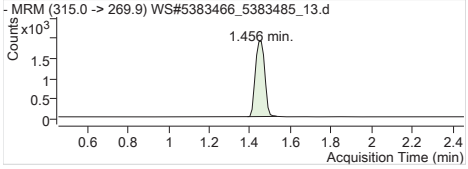

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.48 µg/L
Area ratio: 0
Sample type: QC

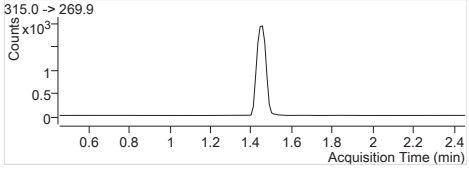
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:MTRX SPK** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_13.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B3 |
| **Acq. Date** | 2018/02/06 7:06:12 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | FZA786 | | |

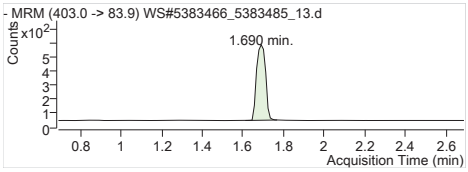
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6025 | 1.46 | 1 µg/L | | |
| MPFHxS | 1666 | 1.69 | 1 µg/L | | |
| MPFHpA | 8269 | 1.71 | 1 µg/L | | |
| MPFOA | 8398 | 1.89 | 1 µg/L | | |
| MPFOS | 1923 | 1.99 | 1 µg/L | | |
| MPFNA | 8620 | 2.04 | 1 µg/L | | |
| MPFDA | 6477 | 2.15 | 1 µg/L | | |
| MPFUnA | 7902 | 2.25 | 1 µg/L | | |
| MPFDoA | 10271 | 2.33 | 1 µg/L | | |
| MPFTeDA | 11131 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 27642 | 1.44 | 1 µg/L | | |
| 13C9-PFDA IS | 37506 | 2.15 | 1 µg/L | | |

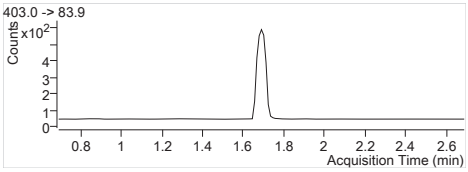
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 12974 | 1.11 | 20.80 | 0.43 µg/L | 85.42 |
| PFHxA 1 | 49505 | 1.45 | 20.80 | 0.49 µg/L | 99.05 |
| PFHxS 1 | 14230 | 1.69 | 20.80 | 0.46 µg/L | 93.04 |
| PFHpA 1 | 65968 | 1.71 | 20.80 | 0.46 µg/L | 91.92 |
| PFOA 1 | 91754 | 1.89 | 20.80 | 0.62 µg/L | 123.94 |
| PFOS 1 | 15388 | 1.98 | 20.80 | 0.56 µg/L | 111.95 |
| PFNA 1 | 62600 | 2.04 | 20.80 | 0.47 µg/L | 93.58 |
| PFDA 1 | 64961 | 2.15 | 20.80 | 0.51 µg/L | 102.54 |
| PFUnA 1 | 67251 | 2.25 | 20.80 | 0.48 µg/L | 96.62 |
| PFDoA 1 | 79333 | 2.33 | 20.80 | 0.45 µg/L | 90.93 |
| PFTrDA 1 | 92323 | 2.41 | 20.80 | 0.48 µg/L | 96.45 |
| PFTeDA 1 | 76552 | 2.48 | 20.80 | 0.48 µg/L | 96.05 |
| 13C2-PFHxA | 6025 | 1.46 | 100.00 | 92.00 µg/L | 92.00 |
| 18O2-PFHxS | 1666 | 1.69 | 100.00 | 103.72 µg/L | 103.72 |
| 13C4-PFHpA | 8269 | 1.71 | 100.00 | 102.40 µg/L | 102.40 |
| 13C4-PFOA | 8398 | 1.89 | 100.00 | 96.79 µg/L | 96.79 |
| 13C4-PFOS | 1923 | 1.99 | 100.00 | 100.79 µg/L | 100.79 |
| 13C5-PFNA | 8553 | 2.04 | 100.00 | 100.04 µg/L | 100.04 |
| 13C2-PFDA | 6396 | 2.15 | 100.00 | 84.98 µg/L | 84.98 |
| 13C2-PFUnA | 7902 | 2.25 | 100.00 | 87.10 µg/L | 87.10 |
| 13C2-PFDoA | 10271 | 2.33 | 100.00 | 85.07 µg/L | 85.07 |
| 13C2-PFTeDA | 11300 | 2.48 | 100.00 | 82.14 µg/L | 82.14 |
| 13C6-PFHxA | 27642 | 1.44 | 100.00 | 2.33 µg/L | 97.23 |
| 13C9-PFDA | 37506 | 2.15 | 100.00 | 2.52 µg/L | 104.84 |



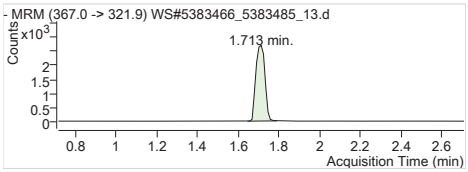



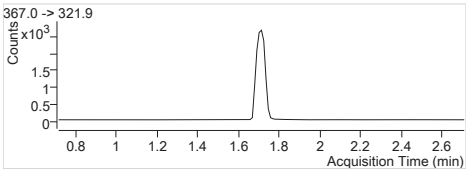

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | QC |



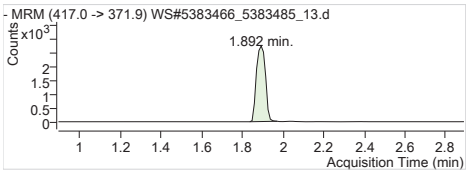



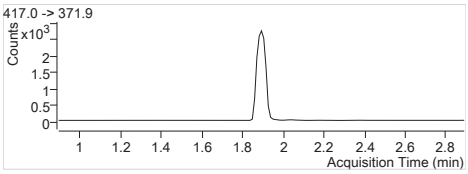

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: QC



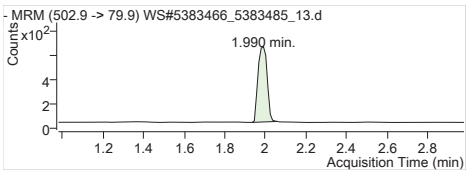



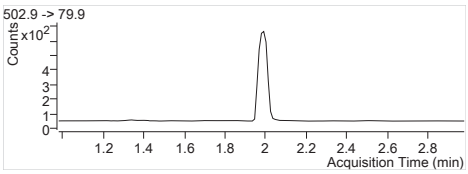

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: QC



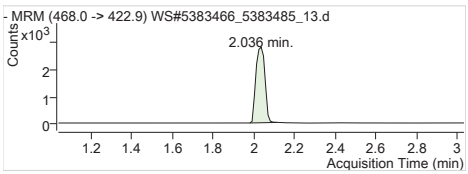



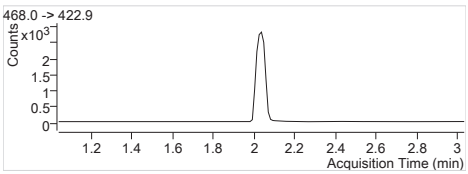

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: QC



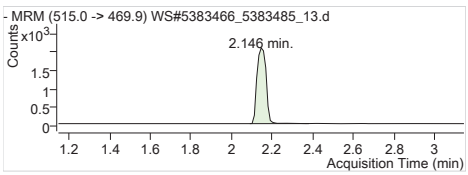



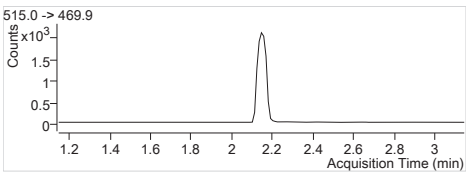

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: QC



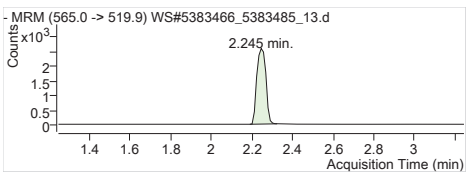



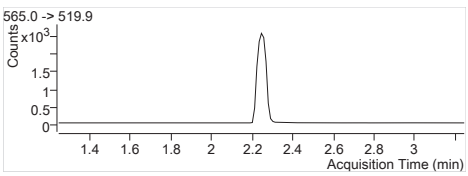

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: QC



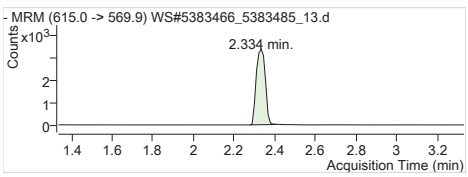



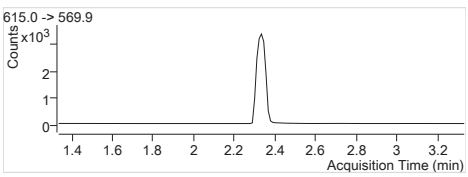

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: QC



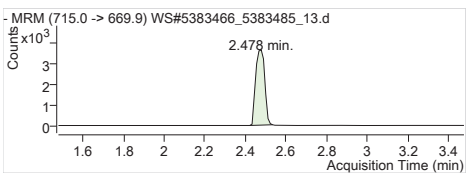



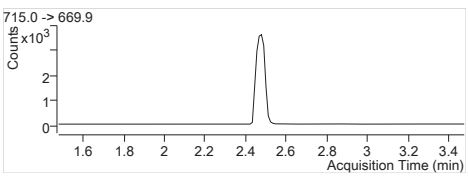

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: QC



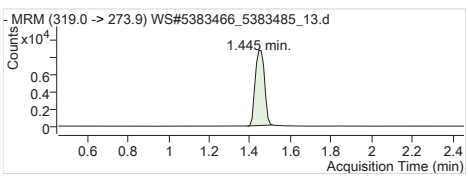



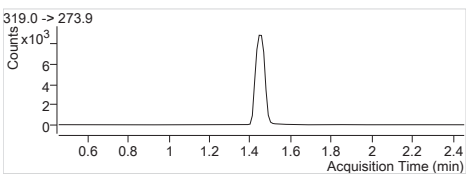

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: QC



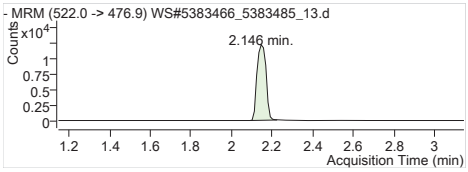



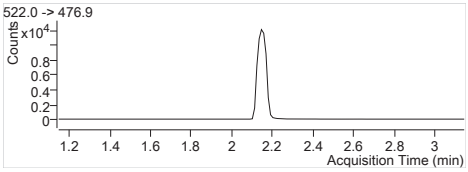

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: QC



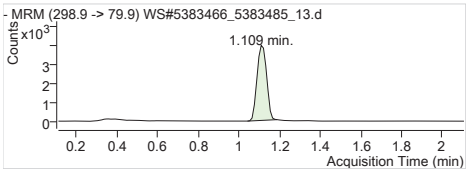



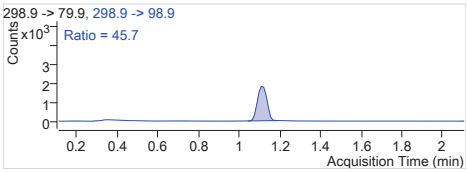

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.445 (1.456)
Concentration: 1 µg/L
Sample type: QC



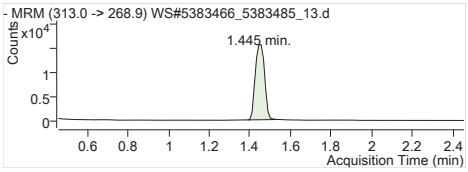



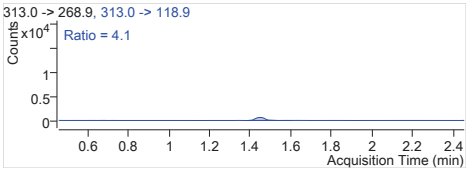

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: QC



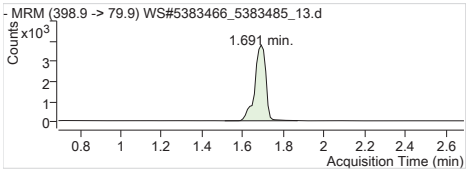



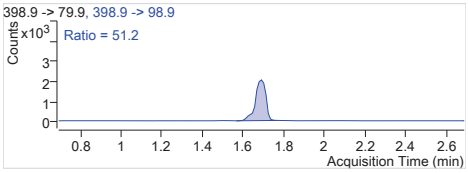

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 0.43 µg/L
Area ratio: 7.78752
Sample type: QC



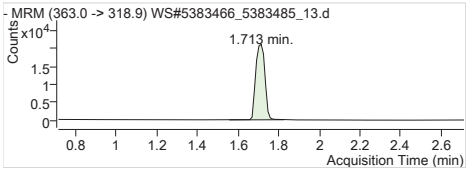



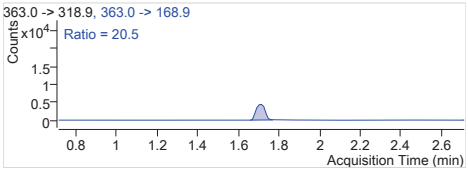

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.445 (1.456)
Calc. conc. 0.49 µg/L
Area ratio: 8.21660
Sample type: QC



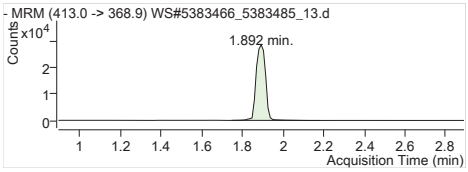



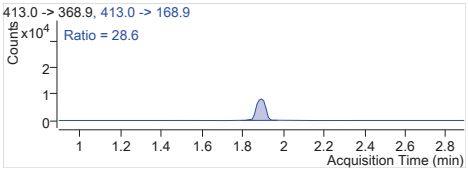

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.46 µg/L
Area ratio: 8.54142
Sample type: QC



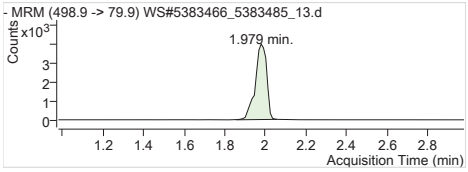



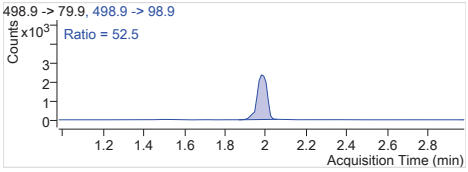

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 0.46 µg/L
Area ratio: 7.97775
Sample type: QC



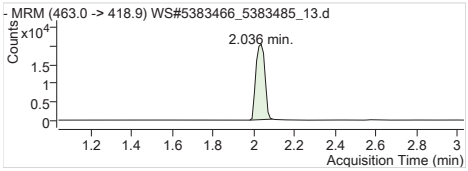



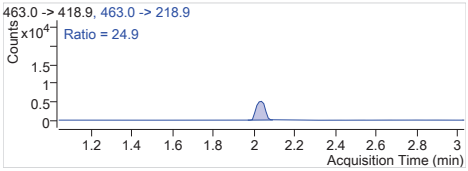

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 0.62 µg/L
Area ratio: 10.92570
Sample type: QC



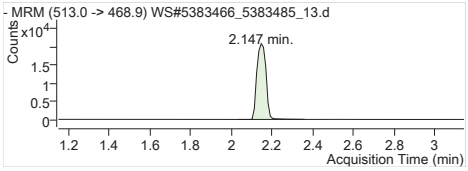



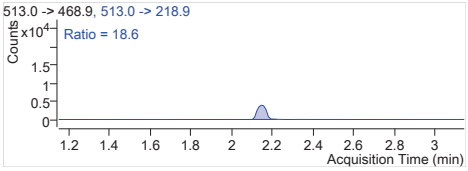

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 0.56 µg/L
Area ratio: 8.00208
Sample type: QC



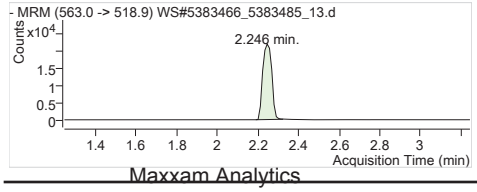



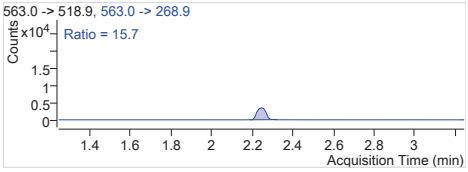

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 0.47 µg/L
Area ratio: 7.26218
Sample type: QC



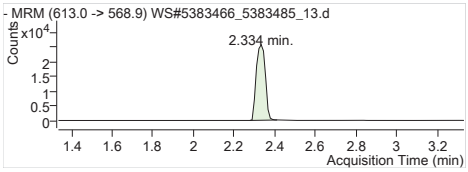



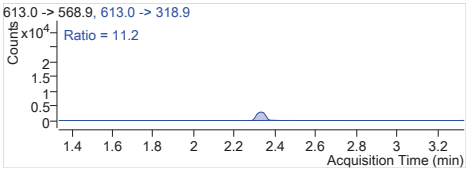

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.147)
Calc. conc. 0.51 µg/L
Area ratio: 10.02949
Sample type: QC



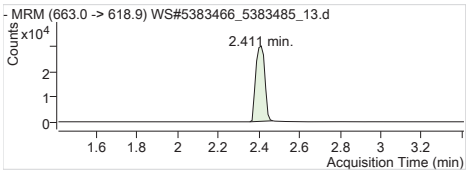



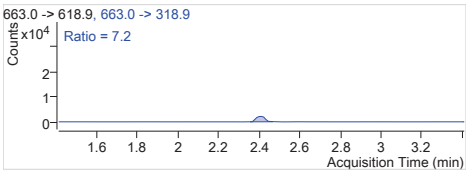

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 0.48 µg/L
Area ratio: 8.51063
Sample type: QC



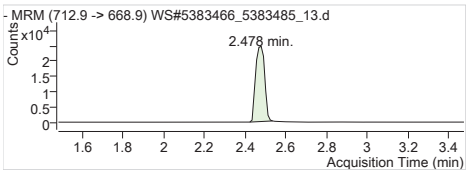



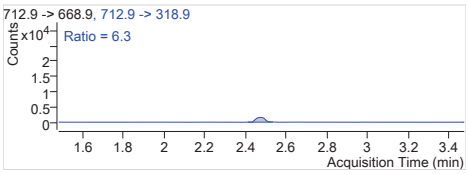

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 0.45 µg/L
Area ratio: 7.72398
Sample type: QC



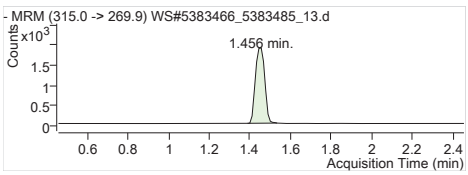



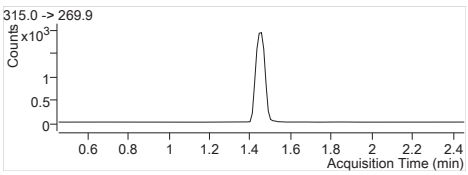

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.411 (2.411)
Calc. conc. 0.48 µg/L
Area ratio: 8.29422
Sample type: QC



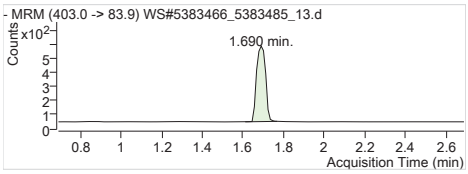



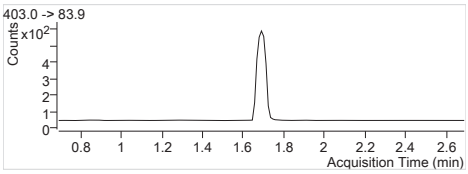

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 0.48 µg/L
Area ratio: 6.87737
Sample type: QC



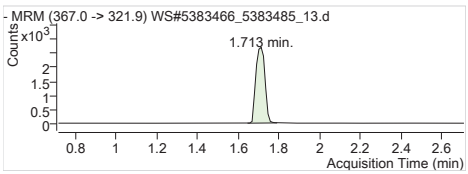



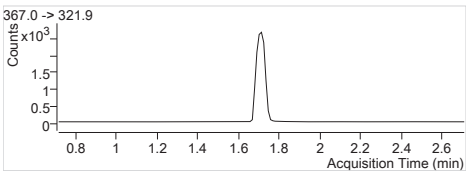

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 92.00 µg/L
Area ratio: 0.21797
Sample type: QC



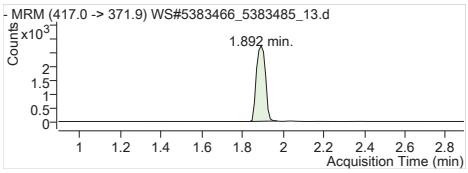



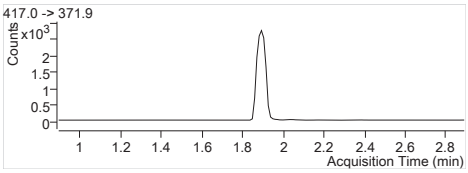

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 103.72 µg/L
Area ratio: 0.06027
Sample type: QC



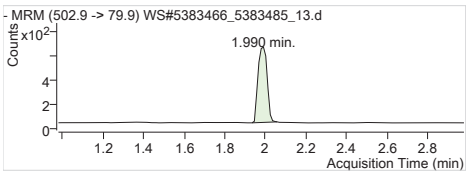



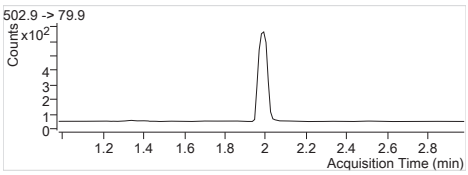

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 102.40 µg/L
Area ratio: 0.29915
Sample type: QC



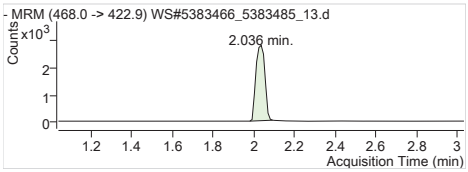



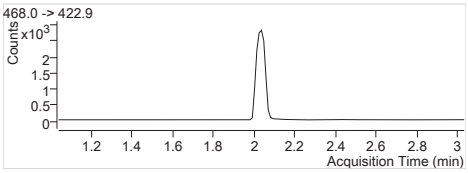

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 96.79 µg/L
Area ratio: 0.30381
Sample type: QC



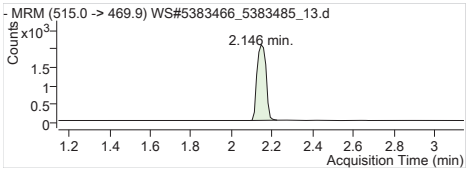



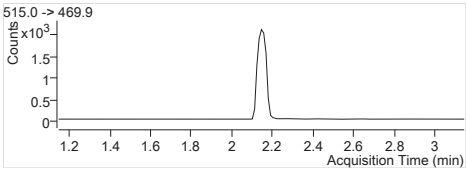

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.990 (1.979)
Calc. conc. 100.79 µg/L
Area ratio: 0.06957
Sample type: QC



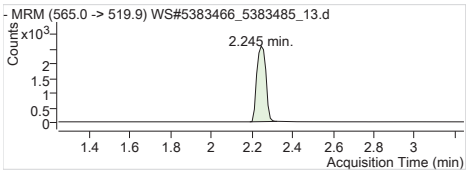



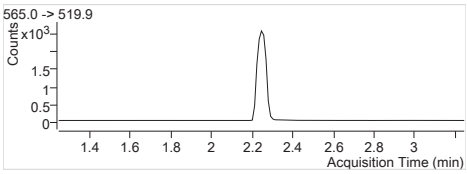

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 100.04 µg/L
Area ratio: 0.30942
Sample type: QC



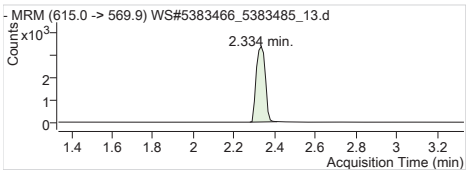



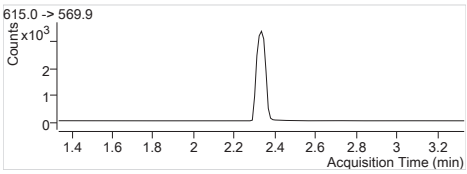

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 84.98 µg/L
Area ratio: 0.17053
Sample type: QC



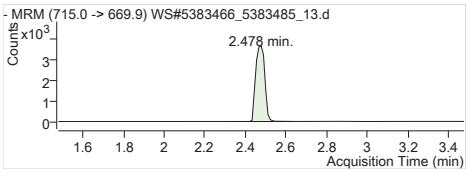



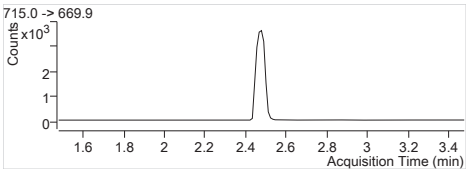

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 87.10 µg/L
Area ratio: 0.21069
Sample type: QC



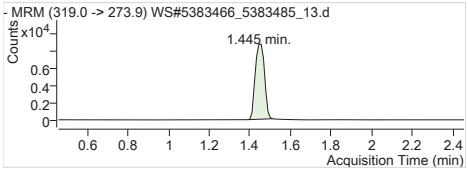



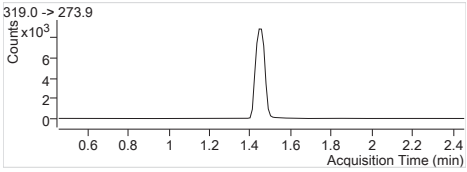

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 85.07 µg/L
Area ratio: 0.27385
Sample type: QC



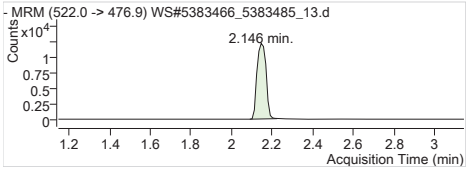



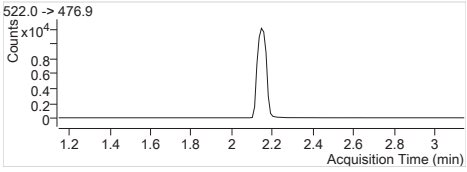

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 82.14 µg/L
Area ratio: 0.30129
Sample type: QC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.445 (1.456)
Calc. conc. 2.33 µg/L
Area ratio: 0
Sample type: QC



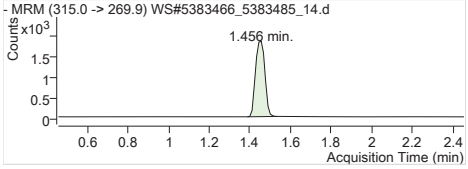

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.52 µg/L
Area ratio: 0
Sample type: QC

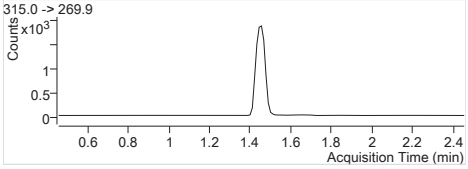
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:MTRX SPK:D1** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_14.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B4 |
| **Acq. Date** | 2018/02/06 7:11:08 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | FZA786 | | |

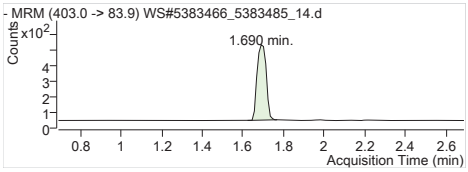
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5862 | 1.46 | 1 µg/L | | |
| MPFHxS | 1514 | 1.69 | 1 µg/L | | |
| MPFHpA | 7688 | 1.71 | 1 µg/L | | |
| MPFOA | 8395 | 1.89 | 1 µg/L | | |
| MPFOS | 1743 | 1.99 | 1 µg/L | | |
| MPFNA | 8031 | 2.04 | 1 µg/L | | |
| MPFDA | 7153 | 2.15 | 1 µg/L | | |
| MPFUnA | 7994 | 2.25 | 1 µg/L | | |
| MPFDoA | 10539 | 2.33 | 1 µg/L | | |
| MPFTeDA | 12020 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 25480 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 33966 | 2.15 | 1 µg/L | | |

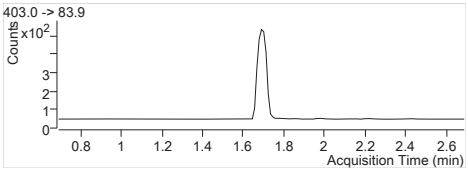
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 13588 | 1.11 | 20.80 | 0.49 µg/L | 98.34 |
| PFHxA 1 | 48572 | 1.46 | 20.80 | 0.50 µg/L | 99.87 |
| PFHxS 1 | 14071 | 1.69 | 20.80 | 0.50 µg/L | 101.13 |
| PFHpA 1 | 66259 | 1.71 | 20.80 | 0.50 µg/L | 99.22 |
| PFOA 1 | 90262 | 1.89 | 20.80 | 0.61 µg/L | 121.98 |
| PFOS 1 | 15668 | 1.98 | 20.80 | 0.63 µg/L | 125.72 |
| PFNA 1 | 60386 | 2.04 | 20.80 | 0.48 µg/L | 96.88 |
| PFDA 1 | 66635 | 2.15 | 20.80 | 0.48 µg/L | 95.27 |
| PFUnA 1 | 72096 | 2.25 | 20.80 | 0.51 µg/L | 102.39 |
| PFDoA 1 | 86761 | 2.33 | 20.80 | 0.48 µg/L | 96.88 |
| PFTrDA 1 | 98816 | 2.41 | 20.80 | 0.48 µg/L | 95.60 |
| PFTeDA 1 | 83035 | 2.48 | 20.80 | 0.48 µg/L | 96.48 |
| 13C2-PFHxA | 5862 | 1.46 | 100.00 | 97.10 µg/L | 97.10 |
| 18O2-PFHxS | 1514 | 1.69 | 100.00 | 102.25 µg/L | 102.25 |
| 13C4-PFHpA | 7688 | 1.71 | 100.00 | 103.28 µg/L | 103.28 |
| 13C4-PFOA | 8395 | 1.89 | 100.00 | 104.96 µg/L | 104.96 |
| 13C4-PFOS | 1743 | 1.99 | 100.00 | 99.11 µg/L | 99.11 |
| 13C5-PFNA | 7997 | 2.04 | 100.00 | 101.48 µg/L | 101.48 |
| 13C2-PFDA | 7097 | 2.15 | 100.00 | 104.12 µg/L | 104.12 |
| 13C2-PFUnA | 7994 | 2.25 | 100.00 | 97.30 µg/L | 97.30 |
| 13C2-PFDoA | 10539 | 2.33 | 100.00 | 96.39 µg/L | 96.39 |
| 13C2-PFTeDA | 12309 | 2.48 | 100.00 | 98.80 µg/L | 98.80 |
| 13C6-PFHxA | 25480 | 1.46 | 100.00 | 2.15 µg/L | 89.63 |
| 13C9-PFDA | 33966 | 2.15 | 100.00 | 2.28 µg/L | 94.95 |



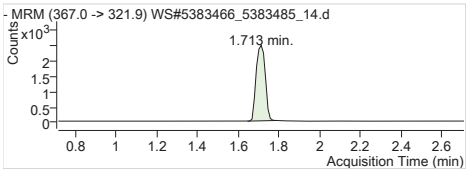



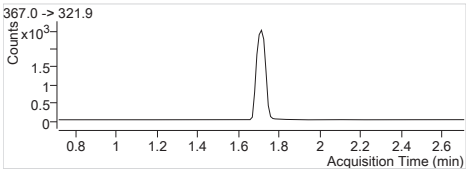

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | QC |



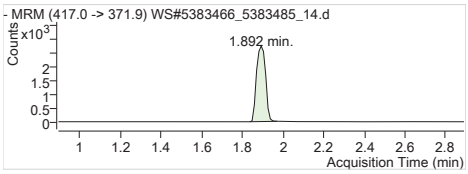



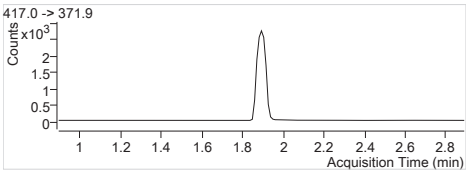

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: QC



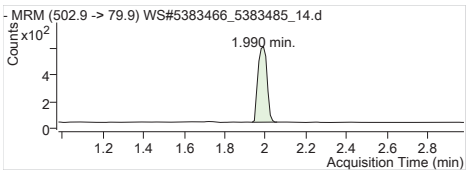



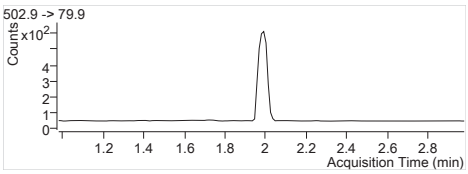

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: QC



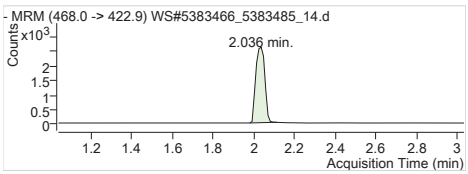



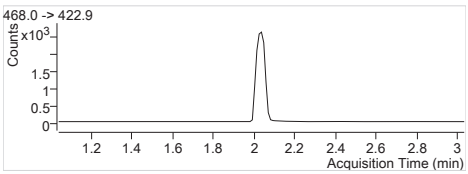

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: QC



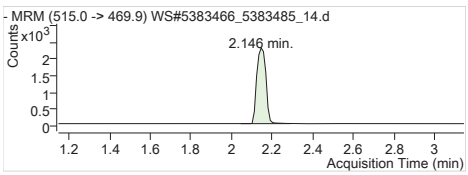



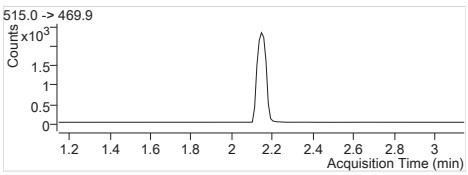

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: QC



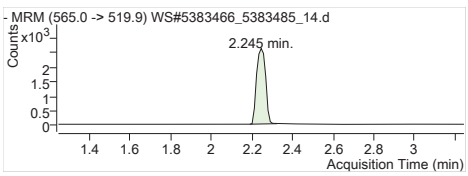



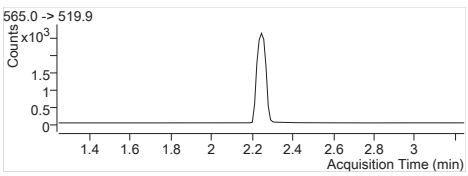

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: QC



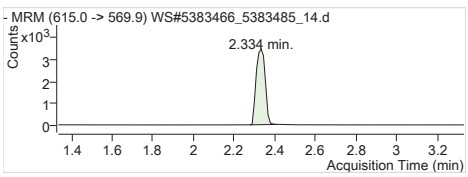



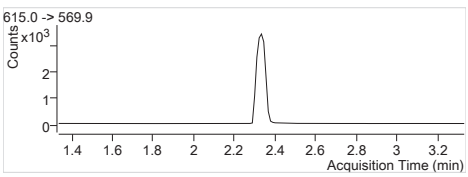

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: QC



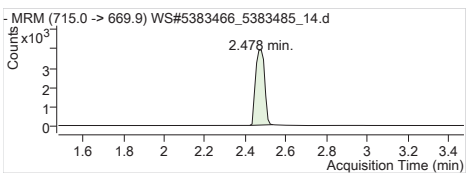



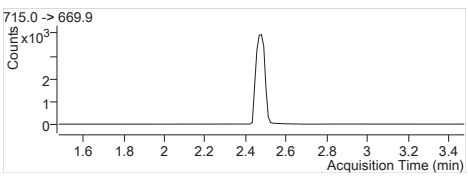

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: QC



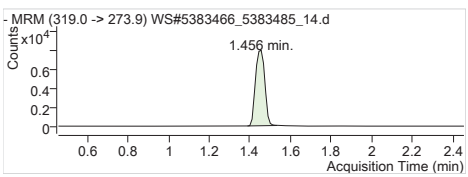



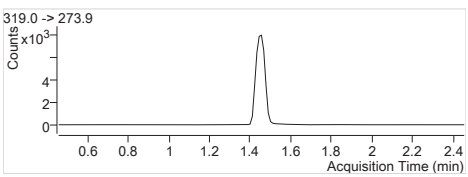

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: QC



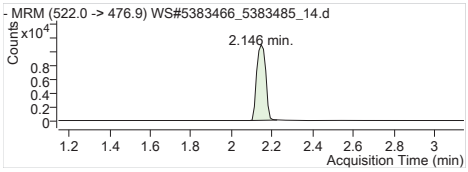



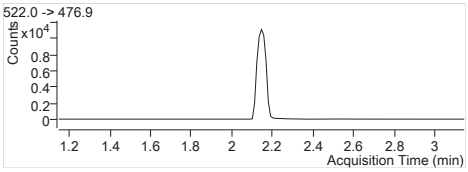

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: QC



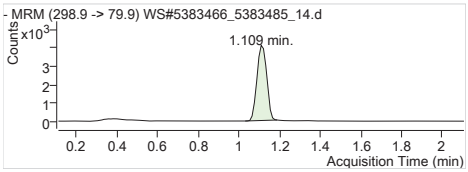



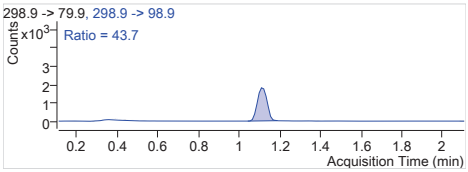

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: QC



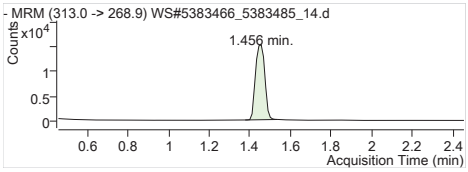



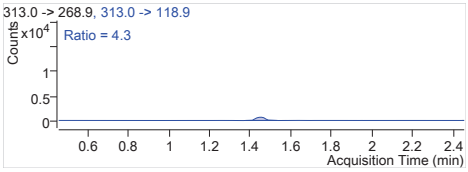

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: QC



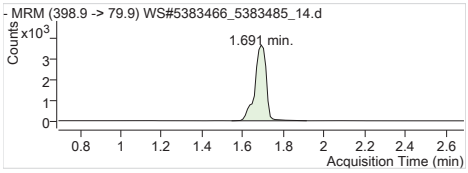



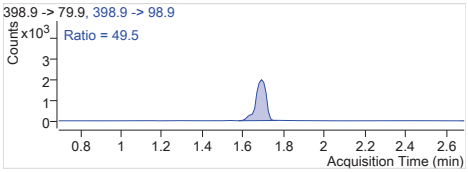

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 0.49 µg/L
Area ratio: 8.97490
Sample type: QC



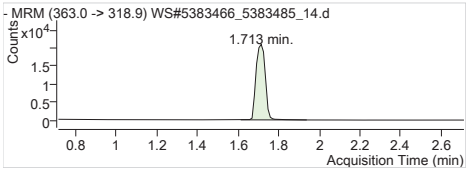



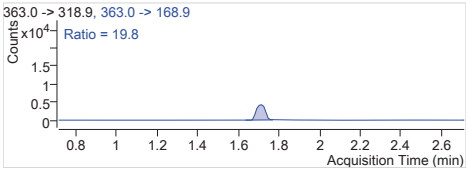

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 0.50 µg/L
Area ratio: 8.28591
Sample type: QC



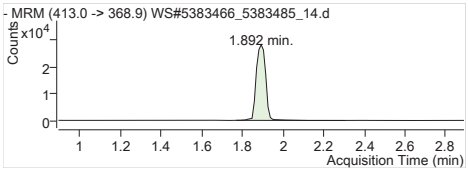



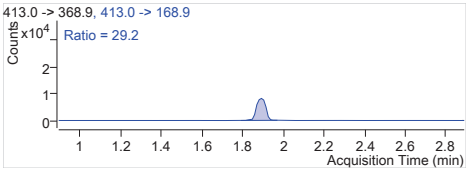

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.50 µg/L
Area ratio: 9.29392
Sample type: QC



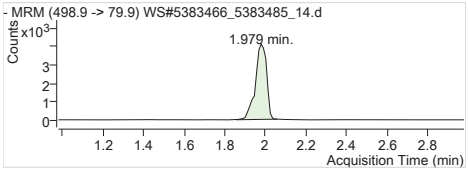



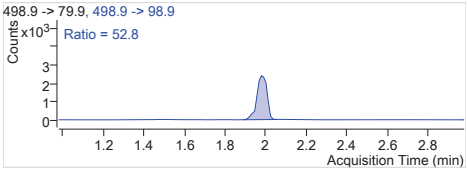

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 0.50 µg/L
Area ratio: 8.61850
Sample type: QC



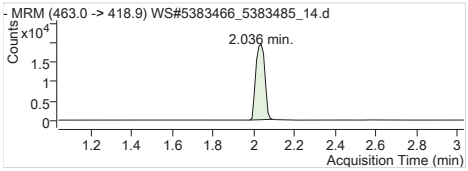



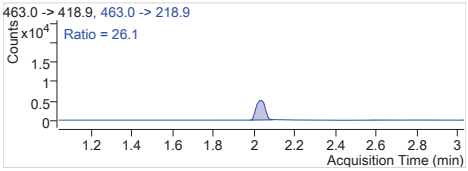

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 0.61 µg/L
Area ratio: 10.75188
Sample type: QC



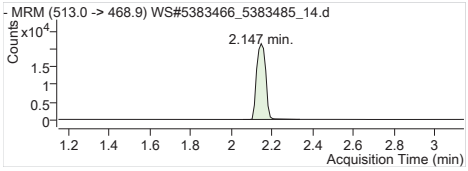



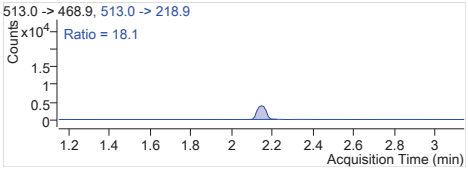

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 0.63 µg/L
Area ratio: 8.98910
Sample type: QC



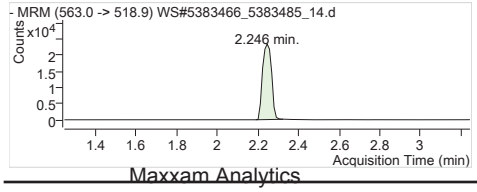



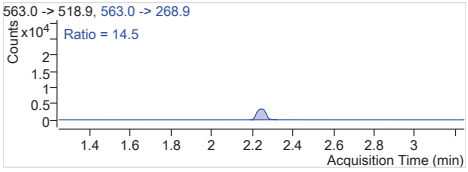

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 0.48 µg/L
Area ratio: 7.51911
Sample type: QC



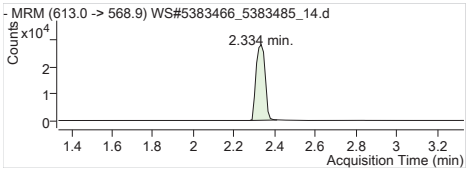



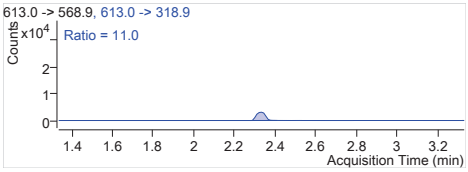

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.147)
Calc. conc. 0.48 µg/L
Area ratio: 9.31567
Sample type: QC



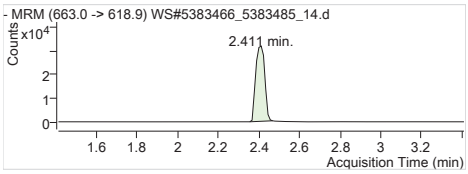



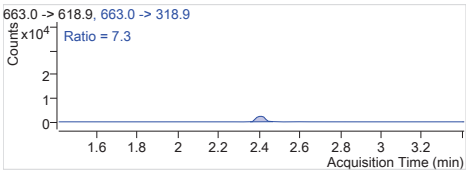

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 0.51 µg/L
Area ratio: 9.01876
Sample type: QC



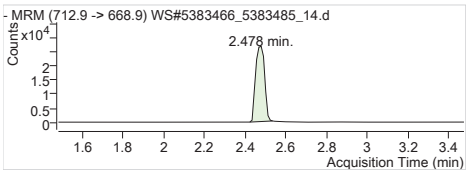



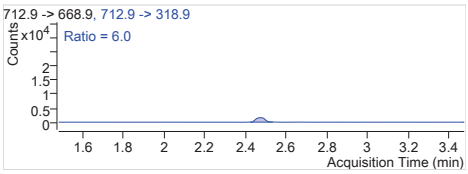

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 0.48 µg/L
Area ratio: 8.23237
Sample type: QC



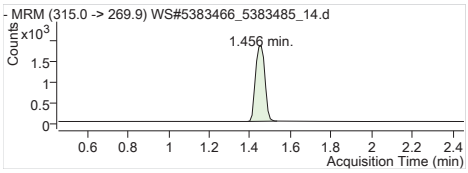



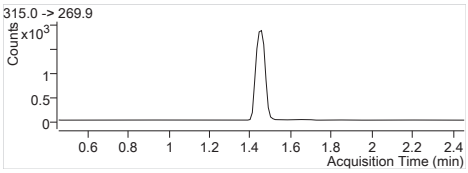

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.411 (2.411)
Calc. conc. 0.48 µg/L
Area ratio: 8.22097
Sample type: QC



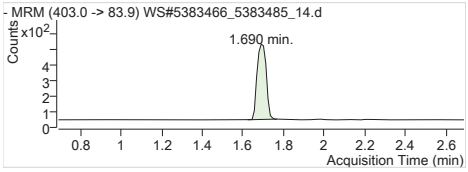



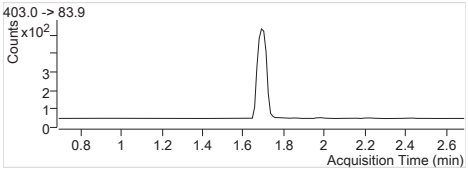

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 0.48 µg/L
Area ratio: 6.90807
Sample type: QC



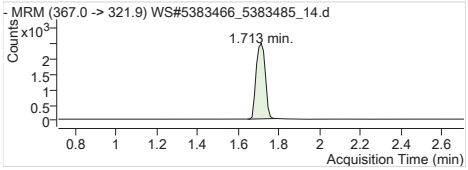



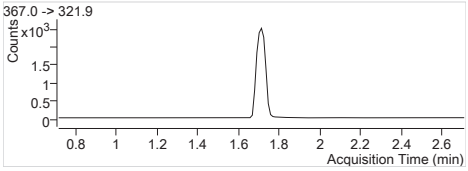

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 97.10 µg/L
Area ratio: 0.23006
Sample type: QC



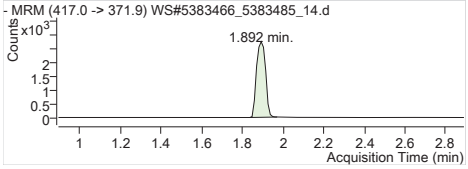



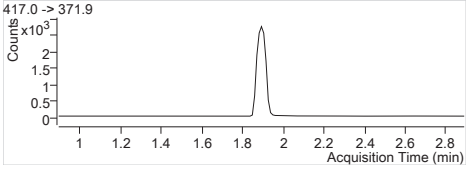

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 102.25 µg/L
Area ratio: 0.05942
Sample type: QC



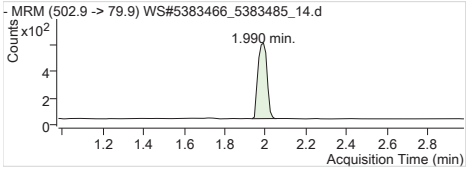



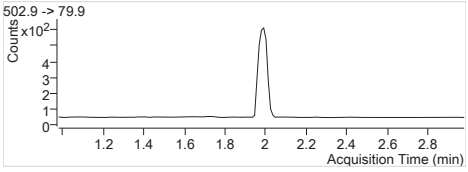

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 103.28 µg/L
Area ratio: 0.30173
Sample type: QC



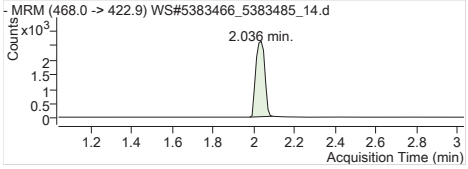



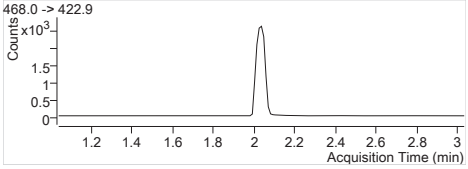

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 104.96 µg/L
Area ratio: 0.32947
Sample type: QC



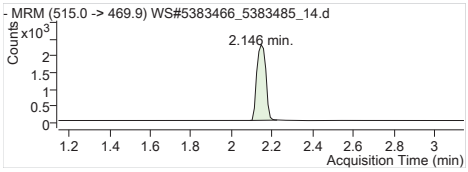



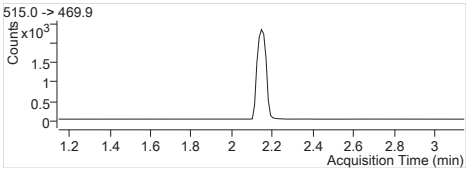

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.990 (1.979)
Calc. conc. 99.11 µg/L
Area ratio: 0.06841
Sample type: QC



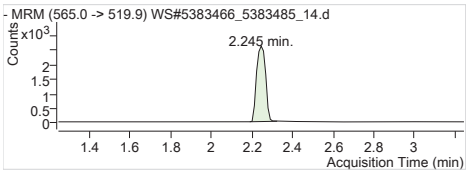



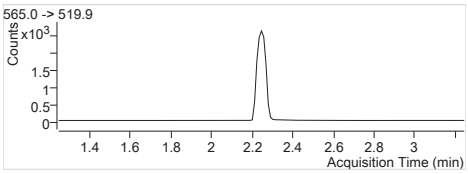

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 101.48 µg/L
Area ratio: 0.31385
Sample type: QC



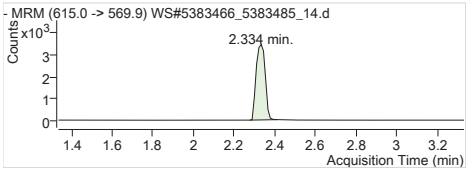



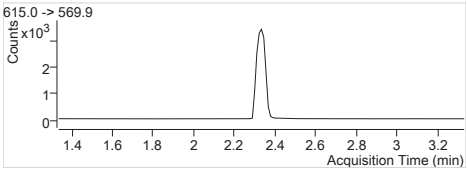

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 104.12 µg/L
Area ratio: 0.20894
Sample type: QC



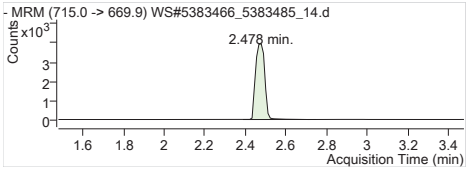



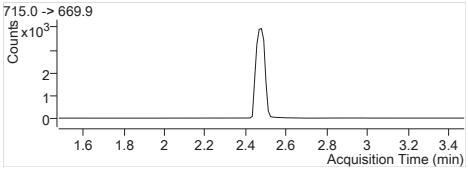

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 97.30 µg/L
Area ratio: 0.23535
Sample type: QC



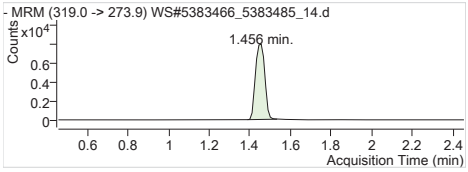



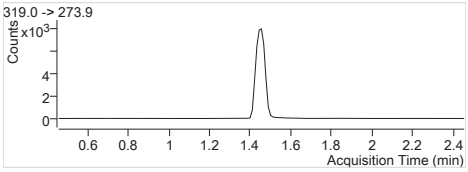

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 96.39 µg/L
Area ratio: 0.31028
Sample type: QC



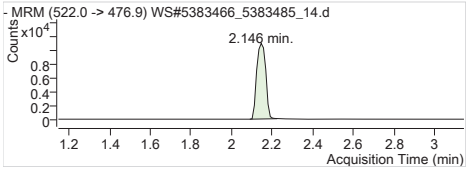



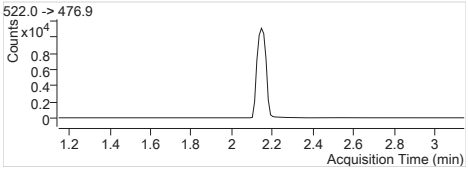

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 98.80 µg/L
Area ratio: 0.36239
Sample type: QC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 2.15 µg/L
Area ratio: 0
Sample type: QC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.28 µg/L
Area ratio: 0
Sample type: QC

# Quantitation Results

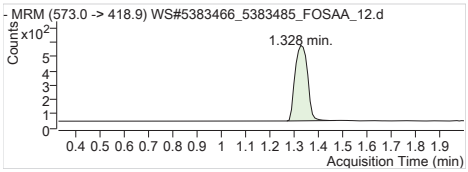
Agilent Technologies

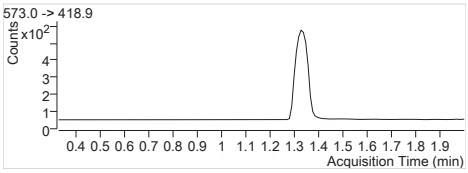
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:SPIKE** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_12.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B2 |
| **Acq. Date** | 2018/02/06 12:52:11 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

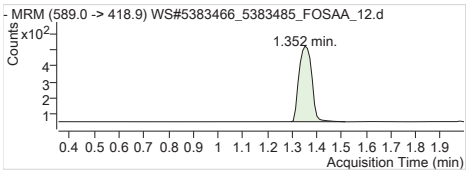
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1884 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1697 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 29447 | 0.94 | 1 µg/L | | |

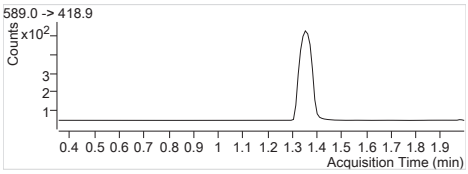
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 9660 | 1.33 | 20.80 | 0.34 µg/L | 68.19 |
| EtFOSAA 1 | 9506 | 1.35 | 20.80 | 0.32 µg/L | 63.85 |
| D3-MeFOSAA | 1884 | 1.33 | 100.00 | 97.40 µg/L | 97.40 |
| D5-EtFOSAA | 1697 | 1.35 | 100.00 | 101.83 µg/L | 101.83 |
| 13C9-PFDA | 29691 | 0.94 | 100.00 | 2.53 µg/L | 105.32 |



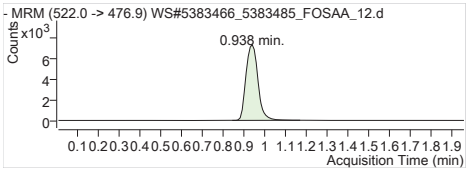



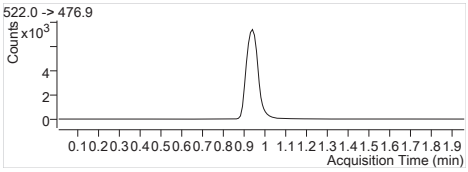

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: QC



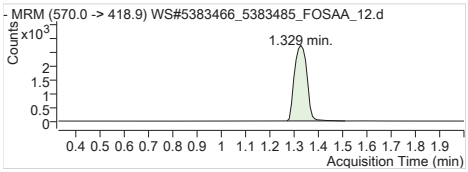



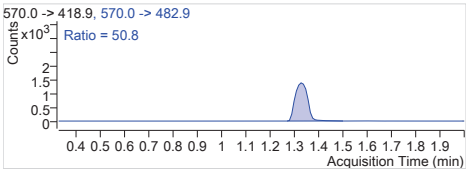

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: QC



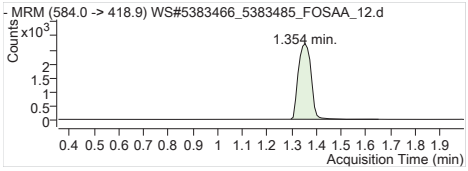



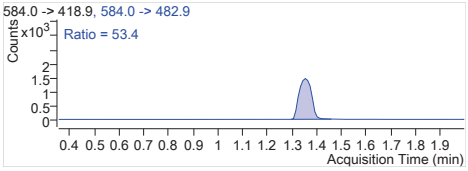

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.938 (0.958)
Concentration: 1 µg/L
Sample type: QC



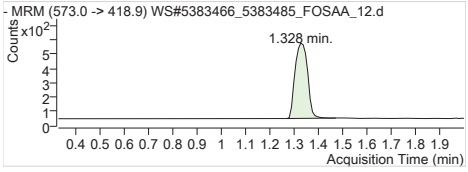



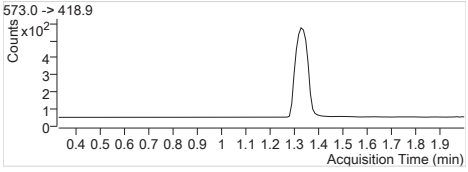

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 0.34 µg/L
Area ratio: 5.12739
Sample type: QC



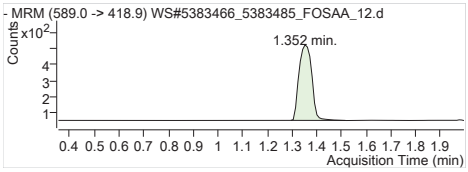



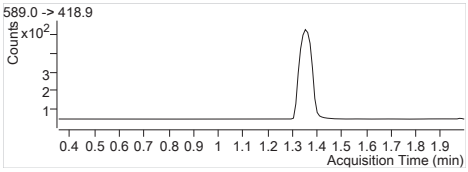

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 0.32 µg/L
Area ratio: 5.60165
Sample type: QC



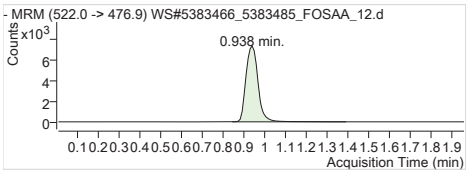



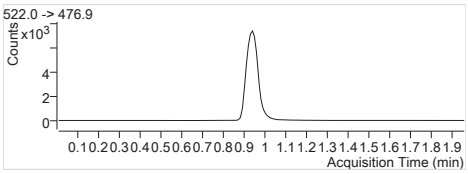

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 97.40 µg/L
Area ratio: 0.06398
Sample type: QC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 101.83 µg/L |
| Area ratio: | 0.05763 |
| Sample type: | QC |



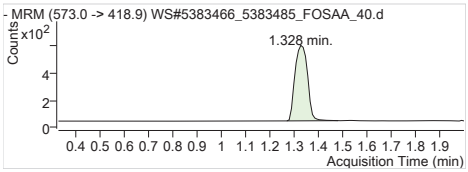

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.938 (0.958) |
| Calc. conc. | 2.53 µg/L |
| Area ratio: | 0 |
| Sample type: | QC |

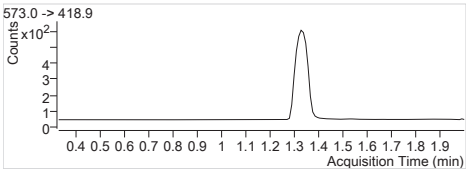
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:SPIKE:R** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_40.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B2 |
| **Acq. Date** | 2018/02/06 2:55:09 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | Not used | | |

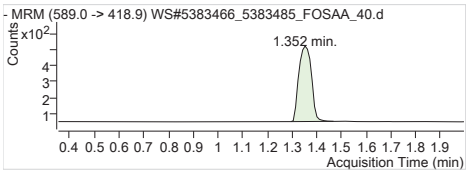
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1986 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1671 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 30281 | 0.94 | 1 µg/L | | |

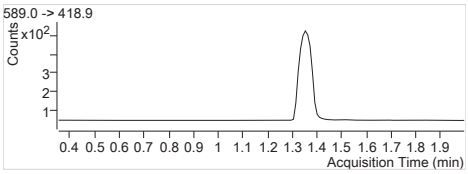
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 9652 | 1.33 | 20.80 | 0.32 µg/L | 64.64 |
| EtFOSAA 1 | 9548 | 1.35 | 20.80 | 0.33 µg/L | 65.12 |
| D3-MeFOSAA | 1986 | 1.33 | 100.00 | 99.84 µg/L | 99.84 |
| D5-EtFOSAA | 1671 | 1.35 | 100.00 | 97.50 µg/L | 97.50 |
| 13C9-PFDA | 30309 | 0.94 | 100.00 | 2.58 µg/L | 107.52 |



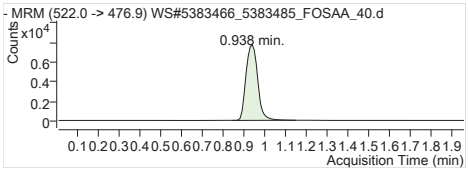



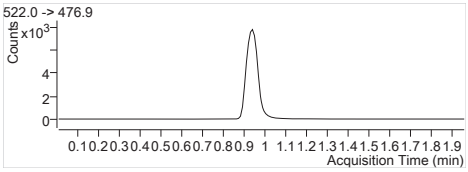

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: QC



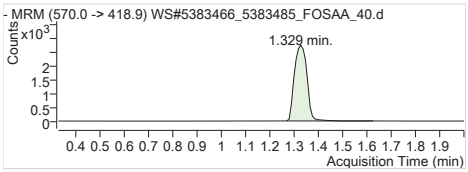



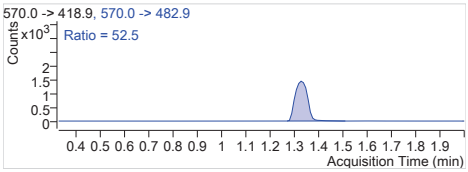

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: QC



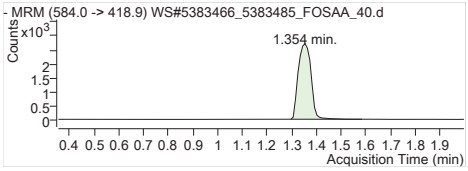



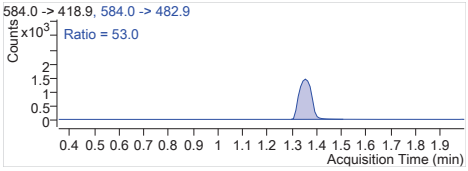

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.938 (0.958)
Concentration: 1 µg/L
Sample type: QC



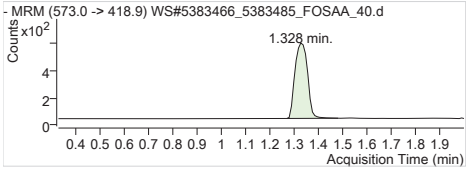



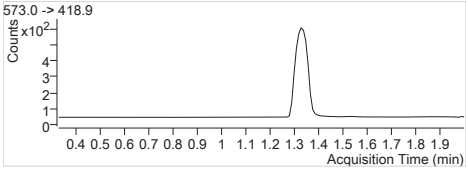

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 0.32 µg/L
Area ratio: 4.86002
Sample type: QC



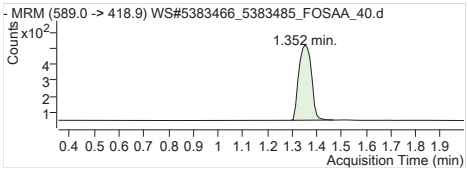



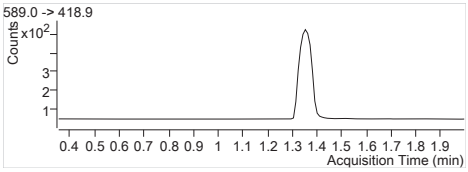

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 0.33 µg/L
Area ratio: 5.71394
Sample type: QC



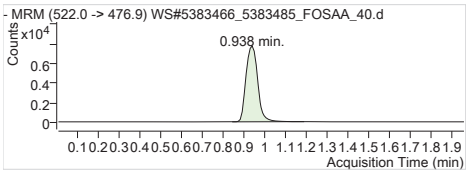



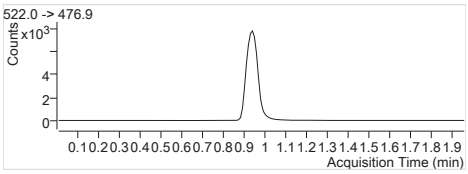

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 99.84 µg/L
Area ratio: 0.06559
Sample type: QC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 97.50 µg/L |
| Area ratio: | 0.05518 |
| Sample type: | QC |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.938 (0.958) |
| Calc. conc. | 2.58 µg/L |
| Area ratio: | 0 |
| Sample type: | QC |

# Quantitation Results

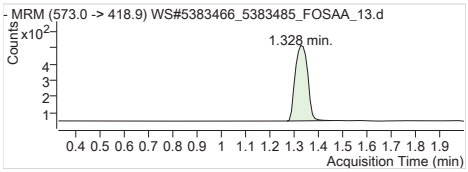
Agilent Technologies

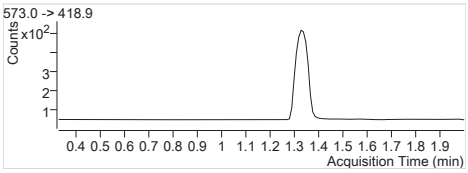
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:MTRX SPK** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_13.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B3 |
| **Acq. Date** | 2018/02/06 12:54:36 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | FZA786 | | |

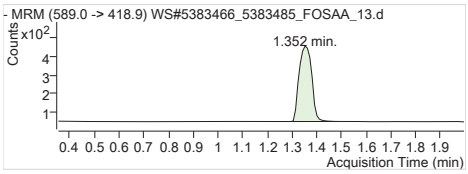
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1659 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1446 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 29374 | 0.93 | 1 µg/L | | |

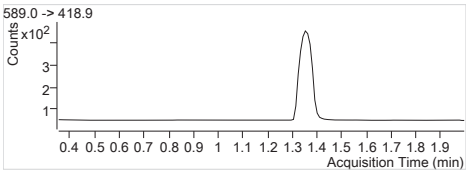
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 11255 | 1.33 | 20.80 | 0.45 µg/L | 90.18 |
| EtFOSAA 1 | 11129 | 1.35 | 20.80 | 0.44 µg/L | 87.44 |
| D3-MeFOSAA | 1659 | 1.33 | 100.00 | 85.98 µg/L | 85.98 |
| D5-EtFOSAA | 1446 | 1.35 | 100.00 | 86.98 µg/L | 86.98 |
| 13C9-PFDA | 29366 | 0.93 | 100.00 | 2.50 µg/L | 104.17 |



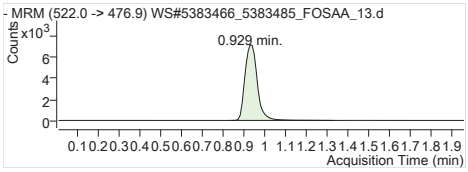



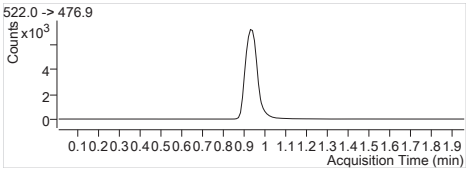

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: QC



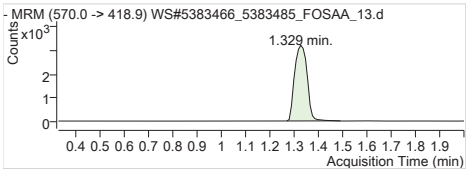



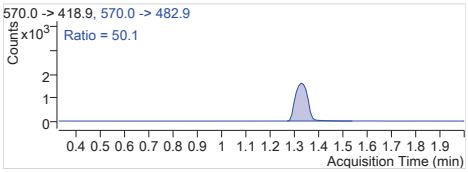

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: QC



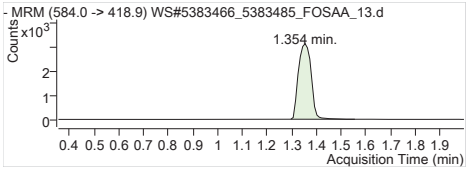



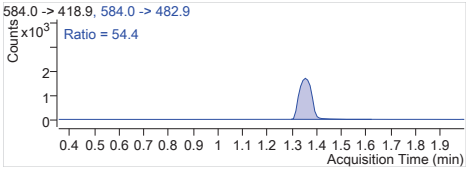

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.929 (0.958)
Concentration: 1 µg/L
Sample type: QC



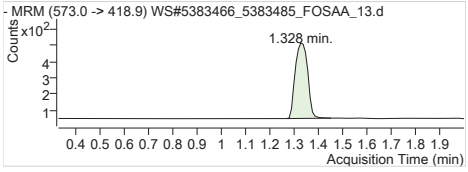



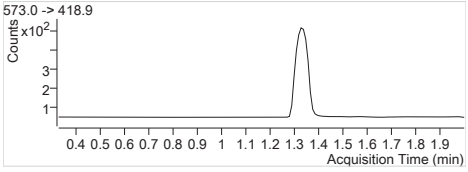

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 0.45 µg/L
Area ratio: 6.78421
Sample type: QC



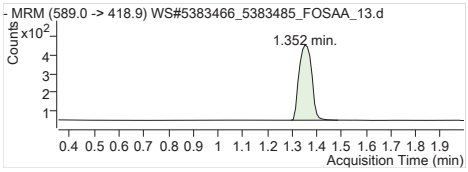



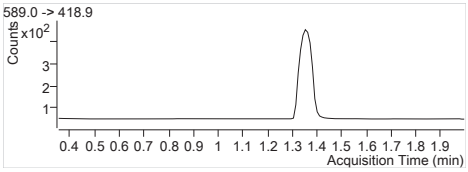

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 0.44 µg/L
Area ratio: 7.69640
Sample type: QC



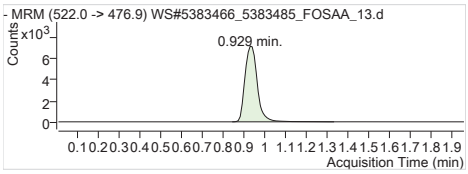



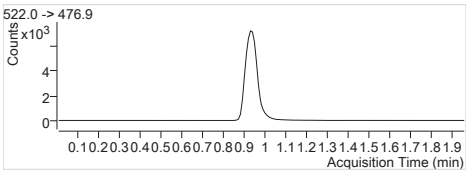

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 85.98 µg/L
Area ratio: 0.05648
Sample type: QC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 86.98 µg/L |
| Area ratio: | 0.04923 |
| Sample type: | QC |



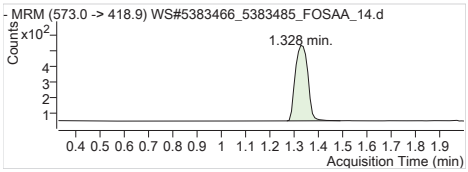

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.929 (0.958) |
| Calc. conc. | 2.50 µg/L |
| Area ratio: | 0 |
| Sample type: | QC |

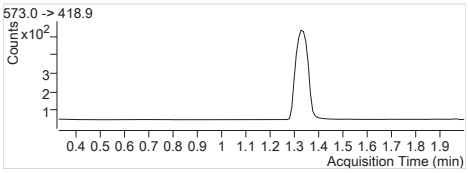
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5383466:MTRX SPK:D1** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_14.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B4 |
| **Acq. Date** | 2018/02/06 12:57:01 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | FZA786 | | |

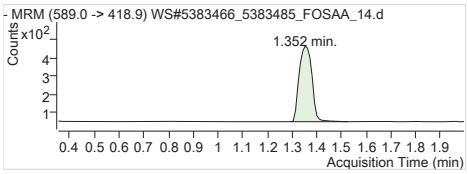
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1730 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1484 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 27873 | 0.94 | 1 µg/L | | |

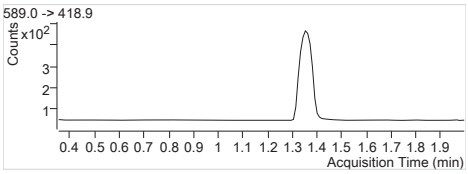
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 12209 | 1.33 | 20.80 | 0.47 µg/L | 93.80 |
| EtFOSAA 1 | 12285 | 1.35 | 20.80 | 0.47 µg/L | 94.00 |
| D3-MeFOSAA | 1730 | 1.33 | 100.00 | 94.49 µg/L | 94.49 |
| D5-EtFOSAA | 1484 | 1.35 | 100.00 | 94.07 µg/L | 94.07 |
| 13C9-PFDA | 27872 | 0.94 | 100.00 | 2.37 µg/L | 98.87 |



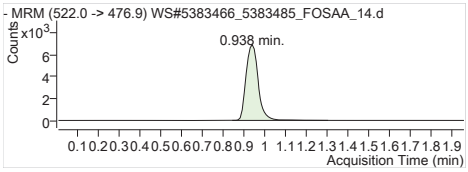



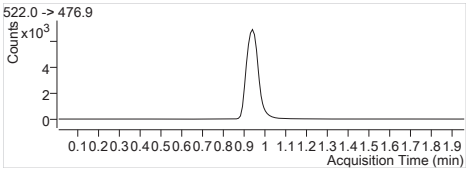

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: QC



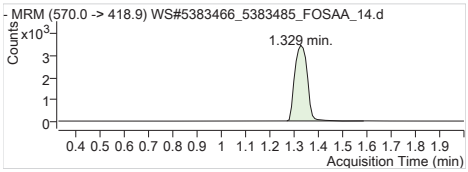



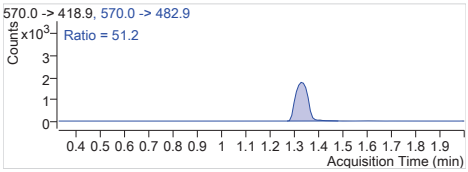

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: QC



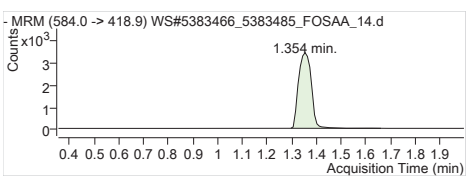



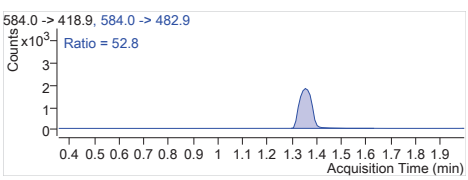

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.938 (0.958)
Concentration: 1 µg/L
Sample type: QC



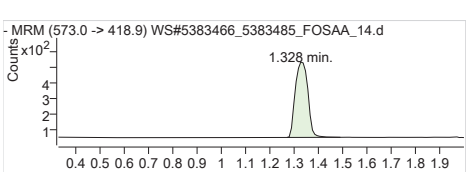



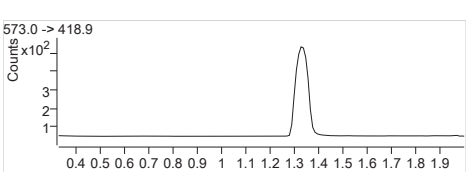

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 0.47 µg/L
Area ratio: 7.05723
Sample type: QC



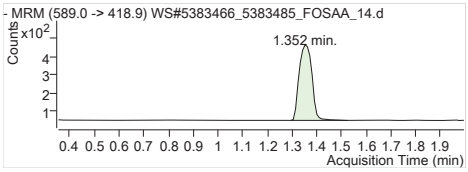



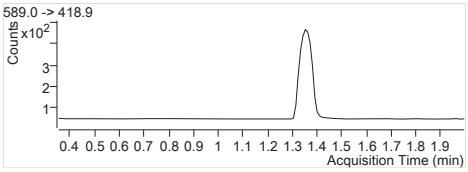

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 0.47 µg/L
Area ratio: 8.27830
Sample type: QC



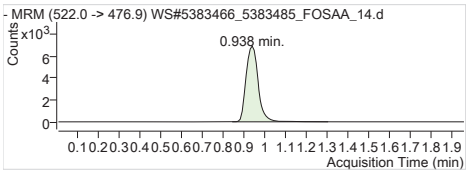



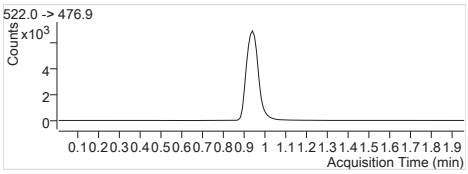

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 94.49 µg/L
Area ratio: 0.06207
Sample type: QC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 94.07 µg/L |
| Area ratio: | 0.05324 |
| Sample type: | QC |



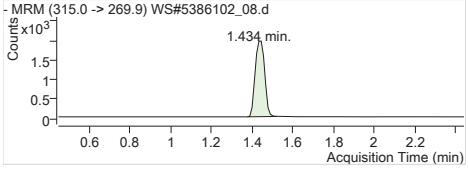

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.938 (0.958) |
| Calc. conc. | 2.37 µg/L |
| Area ratio: | 0 |
| Sample type: | QC |

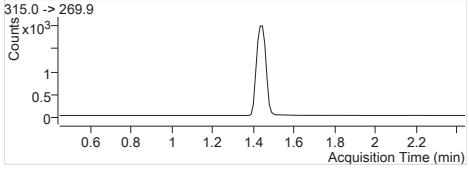
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_08.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D5 |
| **Acq. Date** | 2018/02/08 3:41:24 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

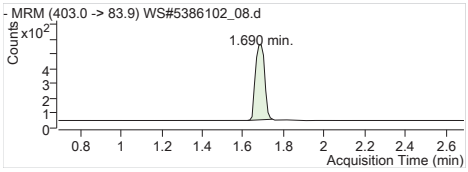
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6296 | 1.43 | 1 µg/L | | |
| MPFHxS | 1620 | 1.69 | 1 µg/L | | |
| MPFHpA | 9156 | 1.70 | 1 µg/L | | |
| MPFOA | 8586 | 1.88 | 1 µg/L | | |
| MPFOS | 1994 | 1.98 | 1 µg/L | | |
| MPFNA | 8866 | 2.02 | 1 µg/L | | |
| MPFDA | 6960 | 2.15 | 1 µg/L | | |
| MPFUnA | 8635 | 2.23 | 1 µg/L | | |
| MPFDoA | 11729 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12927 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 29753 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 39820 | 2.15 | 1 µg/L | | |

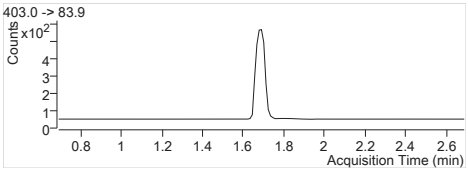
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6296 | 1.43 | - | 108.89 µg/L | - |
| 18O2-PFHxS | 1620 | 1.69 | - | 109.51 µg/L | - |
| 13C4-PFHpA | 9156 | 1.70 | - | 120.93 µg/L | - |
| 13C4-PFOA | 8586 | 1.88 | - | 107.49 µg/L | - |
| 13C4-PFOS | 1994 | 1.98 | - | 110.69 µg/L | - |
| 13C5-PFNA | 8866 | 2.02 | - | 111.21 µg/L | - |
| 13C2-PFDA | 6852 | 2.15 | - | 101.10 µg/L | - |
| 13C2-PFUnA | 8635 | 2.23 | - | 107.44 µg/L | - |
| 13C2-PFDoA | 11729 | 2.32 | - | 105.12 µg/L | - |
| 13C2-PFTeDA | 12952 | 2.47 | - | 101.76 µg/L | - |
| 13C6-PFHxA | 29753 | 1.43 | - | 2.25 µg/L | - |
| 13C9-PFDA | 39820 | 2.15 | - | 2.36 µg/L | - |



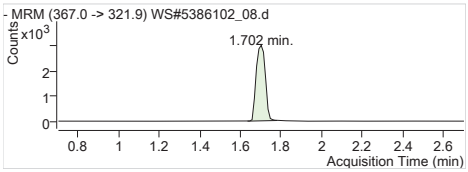



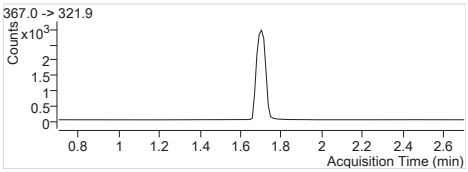

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.445) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



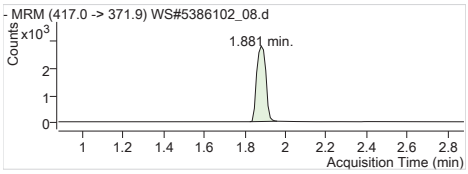



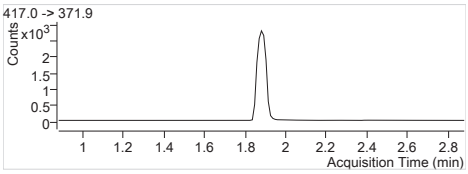

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



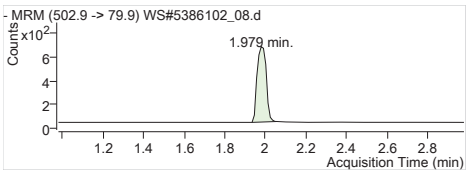



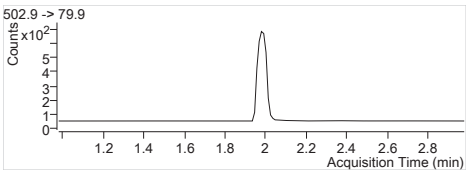

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: Sample



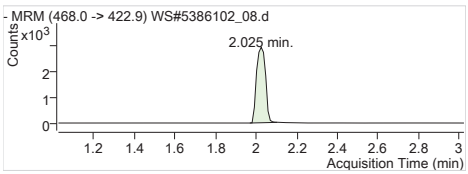



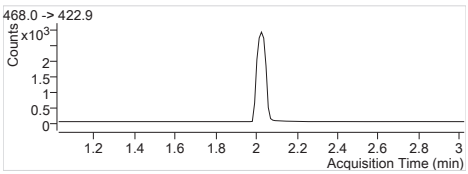

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



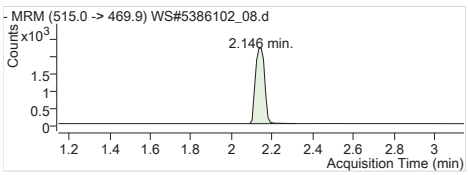



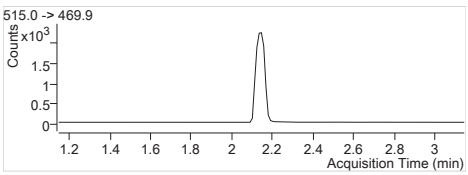

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



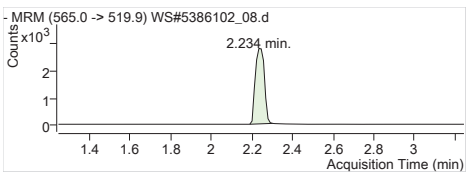



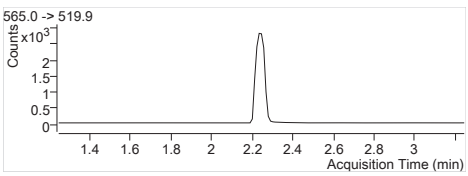

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: Sample



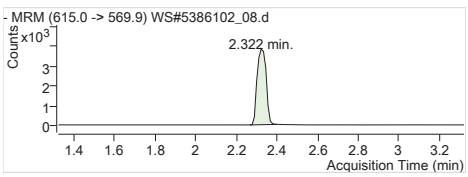



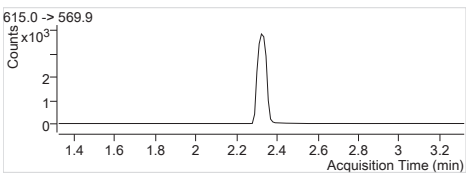

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



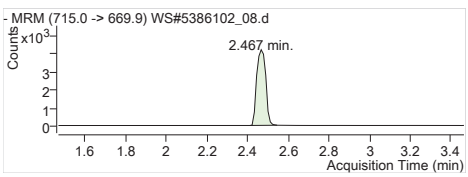



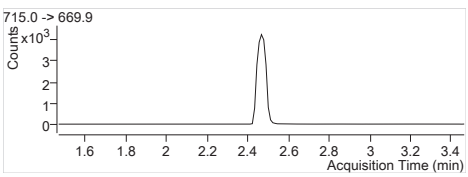

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.245)
Concentration: 1 µg/L
Sample type: Sample



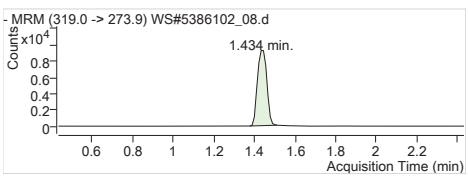



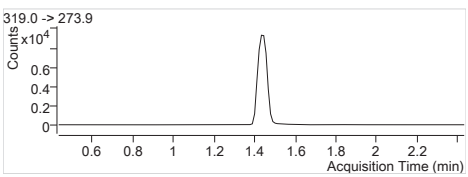

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



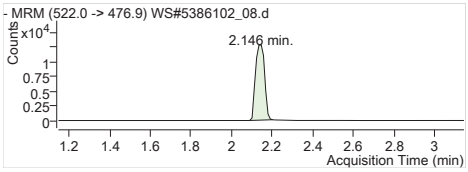



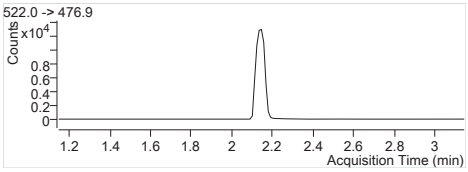

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



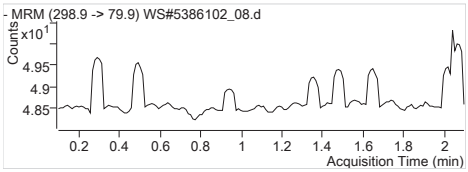



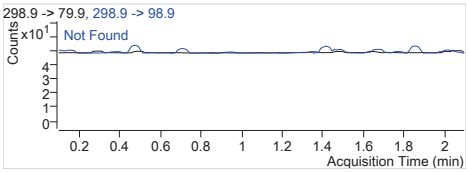

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



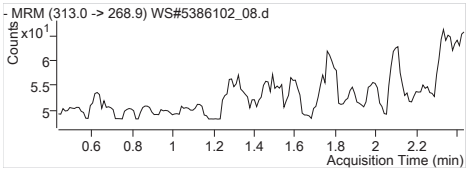



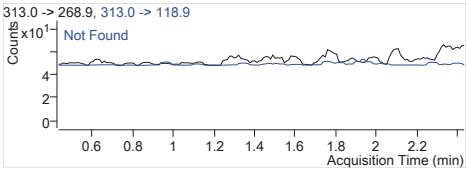

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



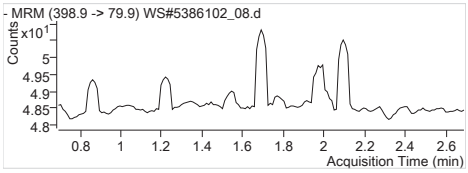



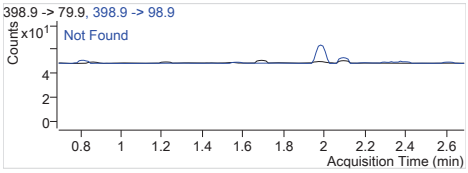

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.098)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



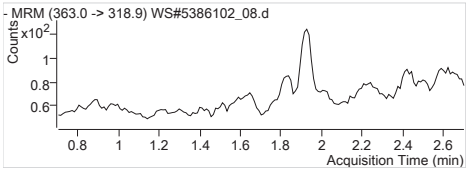



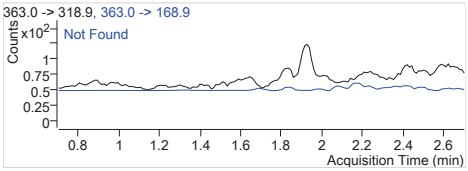

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



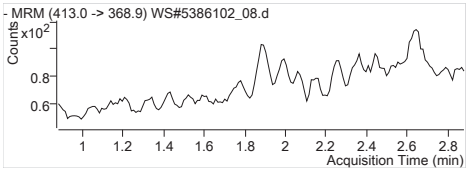



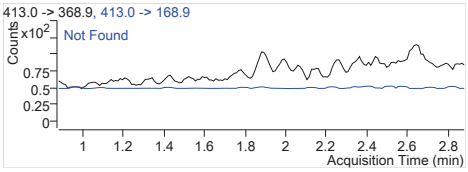

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



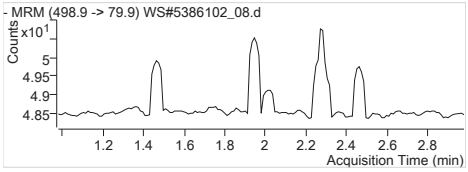



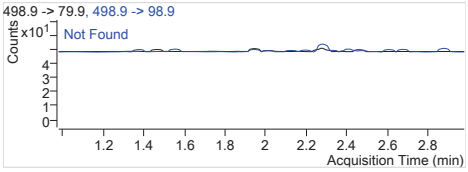

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.702)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



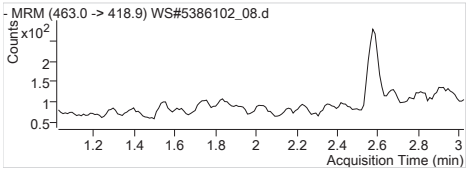



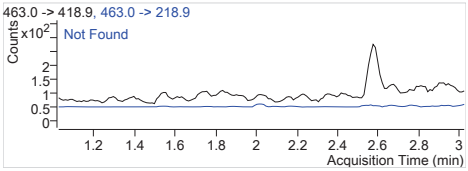

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



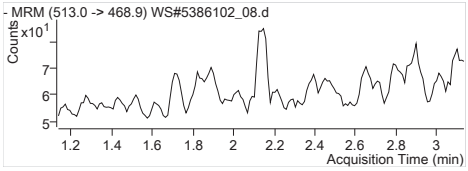



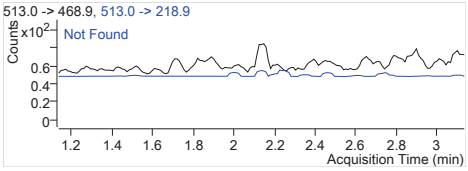

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



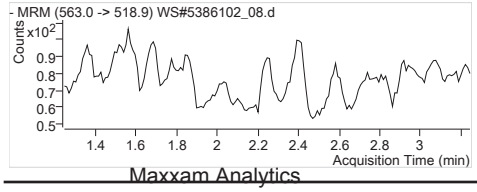



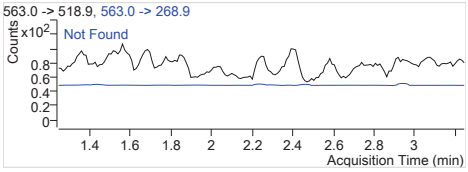

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.025)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



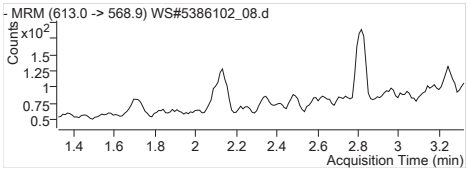



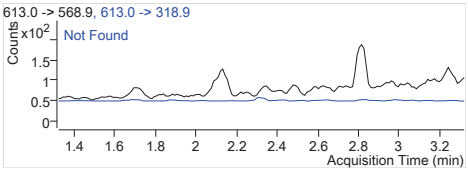

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



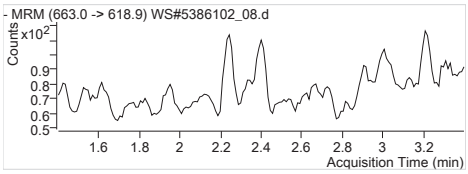



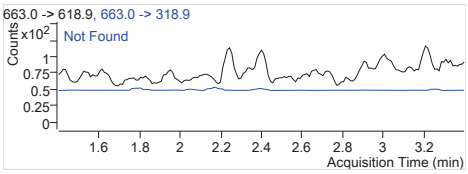

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



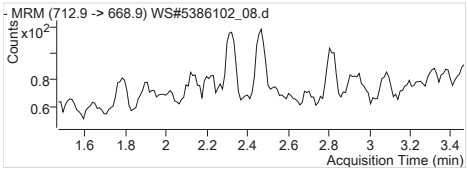



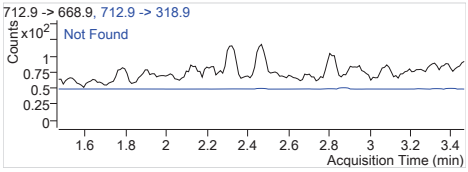

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



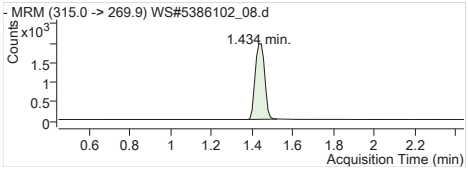



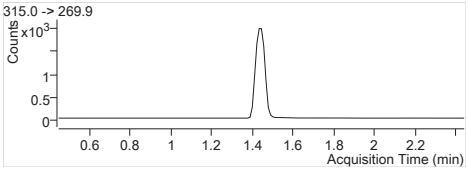

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



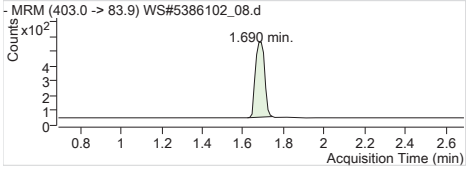



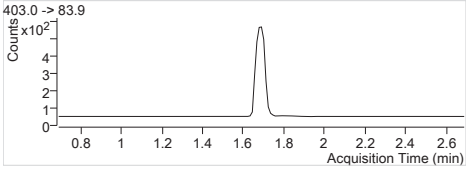

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



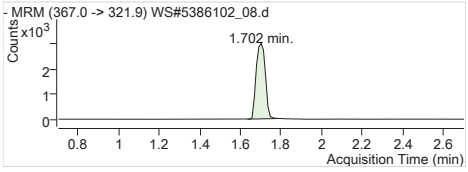



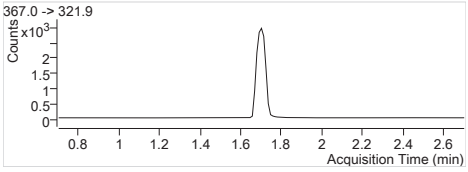

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 108.89 µg/L
Area ratio: 0.21161
Sample type: Sample



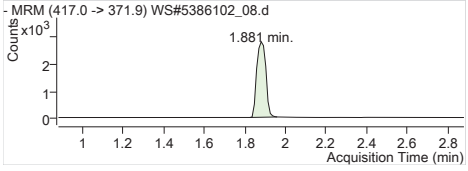



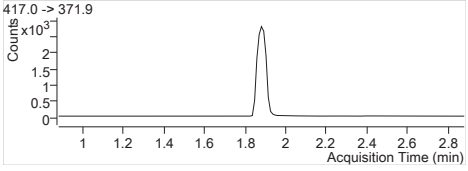

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 109.51 µg/L
Area ratio: 0.05445
Sample type: Sample



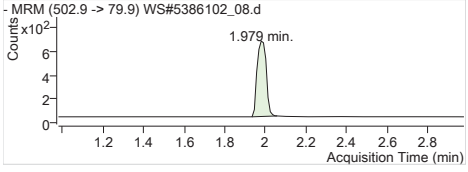



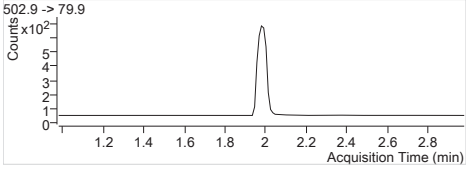

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 120.93 µg/L
Area ratio: 0.30773
Sample type: Sample



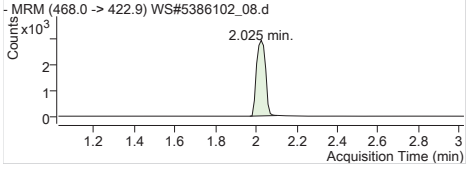



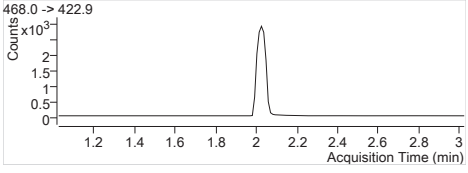

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 107.49 µg/L
Area ratio: 0.28858
Sample type: Sample



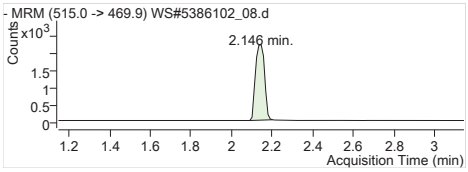



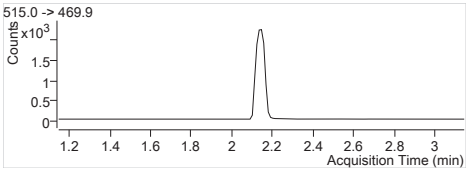

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 110.69 µg/L
Area ratio: 0.06702
Sample type: Sample



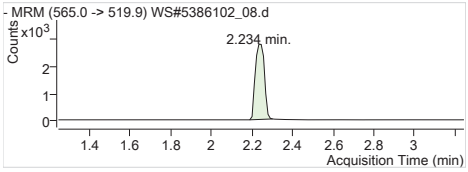



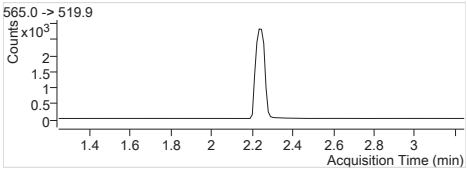

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 111.21 µg/L
Area ratio: 0.29799
Sample type: Sample



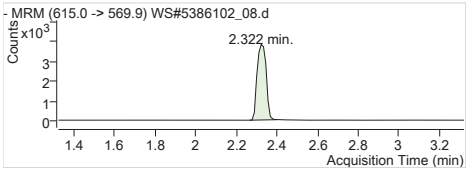



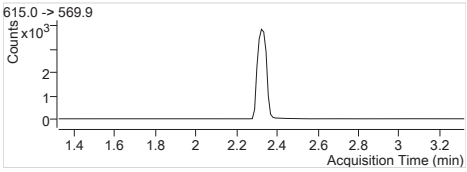

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 101.10 µg/L
Area ratio: 0.17207
Sample type: Sample



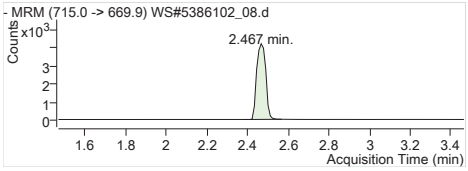



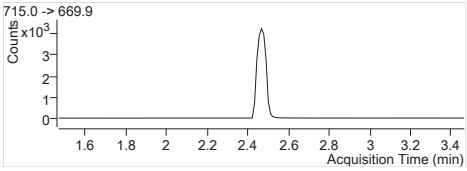

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.245)
Calc. conc. 107.44 µg/L
Area ratio: 0.21685
Sample type: Sample



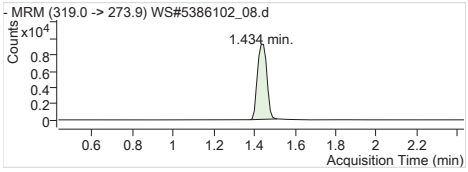



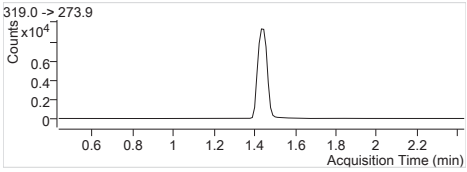

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 105.12 µg/L
Area ratio: 0.29455
Sample type: Sample



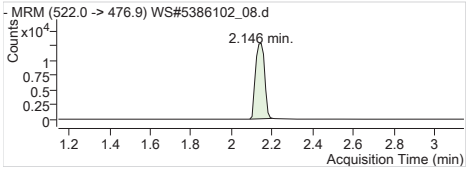



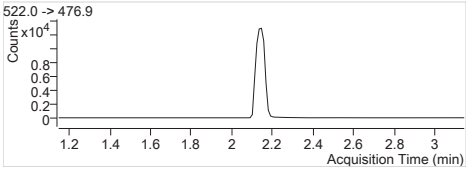

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 101.76 µg/L
Area ratio: 0.32526
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.25 µg/L
Area ratio: 0
Sample type: Sample



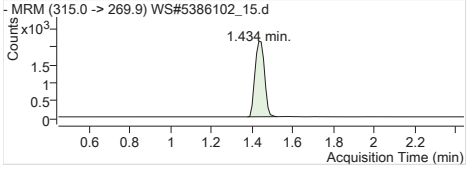

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.36 µg/L
Area ratio: 0
Sample type: Sample

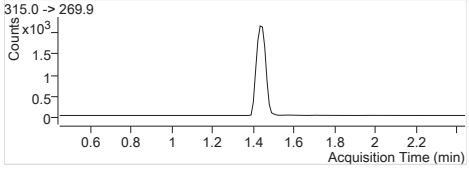
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_15.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D5 |
| **Acq. Date** | 2018/02/08 4:15:56 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

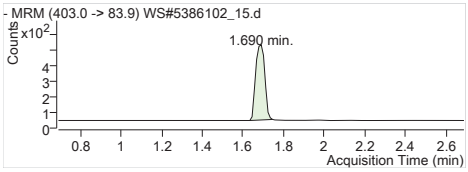
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6833 | 1.43 | 1 µg/L | | |
| MPFHxS | 1526 | 1.69 | 1 µg/L | | |
| MPFHpA | 8961 | 1.70 | 1 µg/L | | |
| MPFOA | 8841 | 1.88 | 1 µg/L | | |
| MPFOS | 1825 | 1.98 | 1 µg/L | | |
| MPFNA | 9040 | 2.02 | 1 µg/L | | |
| MPFDA | 7482 | 2.15 | 1 µg/L | | |
| MPFUnA | 8186 | 2.25 | 1 µg/L | | |
| MPFDoA | 11322 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13128 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 32514 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 42276 | 2.15 | 1 µg/L | | |

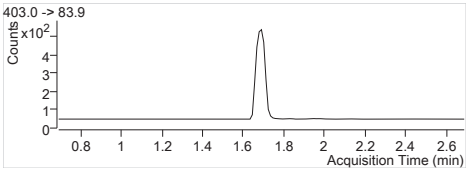
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6833 | 1.43 | - | 108.14 µg/L | - |
| 18O2-PFHxS | 1526 | 1.69 | - | 94.40 µg/L | - |
| 13C4-PFHpA | 8961 | 1.70 | - | 108.30 µg/L | - |
| 13C4-PFOA | 8841 | 1.88 | - | 101.28 µg/L | - |
| 13C4-PFOS | 1825 | 1.98 | - | 92.70 µg/L | - |
| 13C5-PFNA | 9040 | 2.02 | - | 103.77 µg/L | - |
| 13C2-PFDA | 7295 | 2.15 | - | 101.38 µg/L | - |
| 13C2-PFUnA | 8186 | 2.25 | - | 95.93 µg/L | - |
| 13C2-PFDoA | 11322 | 2.32 | - | 95.57 µg/L | - |
| 13C2-PFTeDA | 13451 | 2.47 | - | 99.54 µg/L | - |
| 13C6-PFHxA | 32514 | 1.43 | - | 2.46 µg/L | - |
| 13C9-PFDA | 42276 | 2.15 | - | 2.50 µg/L | - |



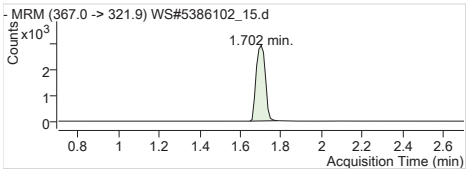



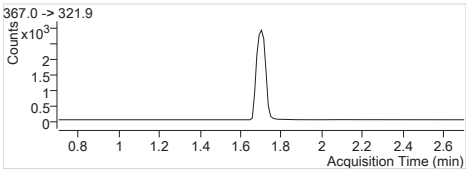

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.445) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



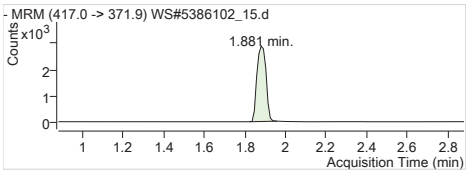



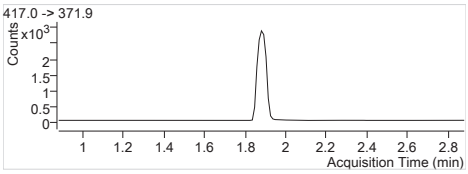

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



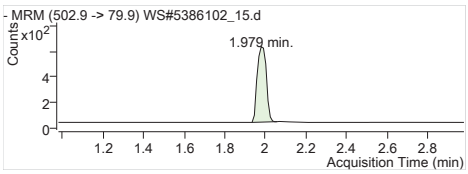



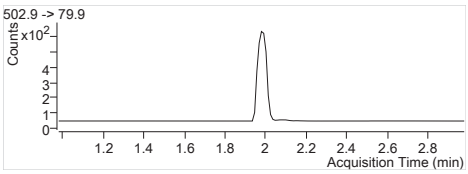

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: Sample



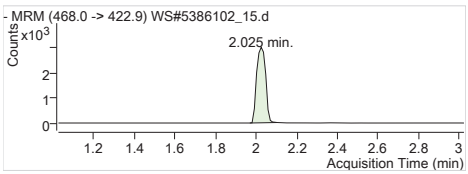



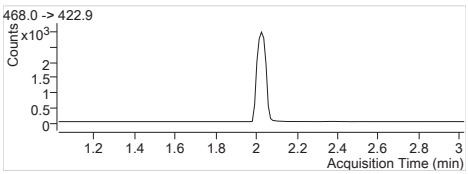

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



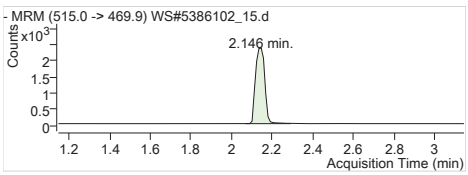



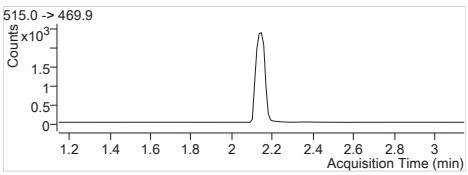

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



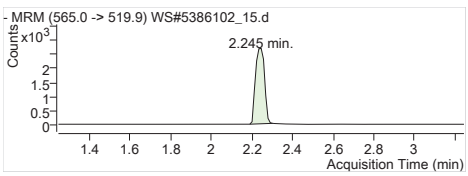



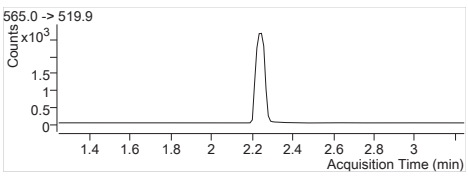

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: Sample



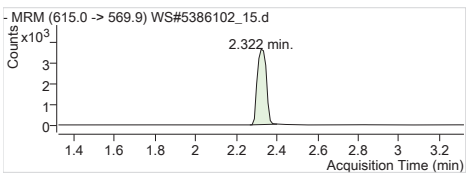



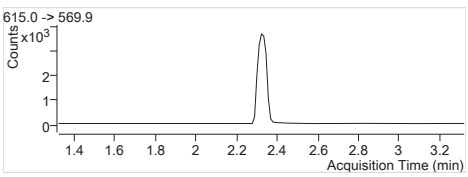

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



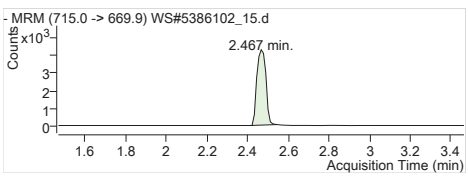



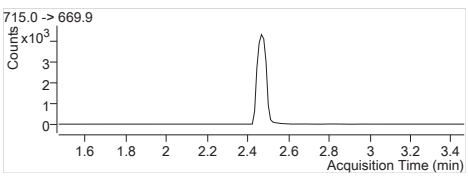

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



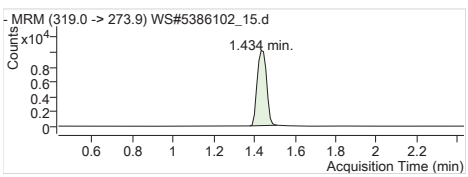



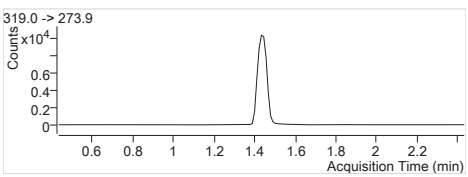

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



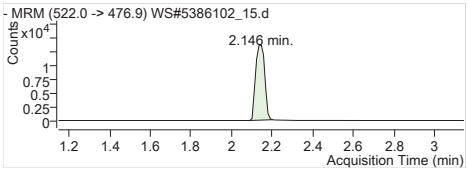



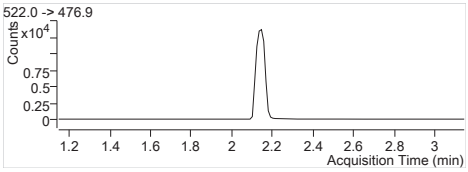

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



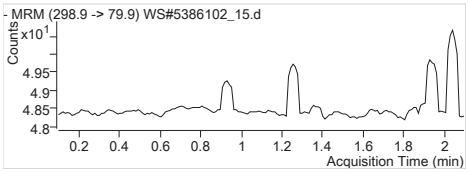



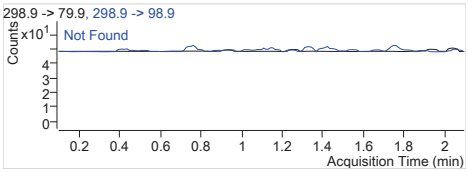

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



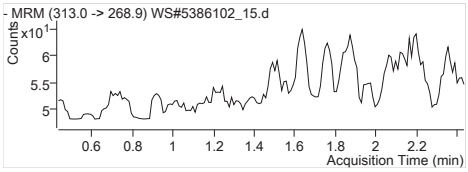



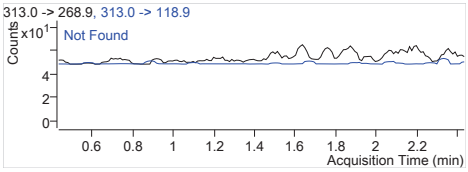

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



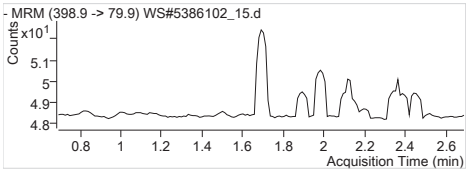



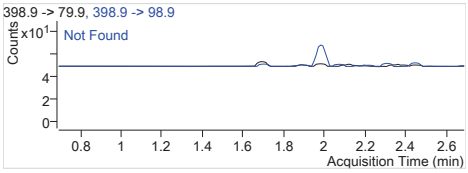

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.098)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



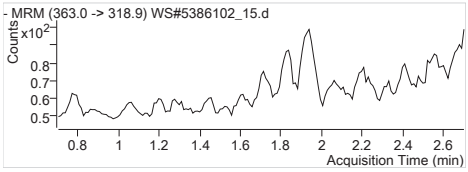



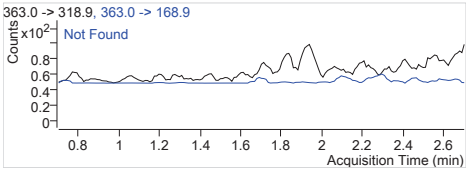

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



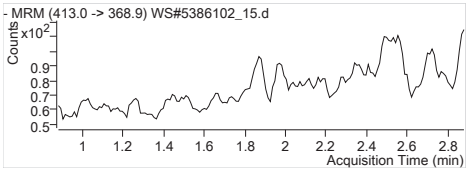



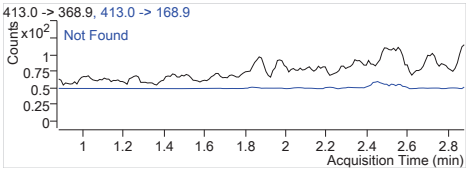

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



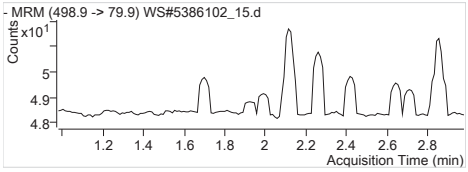



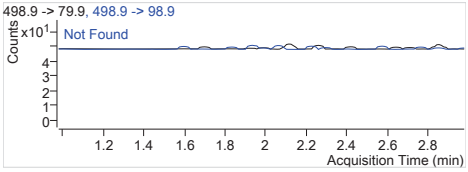

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.702)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



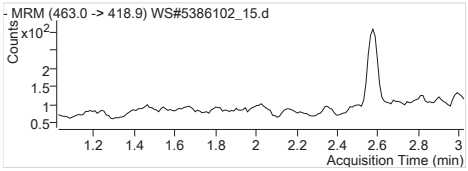



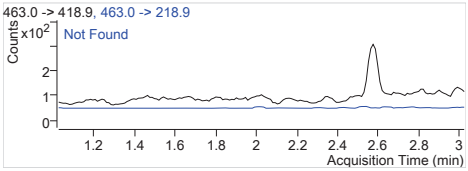

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



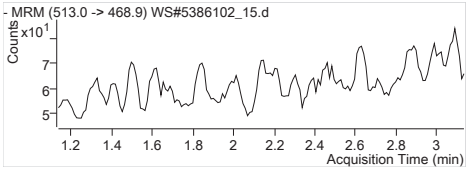



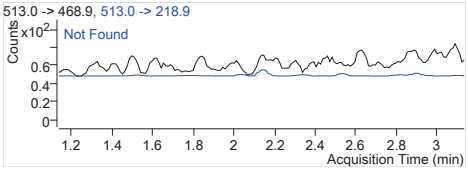

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



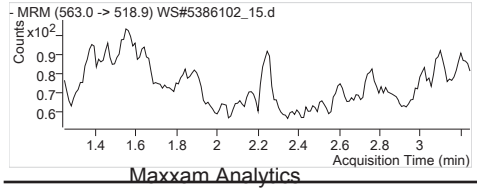



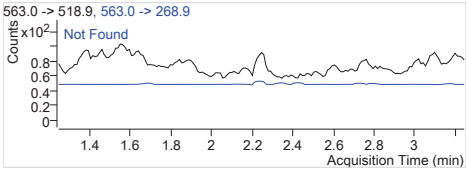

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.025)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



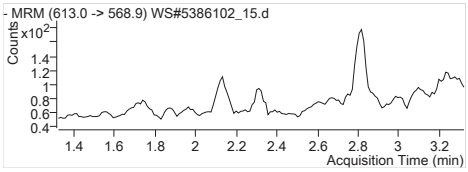



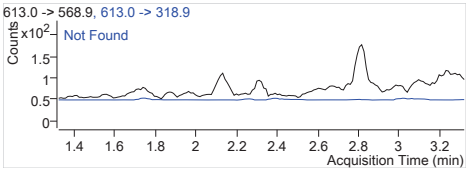

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



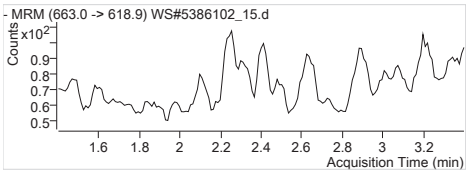



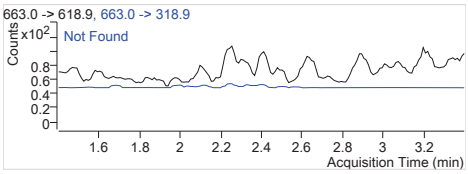

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



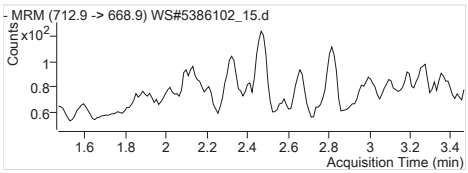



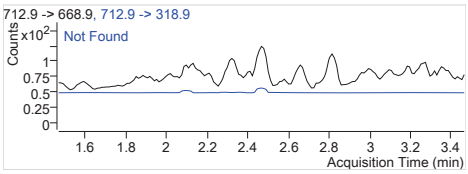

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



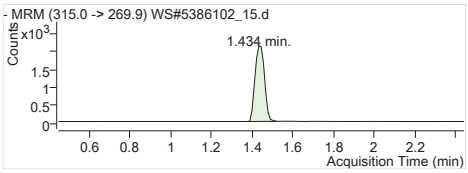



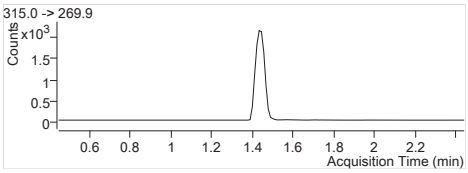

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



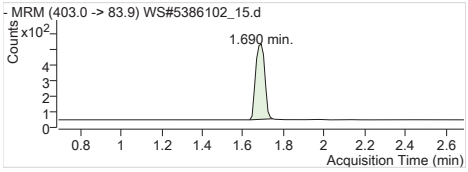



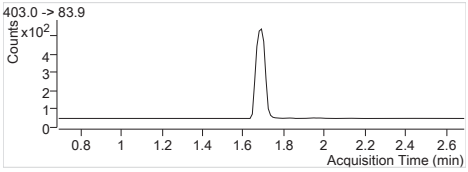

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



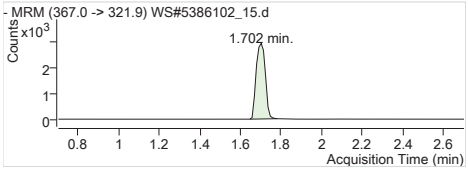



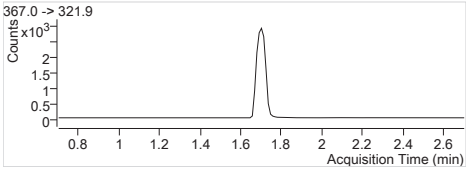

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 108.14 µg/L
Area ratio: 0.21016
Sample type: Sample



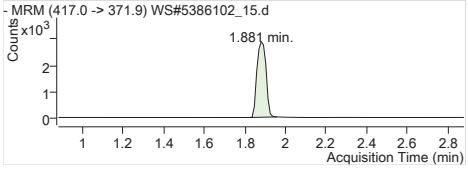



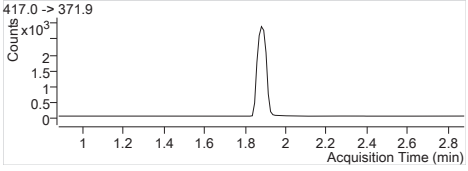

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 94.40 µg/L
Area ratio: 0.04693
Sample type: Sample



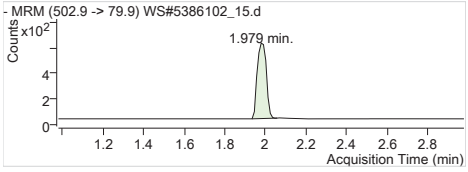



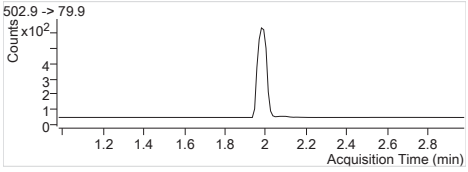

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 108.30 µg/L
Area ratio: 0.27560
Sample type: Sample



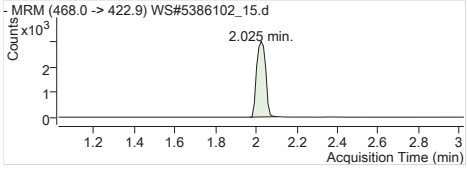



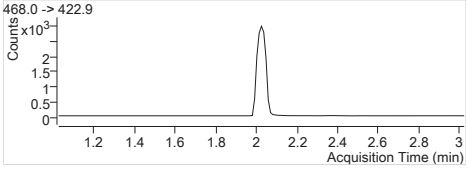

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 101.28 µg/L
Area ratio: 0.27191
Sample type: Sample



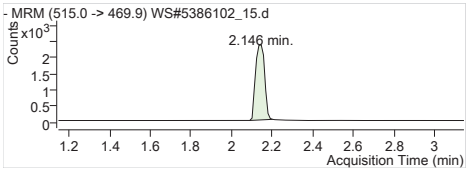



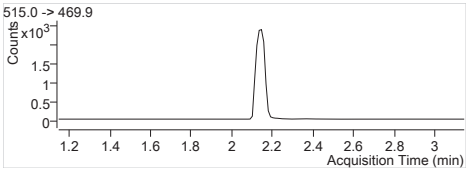

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 92.70 µg/L
Area ratio: 0.05613
Sample type: Sample



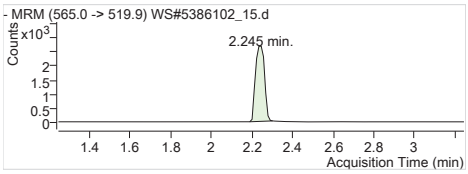



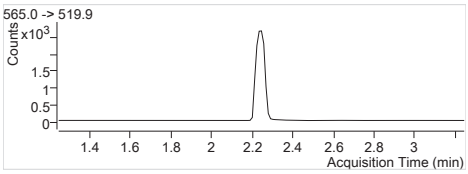

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 103.77 µg/L
Area ratio: 0.27803
Sample type: Sample



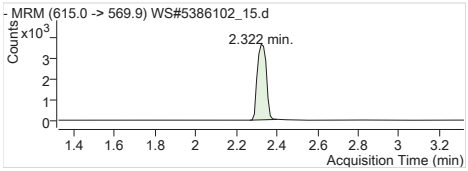



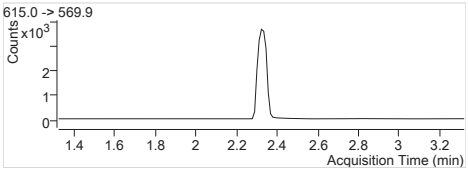

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 101.38 µg/L
Area ratio: 0.17256
Sample type: Sample



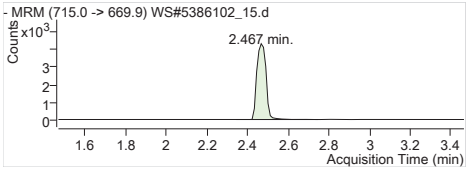



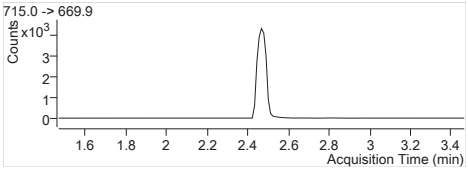

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 95.93 µg/L
Area ratio: 0.19363
Sample type: Sample



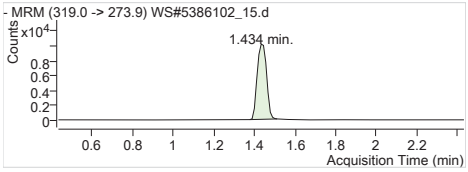



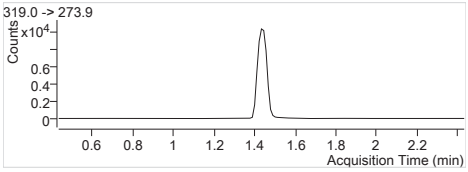

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 95.57 µg/L
Area ratio: 0.26781
Sample type: Sample



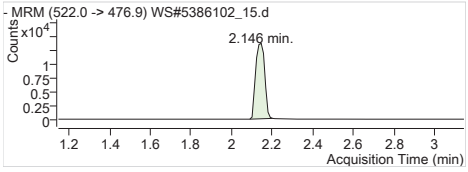



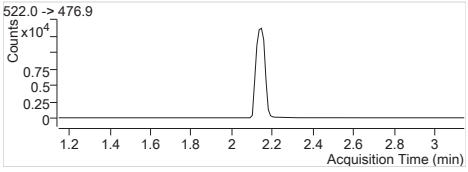

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 99.54 µg/L
Area ratio: 0.31817
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.46 µg/L
Area ratio: 0
Sample type: Sample



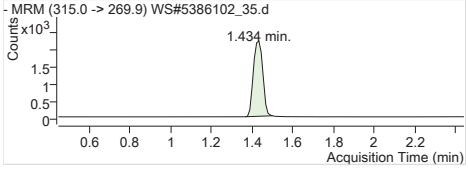

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.50 µg/L
Area ratio: 0
Sample type: Sample

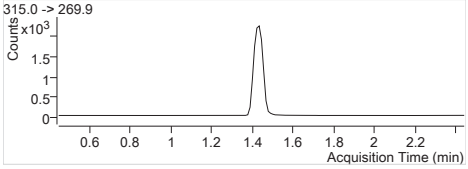
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_35.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D5 |
| **Acq. Date** | 2018/02/08 3:52:06 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

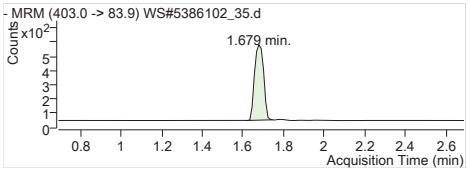
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 7067 | 1.43 | 1 µg/L | | |
| MPFHxS | 1648 | 1.68 | 1 µg/L | | |
| MPFHpA | 8807 | 1.69 | 1 µg/L | | |
| MPFOA | 9682 | 1.88 | 1 µg/L | | |
| MPFOS | 2157 | 1.98 | 1 µg/L | | |
| MPFNA | 9750 | 2.02 | 1 µg/L | | |
| MPFDA | 7579 | 2.14 | 1 µg/L | | |
| MPFUnA | 8543 | 2.23 | 1 µg/L | | |
| MPFDoA | 12146 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13728 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 33420 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 42585 | 2.13 | 1 µg/L | | |

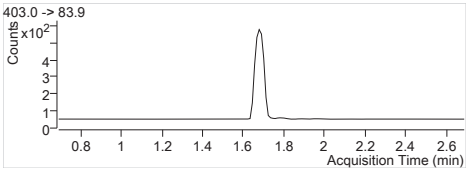
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 7067 | 1.43 | - | 108.82 µg/L | - |
| 18O2-PFHxS | 1648 | 1.68 | - | 99.18 µg/L | - |
| 13C4-PFHpA | 8807 | 1.69 | - | 103.55 µg/L | - |
| 13C4-PFOA | 9682 | 1.88 | - | 107.91 µg/L | - |
| 13C4-PFOS | 2157 | 1.98 | - | 106.60 µg/L | - |
| 13C5-PFNA | 9685 | 2.02 | - | 108.15 µg/L | - |
| 13C2-PFDA | 7425 | 2.14 | - | 102.44 µg/L | - |
| 13C2-PFUnA | 8543 | 2.23 | - | 99.39 µg/L | - |
| 13C2-PFDoA | 12146 | 2.32 | - | 101.79 µg/L | - |
| 13C2-PFTeDA | 13953 | 2.47 | - | 102.50 µg/L | - |
| 13C6-PFHxA | 33420 | 1.43 | - | 2.53 µg/L | - |
| 13C9-PFDA | 42585 | 2.13 | - | 2.52 µg/L | - |



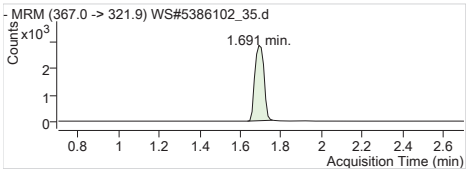



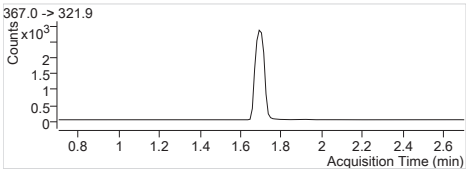

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.445) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



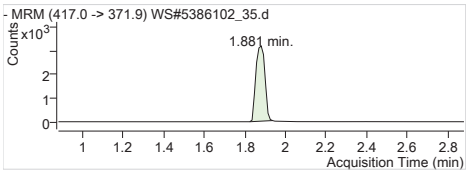



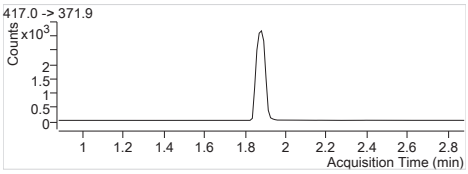

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.690)
Concentration: 1 µg/L
Sample type: Sample



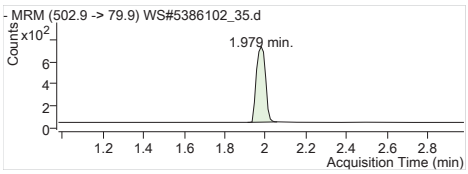



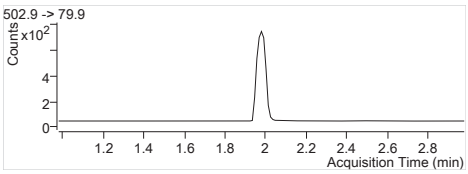

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.702)
Concentration: 1 µg/L
Sample type: Sample



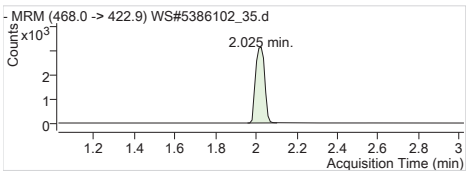



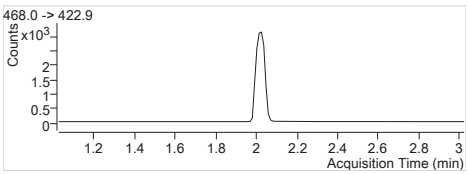

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



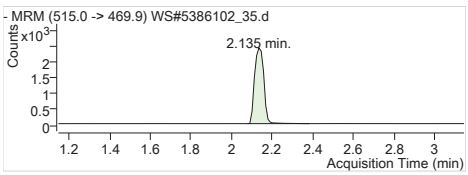



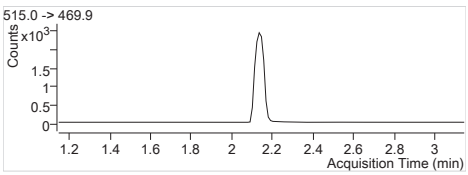

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



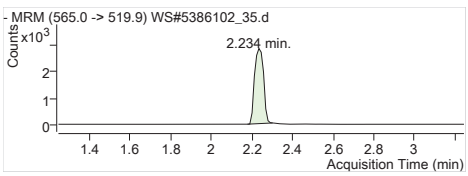



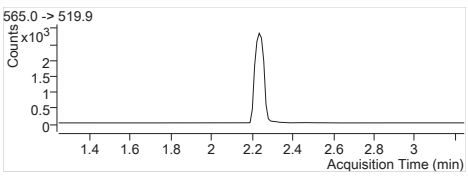

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: Sample



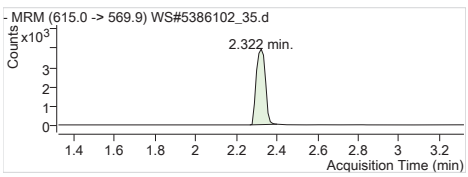



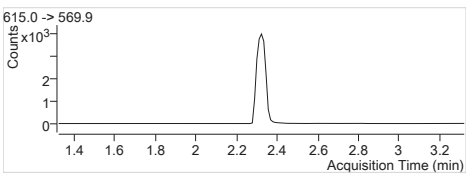

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: Sample



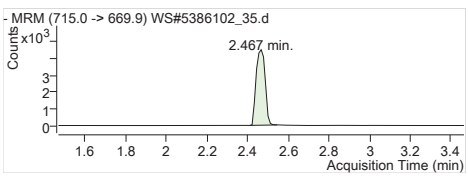



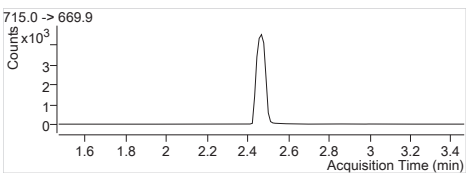

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.245)
Concentration: 1 µg/L
Sample type: Sample



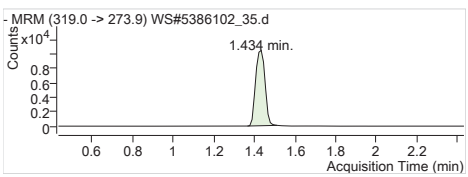



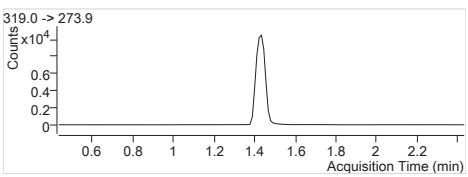

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



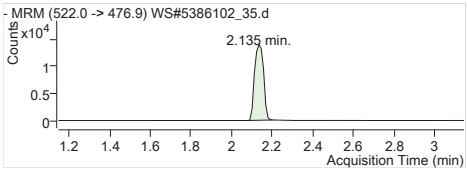



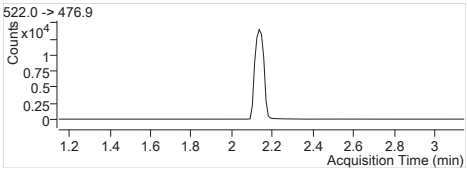

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



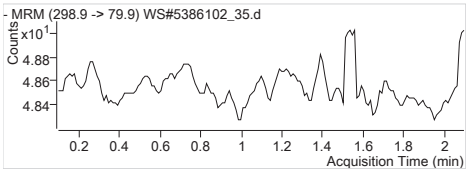



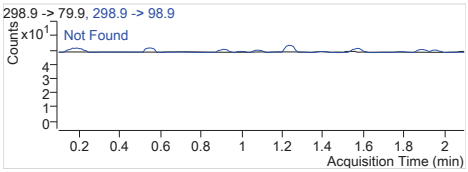

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



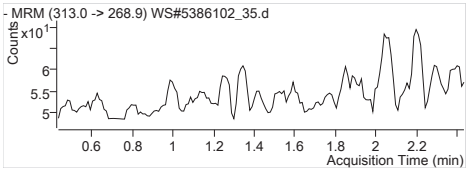



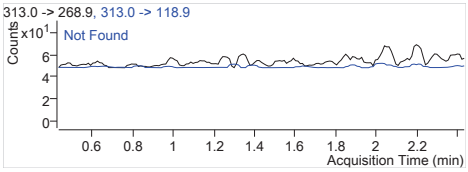

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: Sample



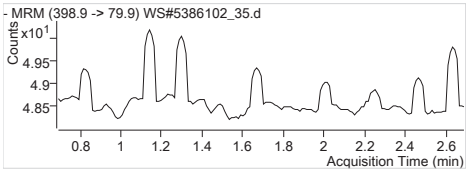



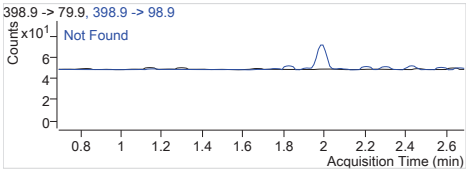

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.098)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



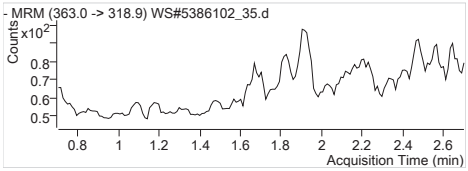



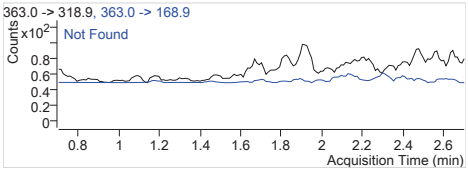

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



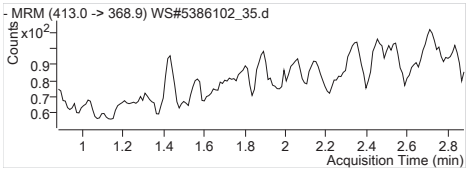



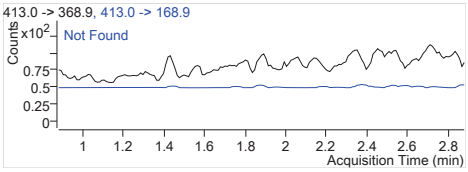

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



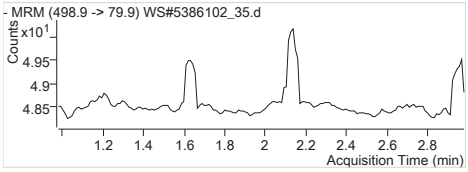



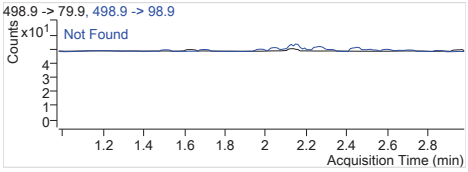

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.702)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



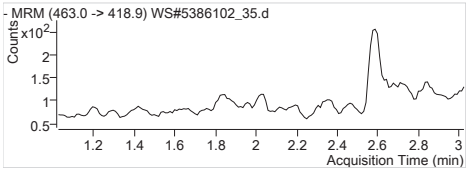



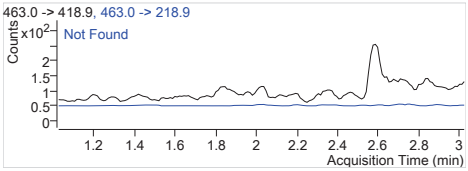

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



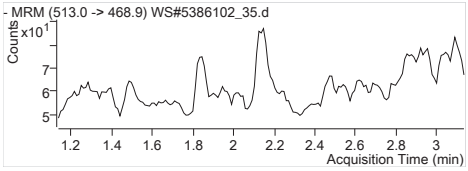



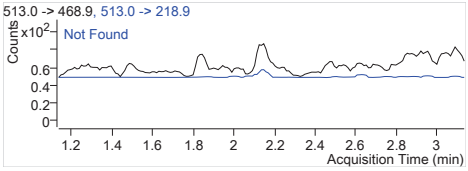

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



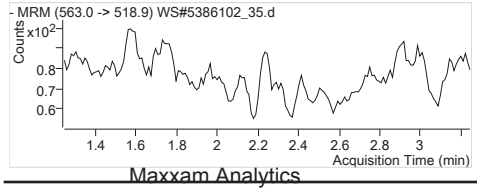



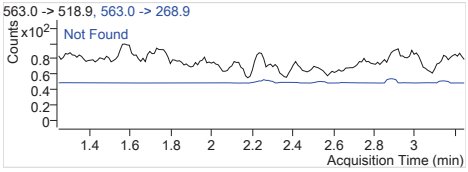

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.025)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



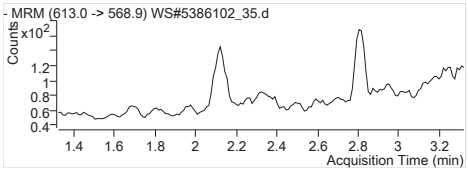



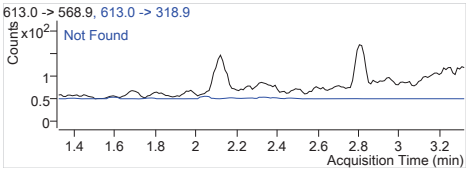

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



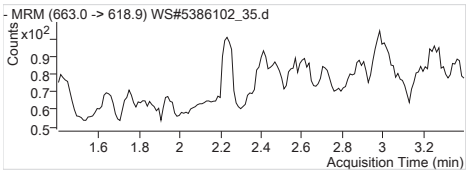



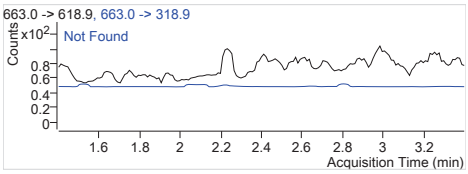

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



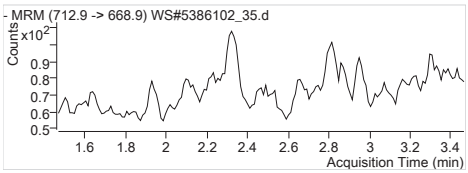



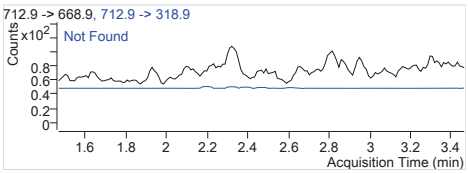

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



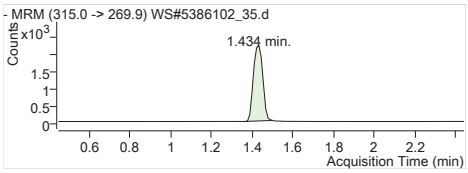



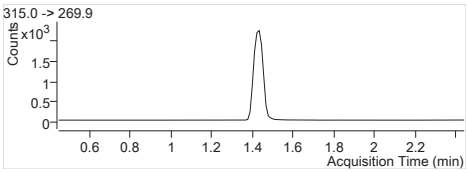

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



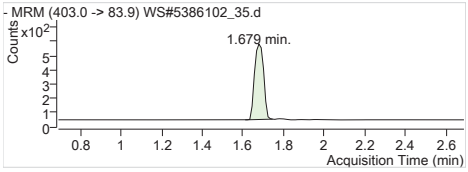



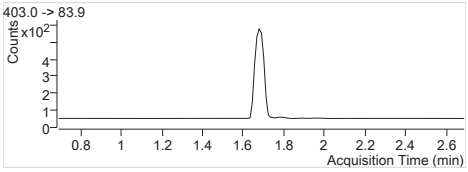

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



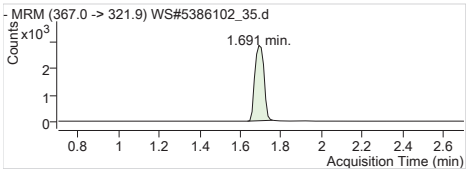



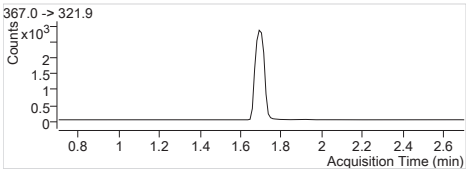

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 108.82 µg/L
Area ratio: 0.21146
Sample type: Sample



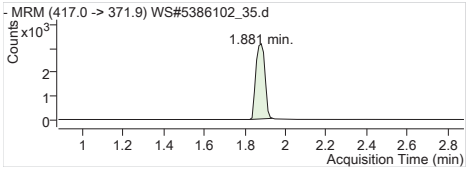



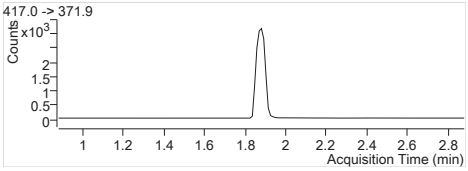

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.690)
Calc. conc. 99.18 µg/L
Area ratio: 0.04931
Sample type: Sample



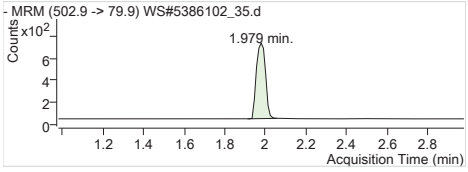



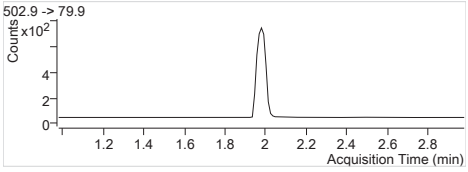

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.702)
Calc. conc. 103.55 µg/L
Area ratio: 0.26352
Sample type: Sample



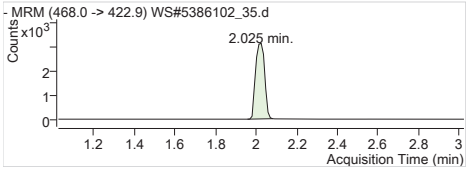



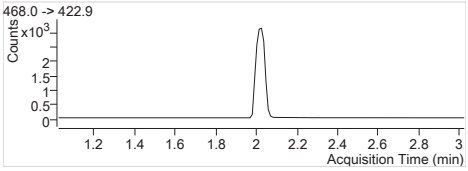

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 107.91 µg/L
Area ratio: 0.28971
Sample type: Sample



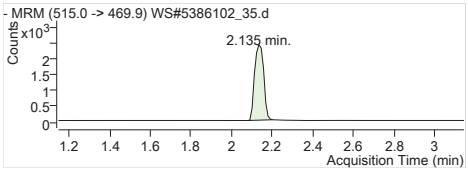



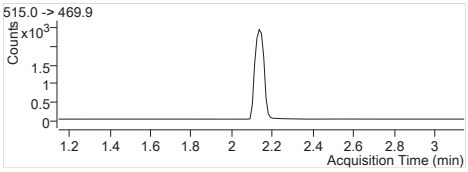

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 106.60 µg/L
Area ratio: 0.06454
Sample type: Sample



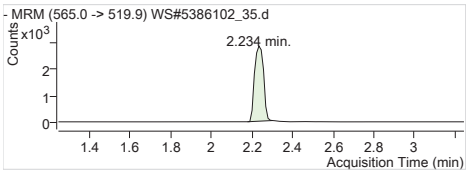



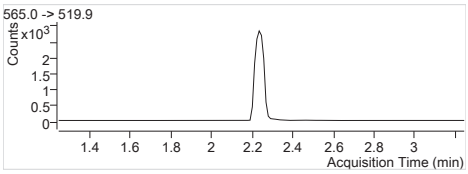

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 108.15 µg/L
Area ratio: 0.28980
Sample type: Sample



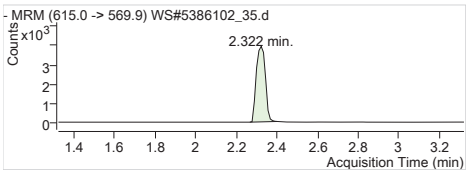



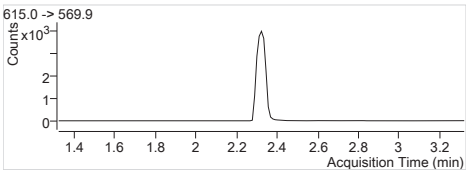

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 102.44 µg/L
Area ratio: 0.17436
Sample type: Sample



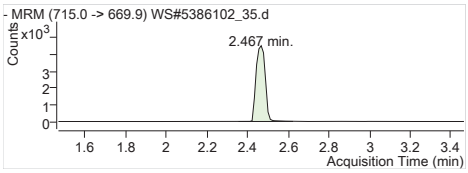



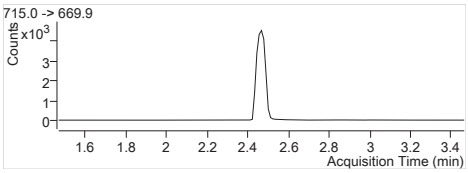

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.245)
Calc. conc. 99.39 µg/L
Area ratio: 0.20061
Sample type: Sample



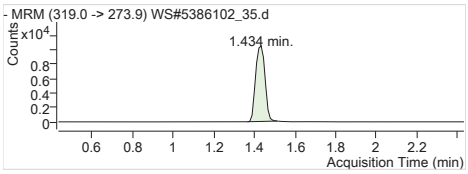



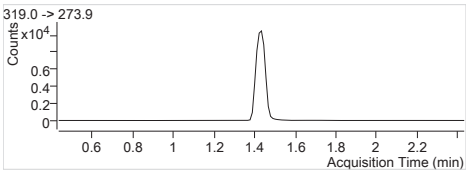

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 101.79 µg/L
Area ratio: 0.28522
Sample type: Sample



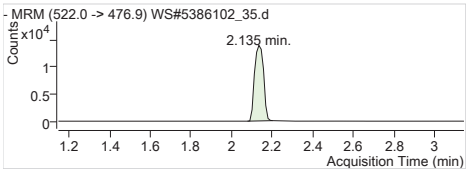



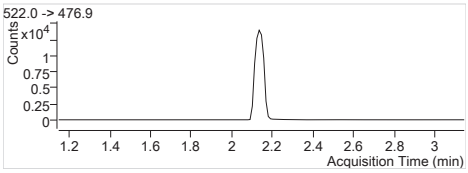

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 102.50 µg/L
Area ratio: 0.32765
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.53 µg/L
Area ratio: 0
Sample type: Sample




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 2.52 µg/L
Area ratio: 0
Sample type: Sample

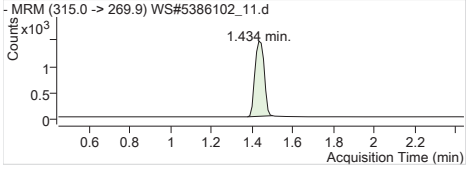
# Quantitation Results

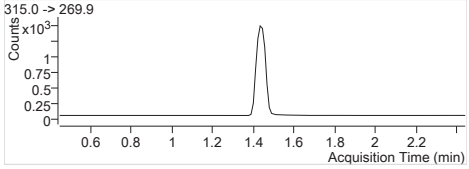
Agilent Technologies

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics | | |
| **Sample Name** | **5386102:BLANK** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_11.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D7 |
| **Acq. Date** | 2018/02/08 3:56:12 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

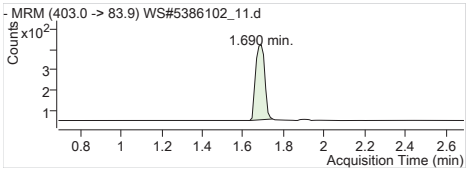
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 4499 | 1.43 | 1 µg/L | | |
| MPFHxS | 1164 | 1.69 | 1 µg/L | | |
| MPFHpA | 5568 | 1.70 | 1 µg/L | | |
| MPFOA | 5650 | 1.88 | 1 µg/L | | |
| MPFOS | 1459 | 1.98 | 1 µg/L | | |
| MPFNA | 5525 | 2.02 | 1 µg/L | | |
| MPFDA | 4056 | 2.15 | 1 µg/L | | |
| MPFUnA | 5044 | 2.25 | 1 µg/L | | |
| MPFDoA | 6622 | 2.32 | 1 µg/L | | |
| MPFTeDA | 6873 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 32505 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 40494 | 2.15 | 1 µg/L | | |

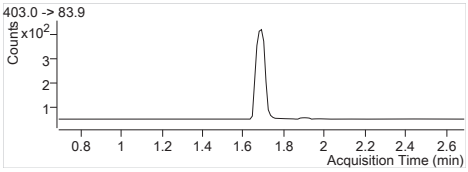
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 4499 | 1.43 | - | 71.22 µg/L | - |
| 18O2-PFHxS | 1164 | 1.69 | - | 72.02 µg/L | - |
| 13C4-PFHpA | 5568 | 1.70 | - | 67.31 µg/L | - |
| 13C4-PFOA | 5650 | 1.88 | - | 64.74 µg/L | - |
| 13C4-PFOS | 1459 | 1.98 | - | 74.13 µg/L | - |
| 13C5-PFNA | 5524 | 2.02 | - | 63.42 µg/L | - |
| 13C2-PFDA | 4032 | 2.15 | - | 58.50 µg/L | - |
| 13C2-PFUnA | 5044 | 2.25 | - | 61.71 µg/L | - |
| 13C2-PFDoA | 6622 | 2.32 | - | 58.36 µg/L | - |
| 13C2-PFTeDA | 6966 | 2.47 | - | 53.82 µg/L | - |
| 13C6-PFHxA | 32505 | 1.43 | - | 2.46 µg/L | - |
| 13C9-PFDA | 40494 | 2.15 | - | 2.40 µg/L | - |



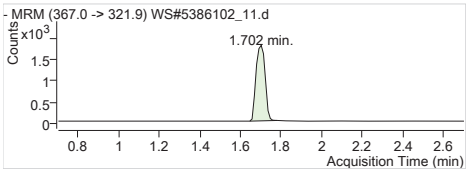



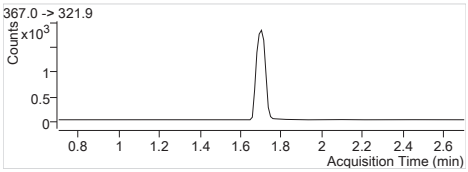

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.445) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



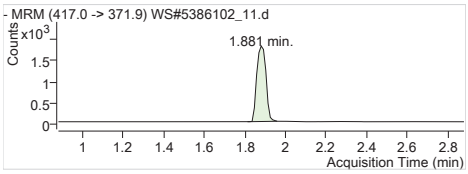



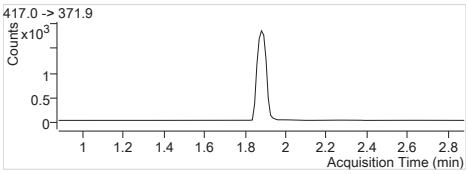

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Sample



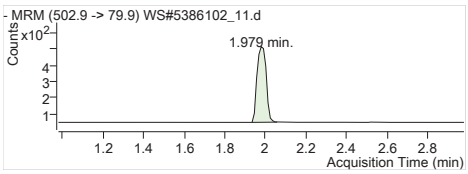



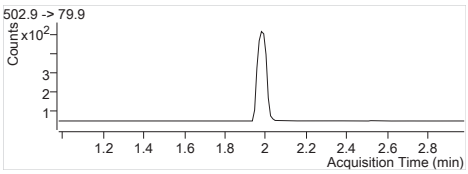

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: Sample



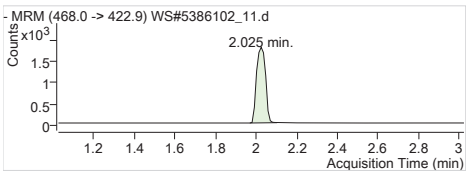



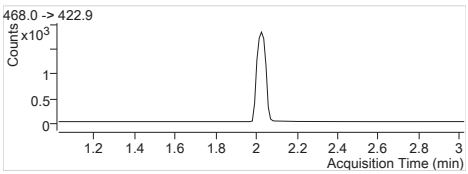

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



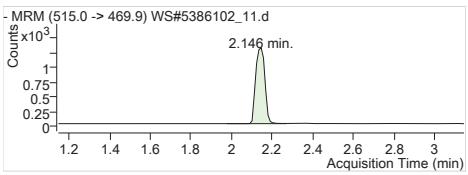



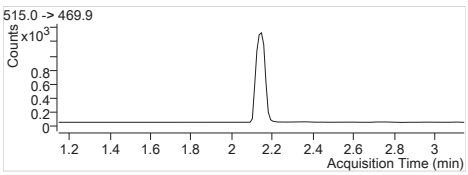

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



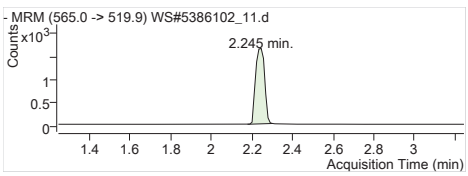



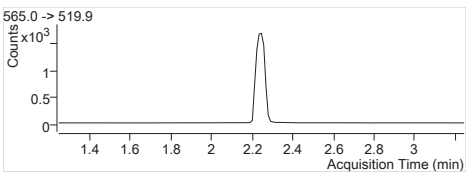

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: Sample



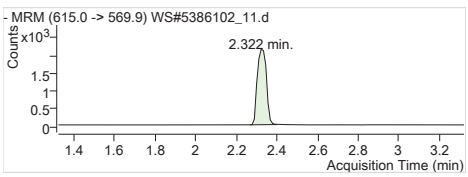



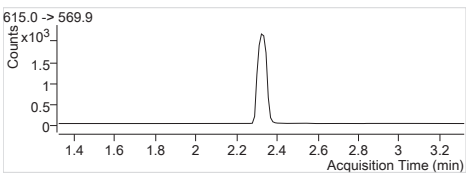

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



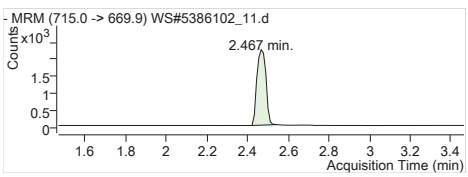



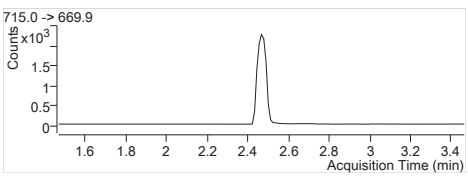

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Sample



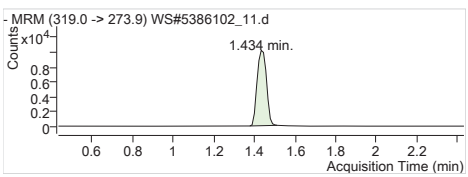



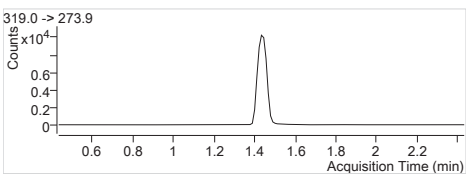

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



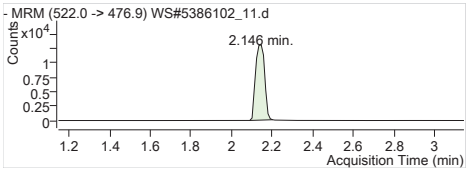



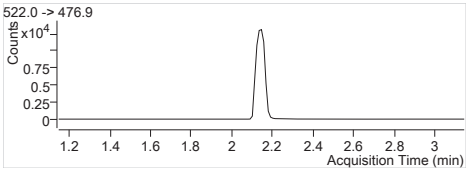

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



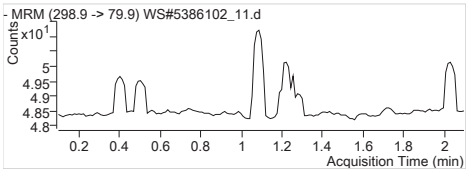



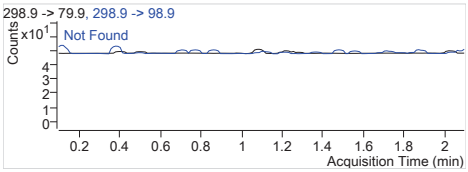

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



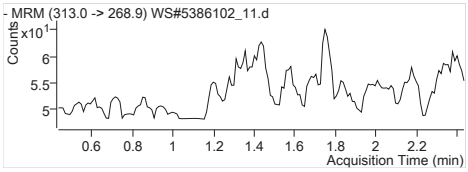



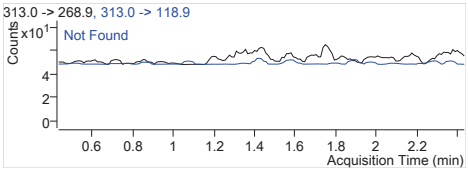

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Sample



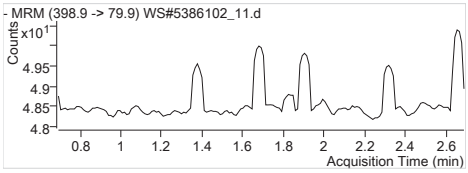



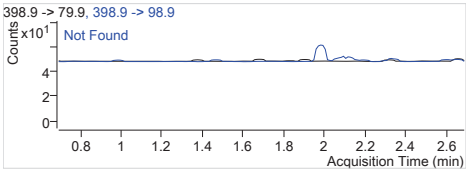

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.098)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



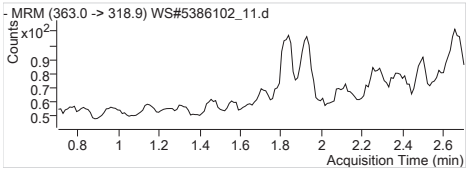



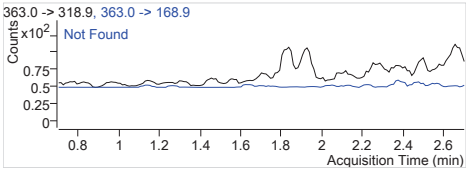

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



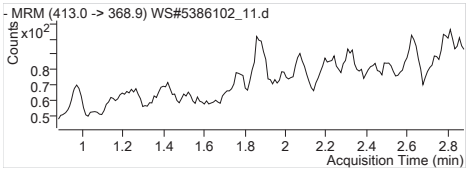



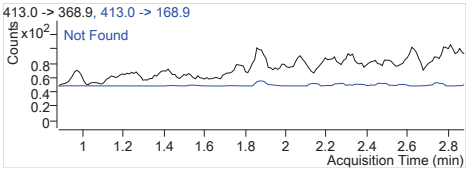

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



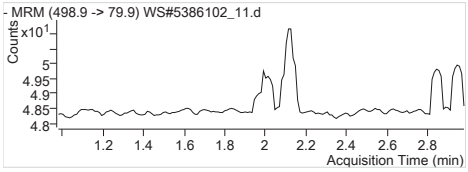



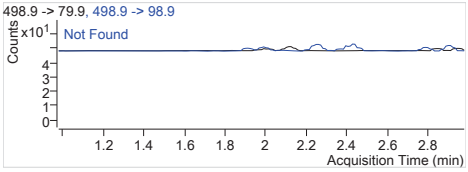

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.702)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



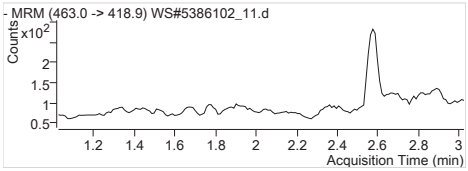



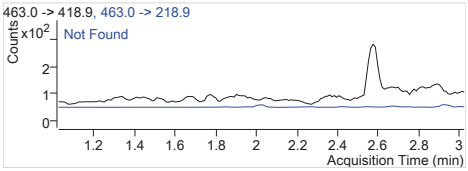

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



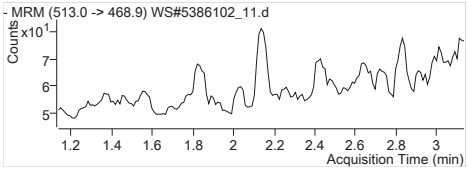



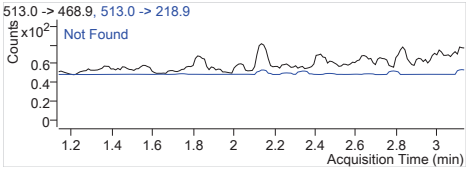

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.979)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



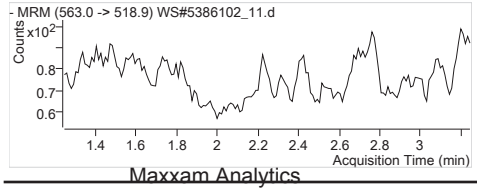



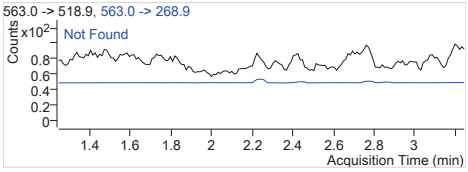

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.025)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



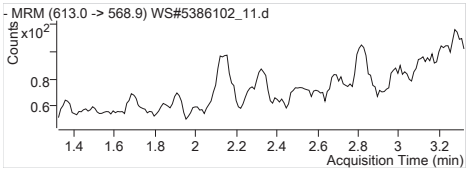



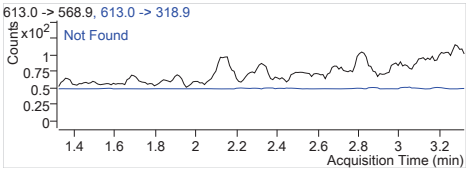

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



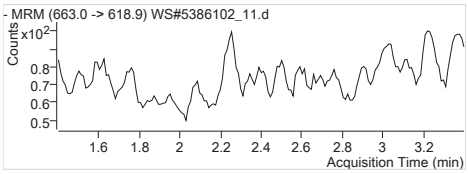



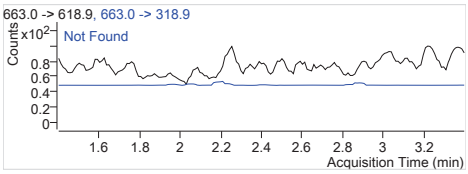

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.246)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



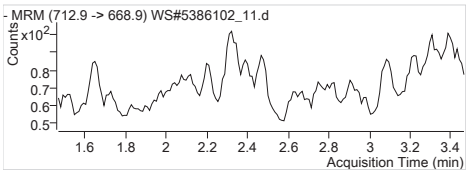



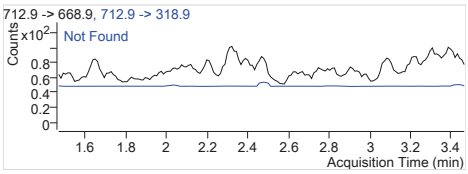

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



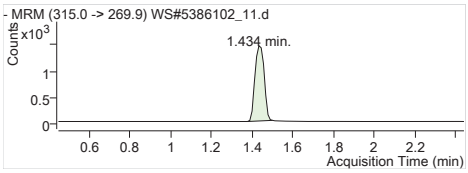



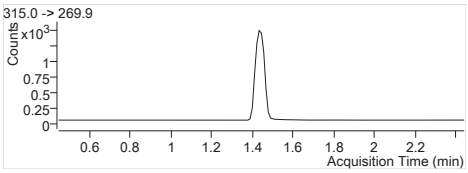

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



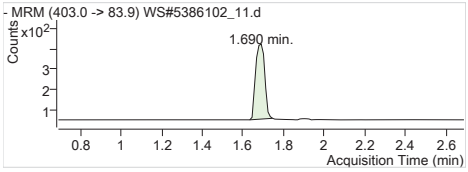



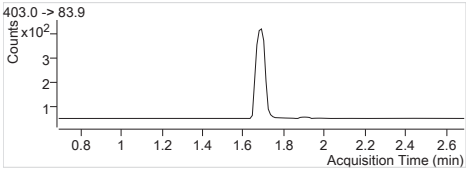

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



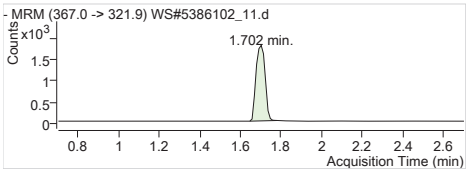



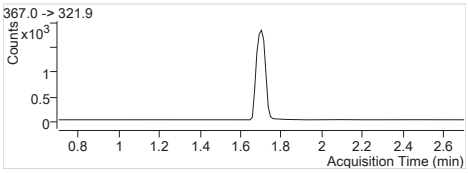

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 71.22 µg/L
Area ratio: 0.13841
Sample type: Sample



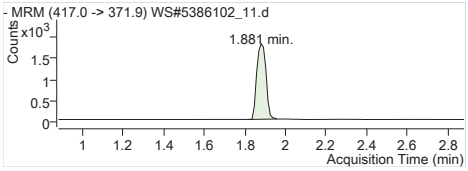



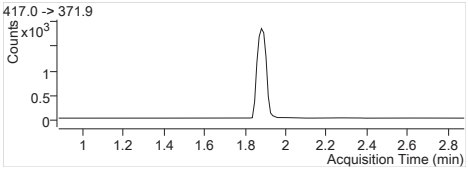

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 72.02 µg/L
Area ratio: 0.03581
Sample type: Sample



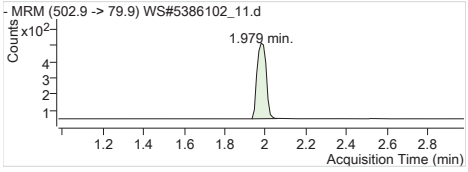



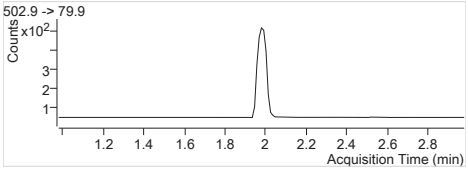

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 67.31 µg/L
Area ratio: 0.17130
Sample type: Sample



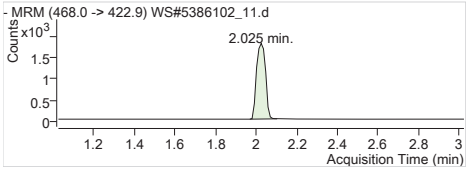



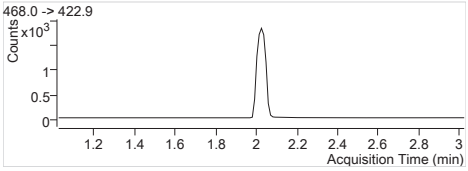

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 64.74 µg/L
Area ratio: 0.17382
Sample type: Sample



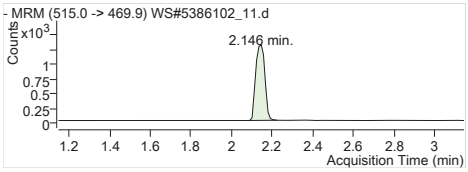



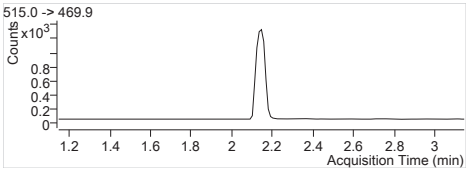

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 74.13 µg/L
Area ratio: 0.04489
Sample type: Sample



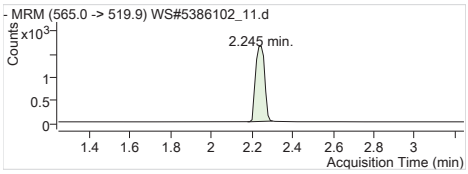



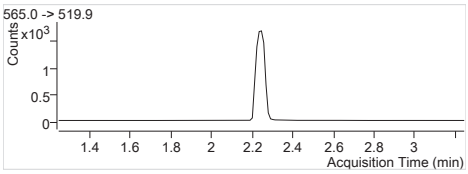

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 63.42 µg/L
Area ratio: 0.16994
Sample type: Sample



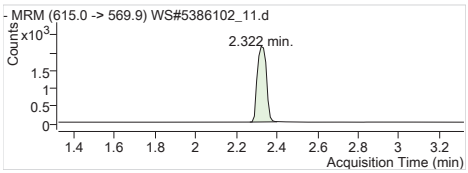



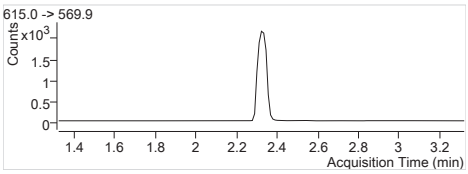

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 58.50 µg/L
Area ratio: 0.09957
Sample type: Sample



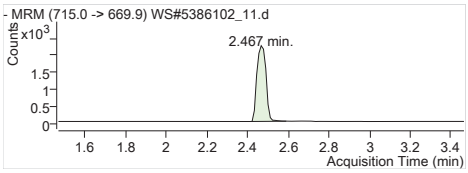



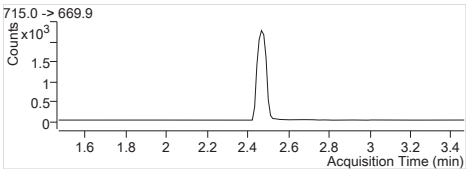

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 61.71 µg/L
Area ratio: 0.12456
Sample type: Sample



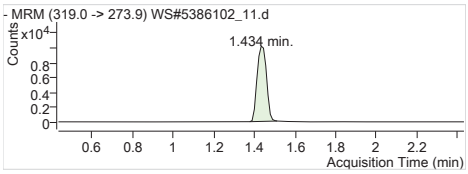



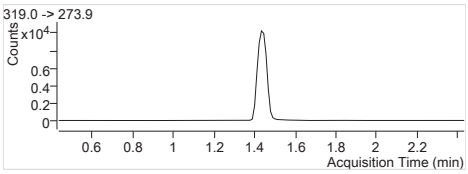

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 58.36 µg/L
Area ratio: 0.16353
Sample type: Sample



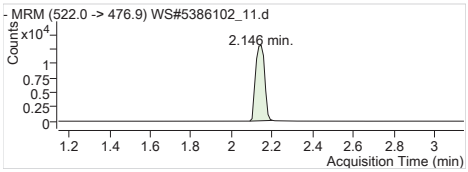



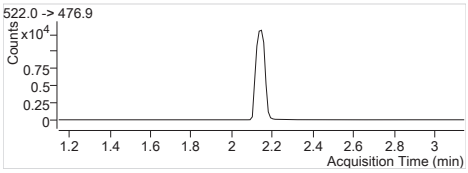

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 53.82 µg/L
Area ratio: 0.17203
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.46 µg/L
Area ratio: 0
Sample type: Sample




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.40 µg/L
Area ratio: 0
Sample type: Sample

# Quantitation Results

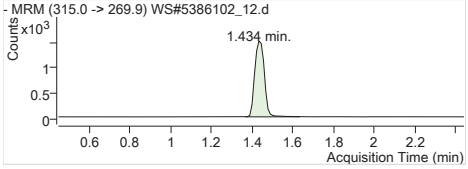
Agilent Technologies

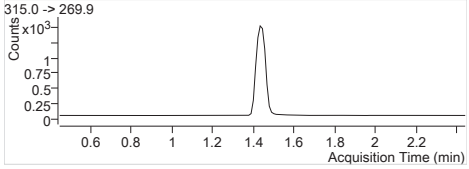
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:SPIKE** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_12.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D8 |
| **Acq. Date** | 2018/02/08 4:01:09 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

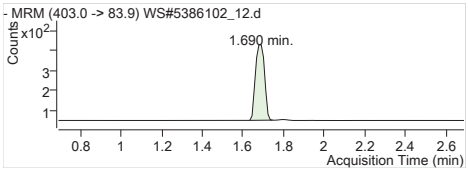
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 4868 | 1.43 | 1 µg/L | | |
| MPFHxS | 1186 | 1.69 | 1 µg/L | | |
| MPFHpA | 6260 | 1.70 | 1 µg/L | | |
| MPFOA | 6178 | 1.88 | 1 µg/L | | |
| MPFOS | 1393 | 1.98 | 1 µg/L | | |
| MPFNA | 6249 | 2.02 | 1 µg/L | | |
| MPFDA | 4691 | 2.15 | 1 µg/L | | |
| MPFUnA | 5681 | 2.25 | 1 µg/L | | |
| MPFDoA | 6977 | 2.32 | 1 µg/L | | |
| MPFTeDA | 8459 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 32560 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 42455 | 2.13 | 1 µg/L | | |

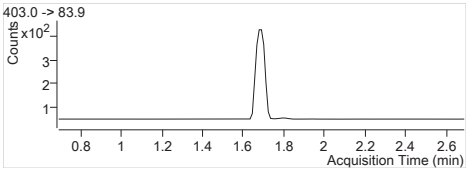
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 12269 | 1.10 | 20.80 | 0.59 µg/L | 117.21 |
| PFHxA 1 | 40084 | 1.43 | 20.80 | 0.49 µg/L | 97.57 |
| PFHxS 1 | 11213 | 1.69 | 20.80 | 0.55 µg/L | 109.72 |
| PFHpA 1 | 50894 | 1.70 | 20.80 | 0.49 µg/L | 98.65 |
| PFOA 1 | 56390 | 1.88 | 20.80 | 0.53 µg/L | 105.18 |
| PFOS 1 | 10996 | 1.98 | 20.80 | 0.52 µg/L | 103.22 |
| PFNA 1 | 50420 | 2.03 | 20.80 | 0.53 µg/L | 106.22 |
| PFDA 1 | 52320 | 2.14 | 20.80 | 0.55 µg/L | 110.82 |
| PFUnA 1 | 53728 | 2.23 | 20.80 | 0.48 µg/L | 97.05 |
| PFDoA 1 | 68507 | 2.32 | 20.80 | 0.57 µg/L | 113.43 |
| PFTrDA 1 | 75923 | 2.40 | 20.80 | 0.52 µg/L | 104.45 |
| PFTeDA 1 | 62672 | 2.47 | 20.80 | 0.51 µg/L | 102.11 |
| 13C2-PFHxA | 4868 | 1.43 | 100.00 | 76.94 µg/L | 76.94 |
| 18O2-PFHxS | 1186 | 1.69 | 100.00 | 73.26 µg/L | 73.26 |
| 13C4-PFHpA | 6260 | 1.70 | 100.00 | 75.55 µg/L | 75.55 |
| 13C4-PFOA | 6178 | 1.88 | 100.00 | 70.68 µg/L | 70.68 |
| 13C4-PFOS | 1393 | 1.98 | 100.00 | 70.66 µg/L | 70.66 |
| 13C5-PFNA | 6249 | 2.02 | 100.00 | 71.63 µg/L | 71.63 |
| 13C2-PFDA | 4604 | 2.15 | 100.00 | 63.71 µg/L | 63.71 |
| 13C2-PFUnA | 5681 | 2.25 | 100.00 | 66.30 µg/L | 66.30 |
| 13C2-PFDoA | 6977 | 2.32 | 100.00 | 58.65 µg/L | 58.65 |
| 13C2-PFTeDA | 8616 | 2.47 | 100.00 | 63.49 µg/L | 63.49 |
| 13C6-PFHxA | 32560 | 1.43 | 100.00 | 2.46 µg/L | 102.64 |
| 13C9-PFDA | 42455 | 2.13 | 100.00 | 2.51 µg/L | 104.69 |



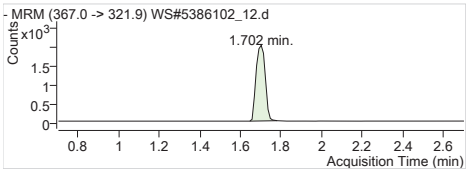



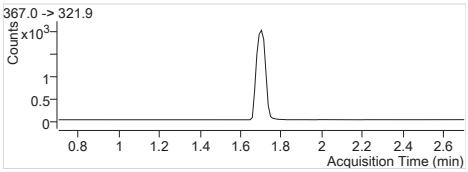

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.445) |
| Concentration: | 1 µg/L |
| Sample type: | QC |



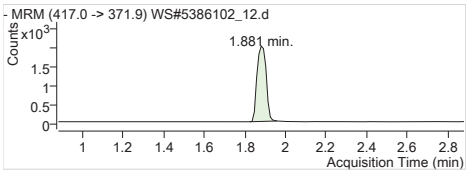



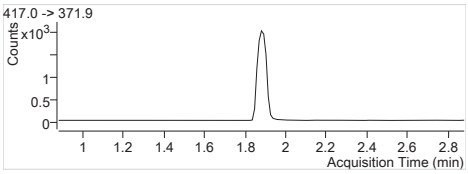

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: QC



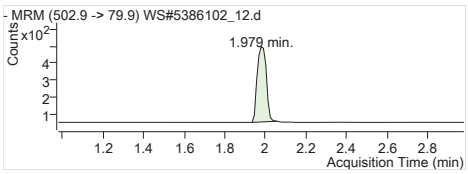



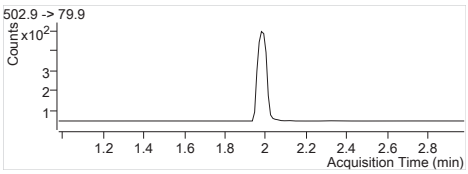

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: QC



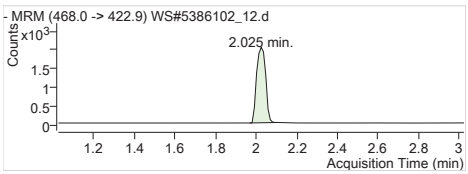



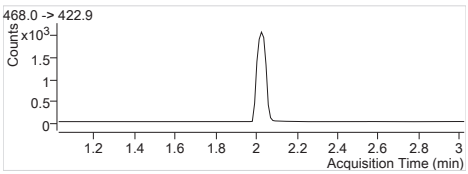

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: QC



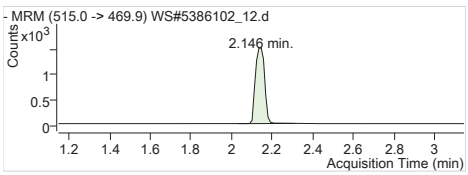



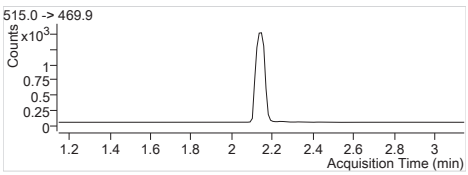

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: QC



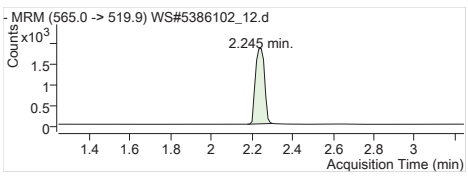



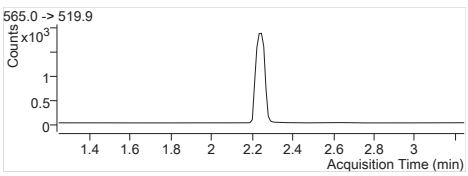

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: QC



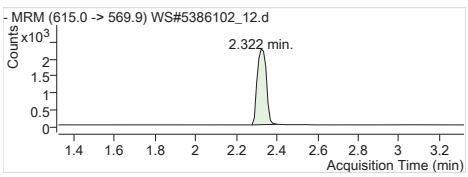



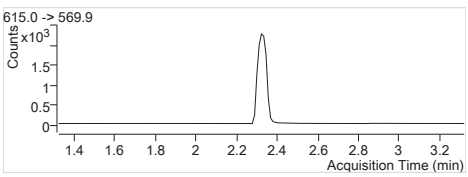

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: QC



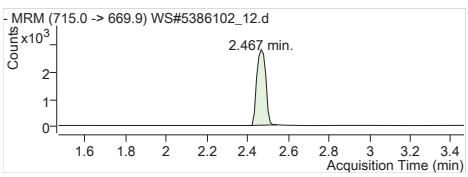



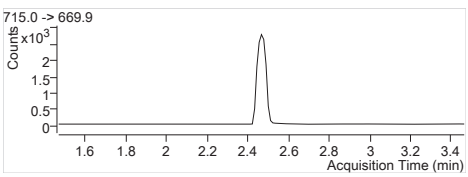

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: QC



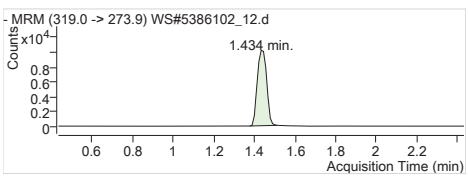



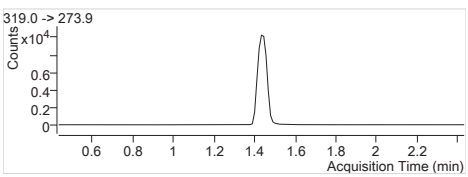

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: QC



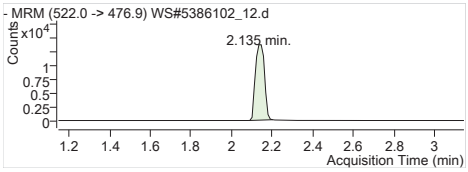



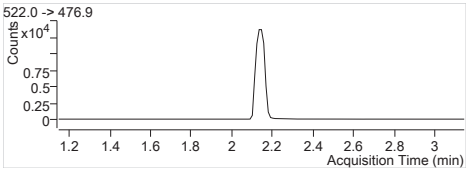

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: QC



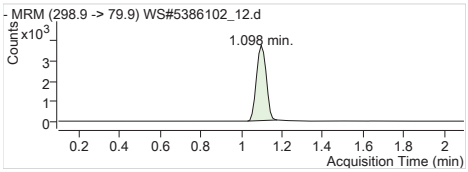



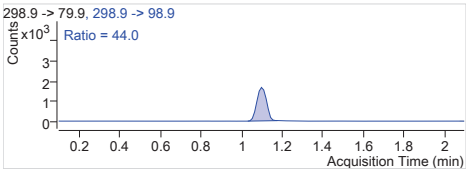

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: QC



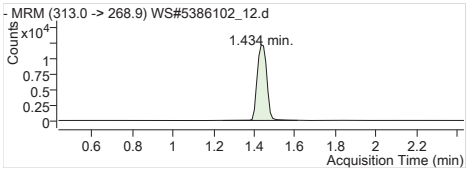



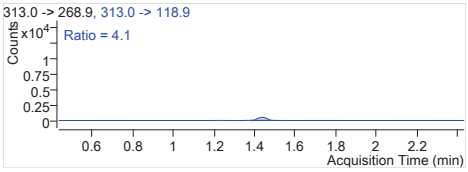

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: QC



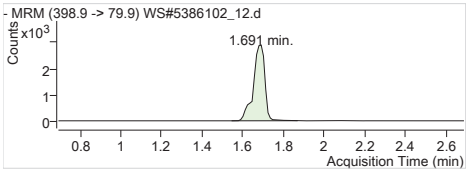



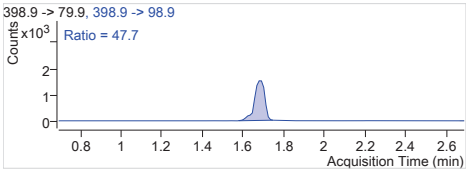

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.098 (1.098)
Calc. conc. 0.59 µg/L
Area ratio: 10.34486
Sample type: QC



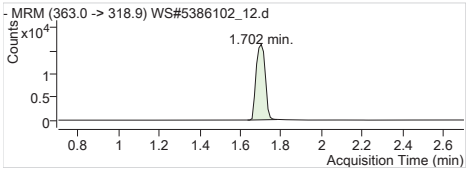



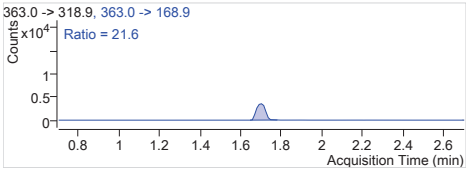

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 0.49 µg/L
Area ratio: 8.23418
Sample type: QC



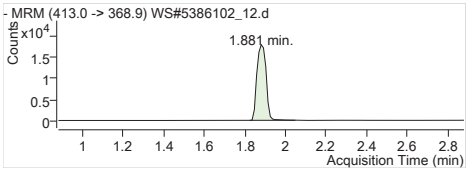



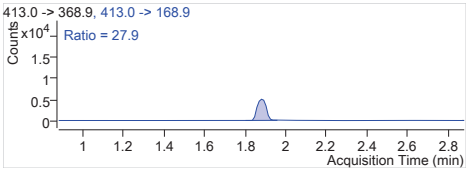

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.55 µg/L
Area ratio: 9.45447
Sample type: QC



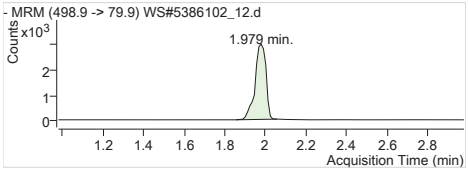



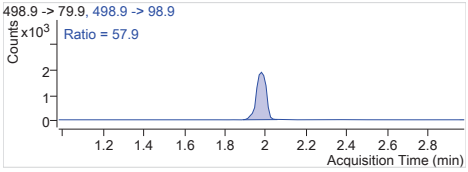

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 0.49 µg/L
Area ratio: 8.13003
Sample type: QC



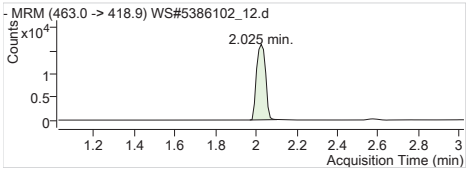



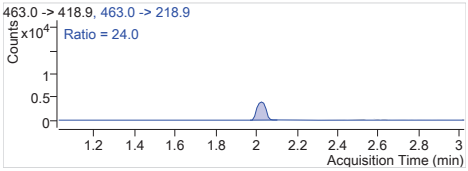

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 0.53 µg/L
Area ratio: 9.12755
Sample type: QC



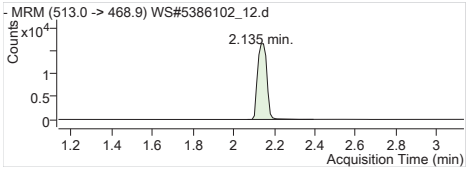



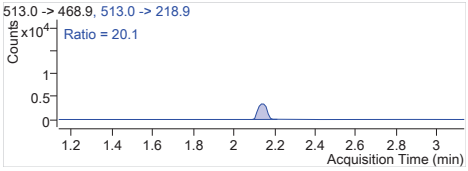

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 0.52 µg/L
Area ratio: 7.89375
Sample type: QC



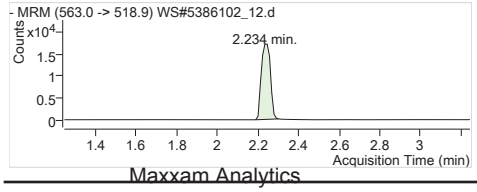



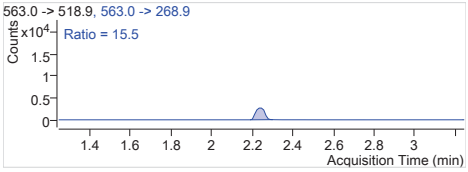

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 0.53 µg/L
Area ratio: 8.06849
Sample type: QC



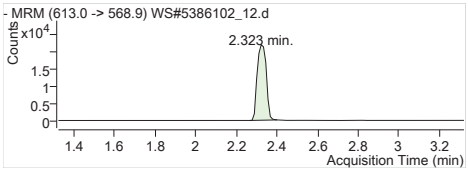



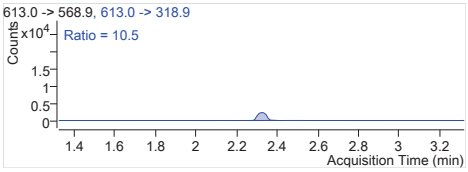

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 0.55 µg/L
Area ratio: 11.15327
Sample type: QC



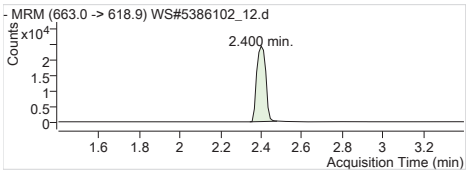



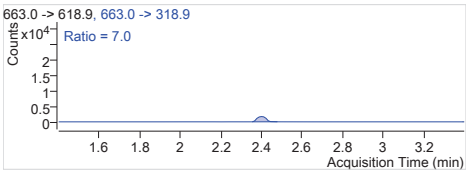

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.246)
Calc. conc. 0.48 µg/L
Area ratio: 9.45749
Sample type: QC



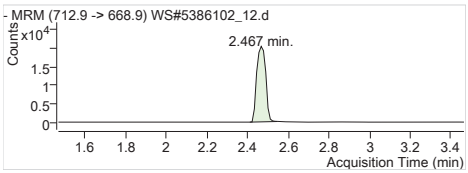



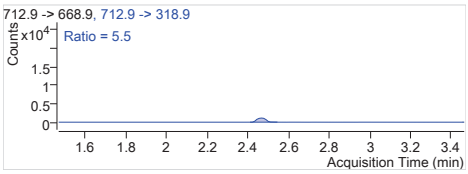

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.57 µg/L
Area ratio: 9.81898
Sample type: QC



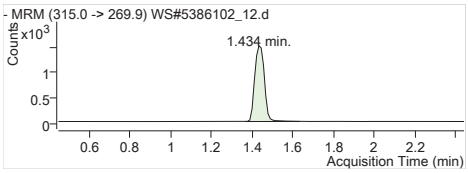



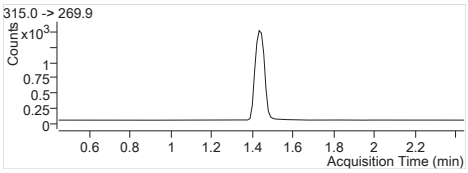

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.52 µg/L
Area ratio: 8.97541
Sample type: QC



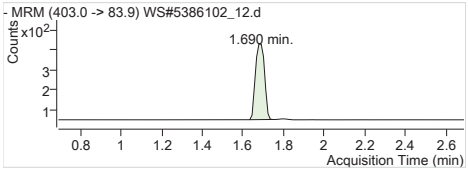



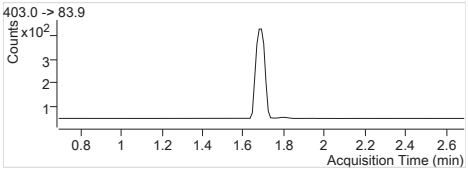

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 0.51 µg/L
Area ratio: 7.40891
Sample type: QC



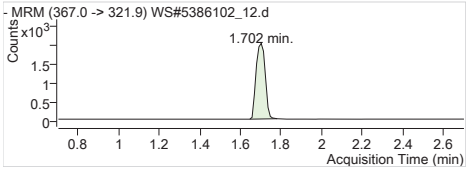



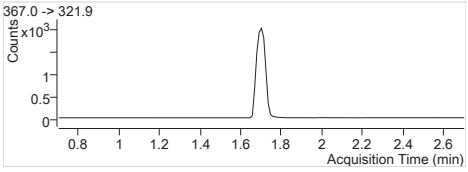

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 76.94 µg/L
Area ratio: 0.14951
Sample type: QC



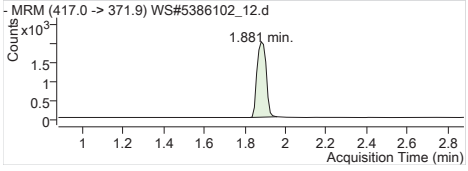



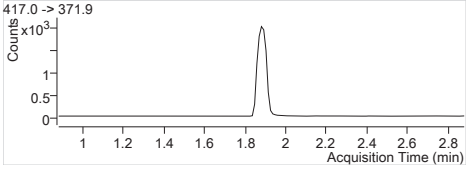

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 73.26 µg/L
Area ratio: 0.03643
Sample type: QC



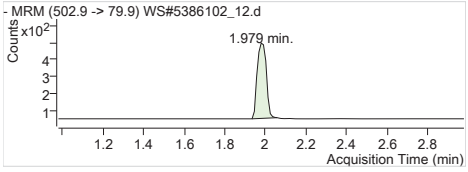



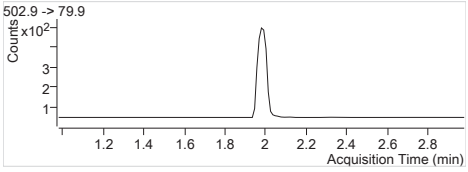

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 75.55 µg/L
Area ratio: 0.19226
Sample type: QC



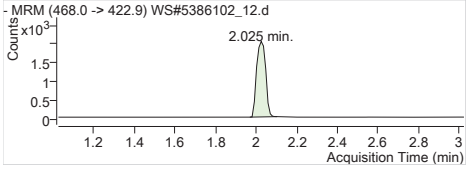



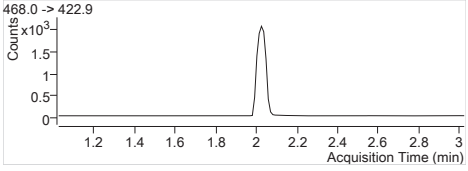

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 70.68 µg/L
Area ratio: 0.18974
Sample type: QC



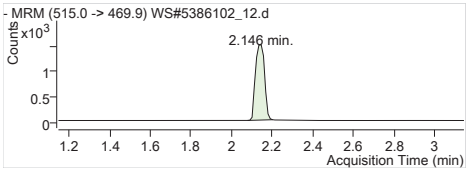



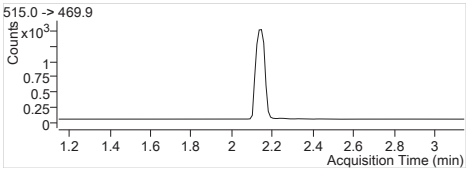

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 70.66 µg/L
Area ratio: 0.04278
Sample type: QC



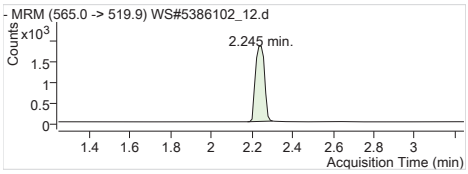



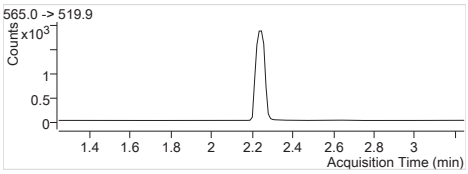

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 71.63 µg/L
Area ratio: 0.19192
Sample type: QC



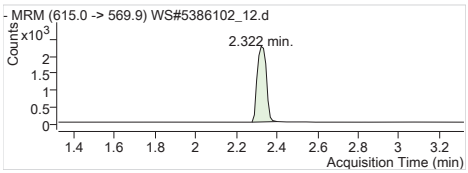



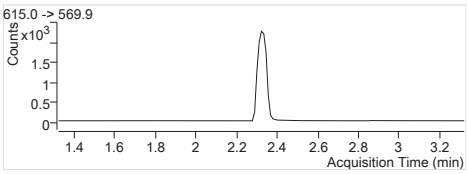

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 63.71 µg/L
Area ratio: 0.10844
Sample type: QC



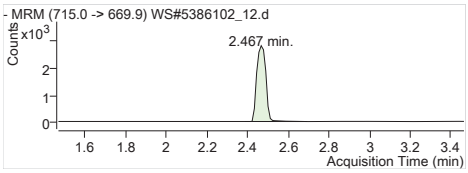



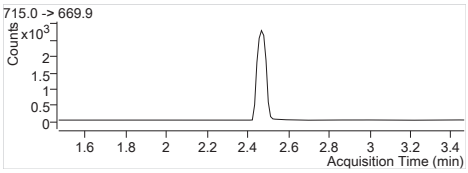

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 66.30 µg/L
Area ratio: 0.13381
Sample type: QC



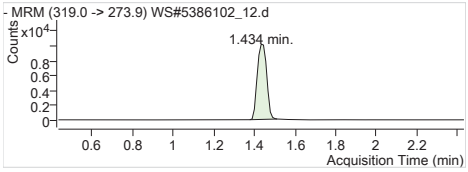



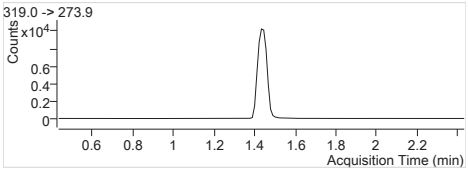

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 58.65 µg/L
Area ratio: 0.16434
Sample type: QC



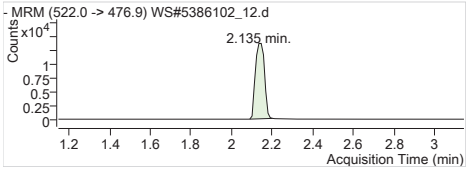



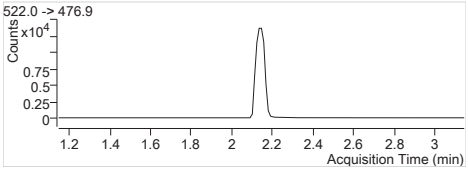

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 63.49 µg/L
Area ratio: 0.20294
Sample type: QC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.46 µg/L
Area ratio: 0
Sample type: QC



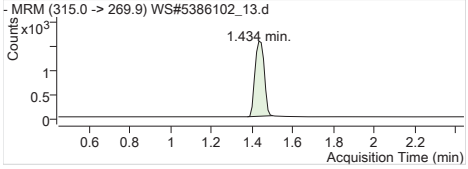

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 2.51 µg/L
Area ratio: 0
Sample type: QC

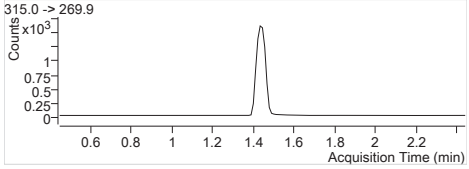
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:MTRX SPK** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_13.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D9 |
| **Acq. Date** | 2018/02/08 4:06:05 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | FZH347 | | |

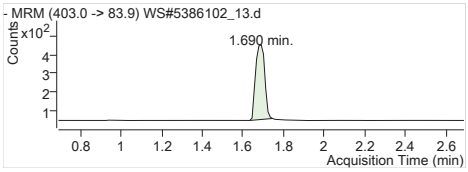
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 4890 | 1.43 | 1 µg/L | | |
| MPFHxS | 1253 | 1.69 | 1 µg/L | | |
| MPFHpA | 6222 | 1.70 | 1 µg/L | | |
| MPFOA | 6766 | 1.88 | 1 µg/L | | |
| MPFOS | 1543 | 1.98 | 1 µg/L | | |
| MPFNA | 6828 | 2.02 | 1 µg/L | | |
| MPFDA | 5262 | 2.15 | 1 µg/L | | |
| MPFUnA | 5610 | 2.25 | 1 µg/L | | |
| MPFDoA | 7380 | 2.32 | 1 µg/L | | |
| MPFTeDA | 5060 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 29803 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 37721 | 2.15 | 1 µg/L | | |

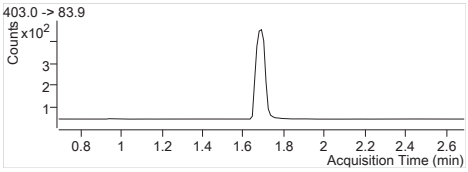
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 12447 | 1.10 | 20.80 | 0.56 µg/L | 112.57 |
| PFHxA 1 | 40734 | 1.43 | 20.80 | 0.49 µg/L | 98.70 |
| PFHxS 1 | 11506 | 1.68 | 20.80 | 0.53 µg/L | 106.56 |
| PFHpA 1 | 51765 | 1.70 | 20.80 | 0.50 µg/L | 100.94 |
| PFOA 1 | 57953 | 1.88 | 20.80 | 0.49 µg/L | 98.74 |
| PFOS 1 | 11261 | 1.98 | 20.80 | 0.48 µg/L | 95.47 |
| PFNA 1 | 49357 | 2.03 | 20.80 | 0.48 µg/L | 95.18 |
| PFDA 1 | 51987 | 2.14 | 20.80 | 0.49 µg/L | 98.16 |
| PFUnA 1 | 53717 | 2.23 | 20.80 | 0.49 µg/L | 98.25 |
| PFDoA 1 | 67583 | 2.32 | 20.80 | 0.53 µg/L | 105.81 |
| PFTrDA 1 | 69032 | 2.40 | 20.80 | 0.79 µg/L | 158.52 |
| PFTeDA 1 | 56924 | 2.47 | 20.80 | 0.77 µg/L | 154.91 |
| 13C2-PFHxA | 4890 | 1.43 | 100.00 | 84.43 µg/L | 84.43 |
| 18O2-PFHxS | 1253 | 1.69 | 100.00 | 84.56 µg/L | 84.56 |
| 13C4-PFHpA | 6222 | 1.70 | 100.00 | 82.04 µg/L | 82.04 |
| 13C4-PFOA | 6766 | 1.88 | 100.00 | 84.56 µg/L | 84.56 |
| 13C4-PFOS | 1543 | 1.98 | 100.00 | 85.51 µg/L | 85.51 |
| 13C5-PFNA | 6828 | 2.02 | 100.00 | 85.50 µg/L | 85.50 |
| 13C2-PFDA | 5112 | 2.15 | 100.00 | 79.62 µg/L | 79.62 |
| 13C2-PFUnA | 5610 | 2.25 | 100.00 | 73.68 µg/L | 73.68 |
| 13C2-PFDoA | 7380 | 2.32 | 100.00 | 69.82 µg/L | 69.82 |
| 13C2-PFTeDA | 5165 | 2.47 | 100.00 | 42.84 µg/L | 42.84 |
| 13C6-PFHxA | 29803 | 1.43 | 100.00 | 2.25 µg/L | 93.95 |
| 13C9-PFDA | 37721 | 2.15 | 100.00 | 2.23 µg/L | 93.01 |



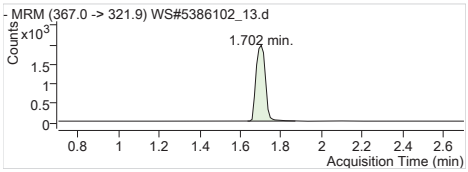



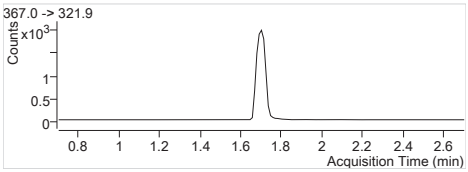

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.445) |
| Concentration: | 1 µg/L |
| Sample type: | QC |



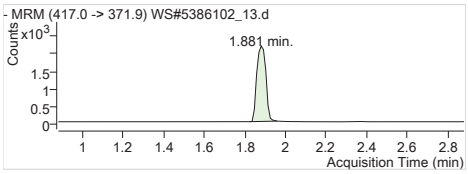



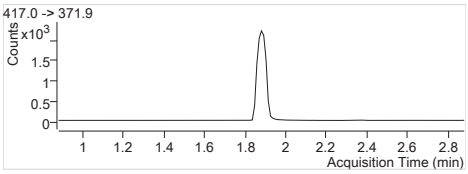

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: QC



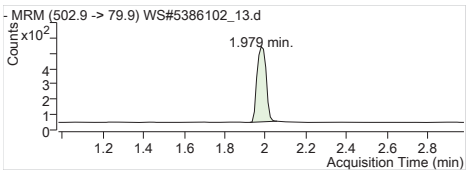



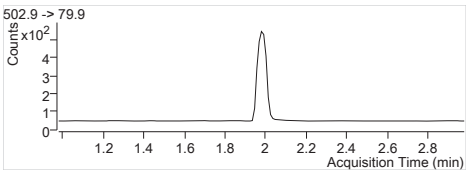

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: QC



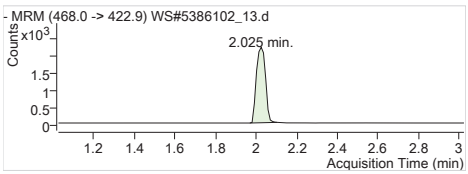



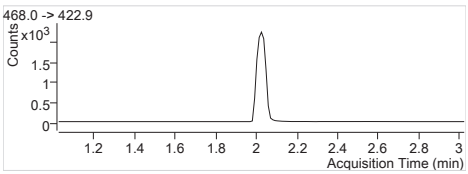

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: QC



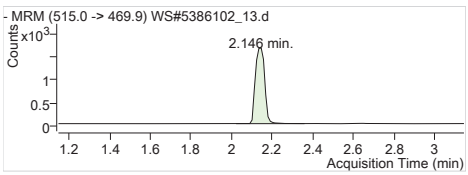



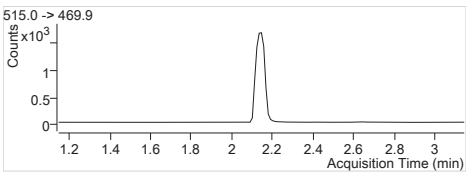

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: QC



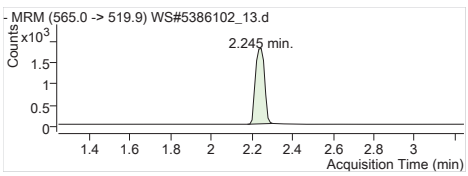



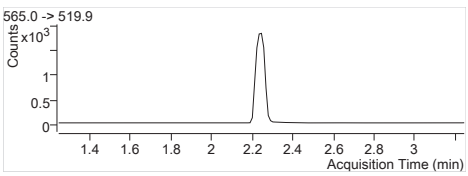

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: QC



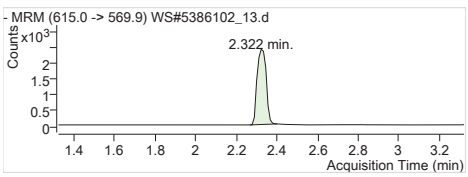



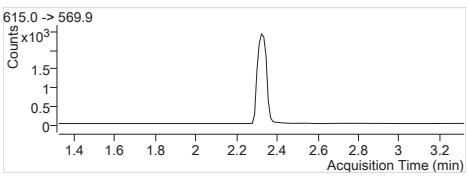

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: QC



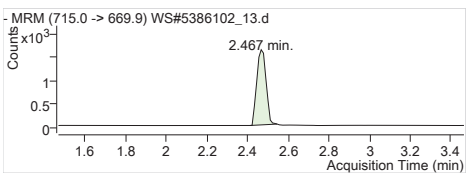



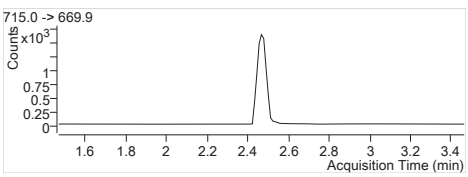

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: QC



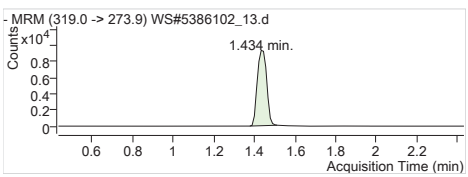



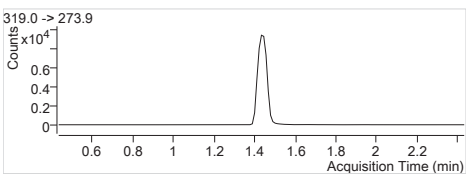

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: QC



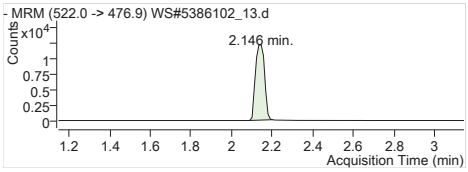



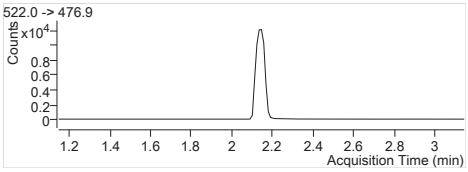

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: QC



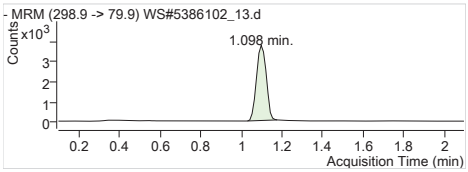



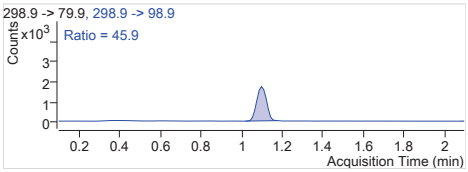

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: QC



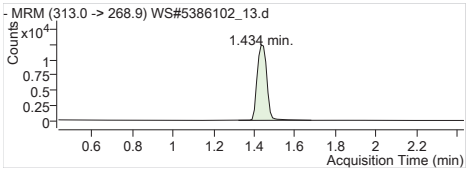



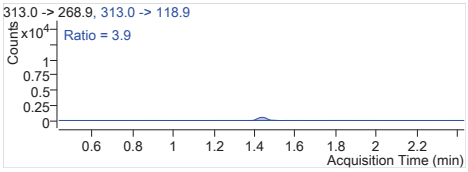

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: QC



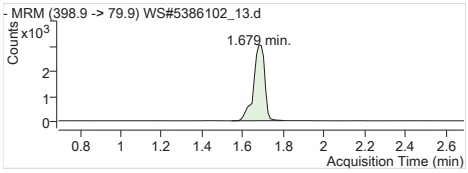



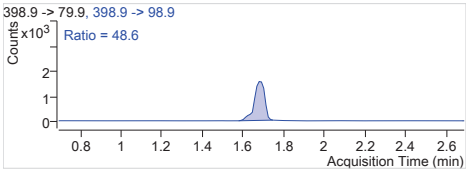

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.098 (1.098)
Calc. conc. 0.56 µg/L
Area ratio: 9.93376
Sample type: QC



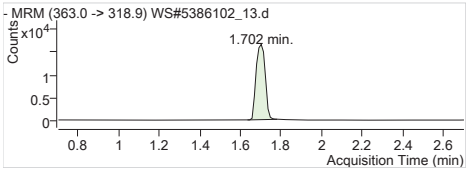



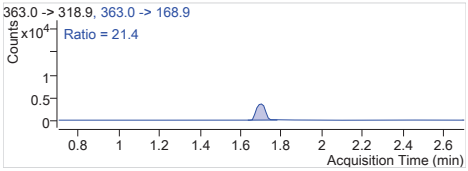

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 0.49 µg/L
Area ratio: 8.33006
Sample type: QC



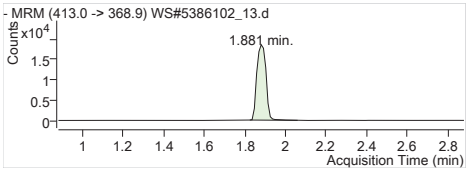



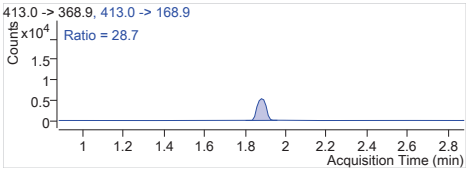

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.691)
Calc. conc. 0.53 µg/L
Area ratio: 9.18276
Sample type: QC



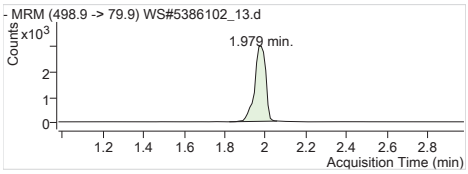



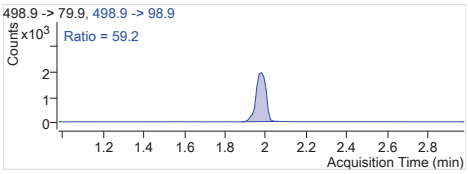

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 0.50 µg/L
Area ratio: 8.31967
Sample type: QC



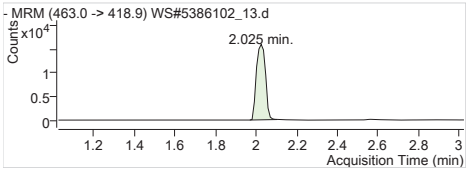



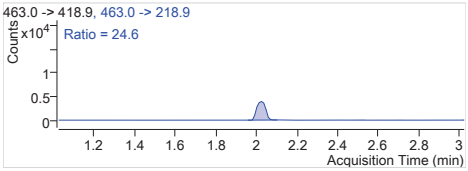

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 0.49 µg/L
Area ratio: 8.56533
Sample type: QC



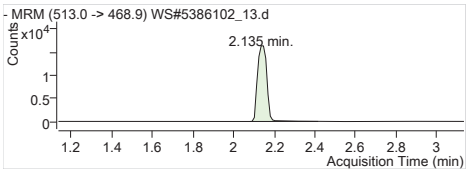



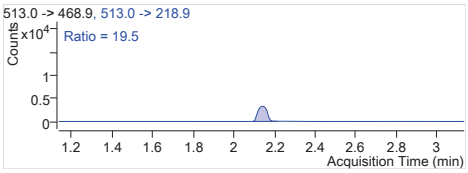

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 0.48 µg/L
Area ratio: 7.29812
Sample type: QC



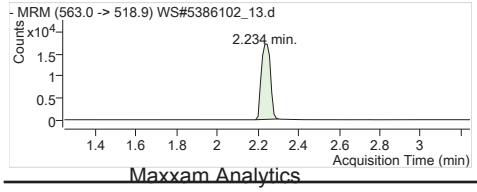



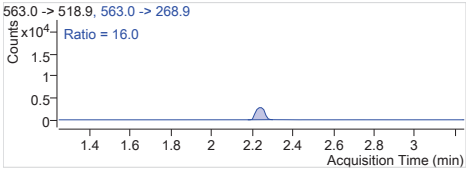

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 0.48 µg/L
Area ratio: 7.22862
Sample type: QC



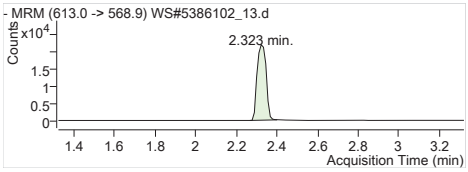



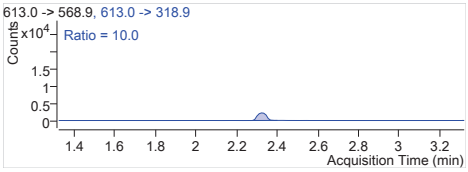

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 0.49 µg/L
Area ratio: 9.87970
Sample type: QC



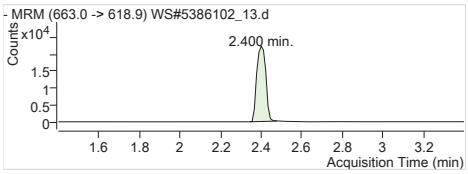



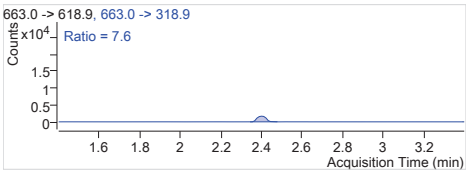

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.246)
Calc. conc. 0.49 µg/L
Area ratio: 9.57522
Sample type: QC



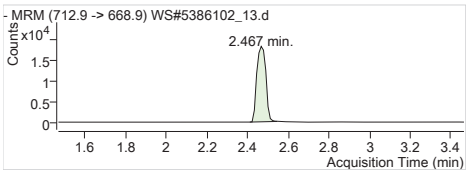



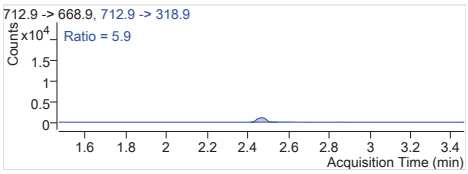

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.53 µg/L
Area ratio: 9.15759
Sample type: QC



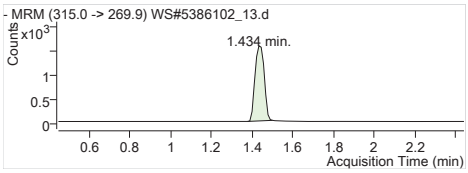



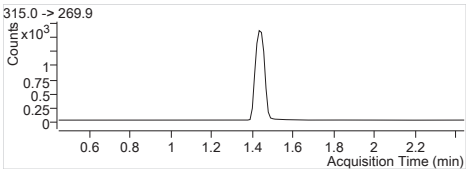

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.79 µg/L
Area ratio: 13.64269
Sample type: QC



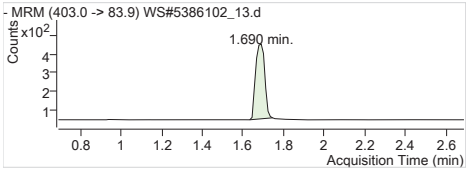



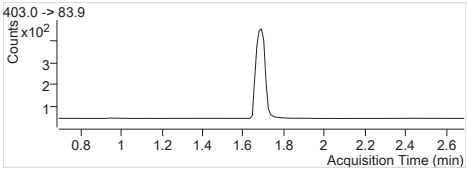

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 0.77 µg/L
Area ratio: 11.24980
Sample type: QC



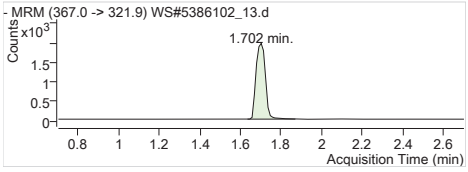



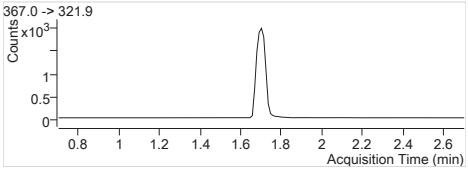

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 84.43 µg/L
Area ratio: 0.16408
Sample type: QC



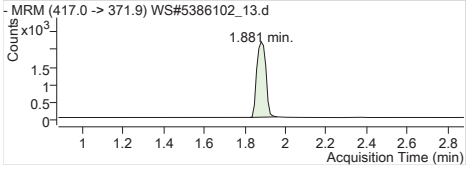



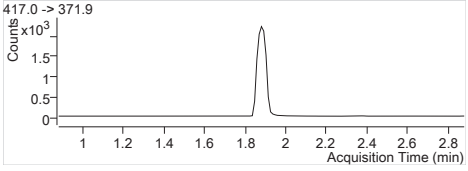

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 84.56 µg/L
Area ratio: 0.04204
Sample type: QC



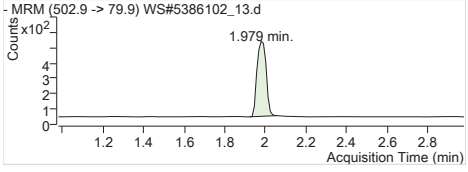



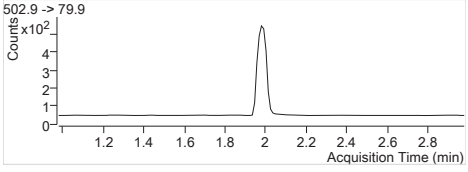

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 82.04 µg/L
Area ratio: 0.20877
Sample type: QC



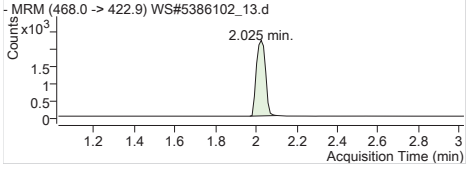



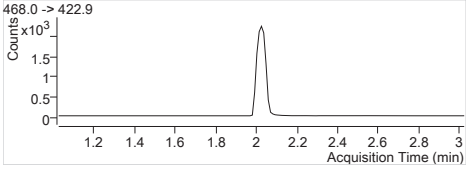

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 84.56 µg/L
Area ratio: 0.22702
Sample type: QC



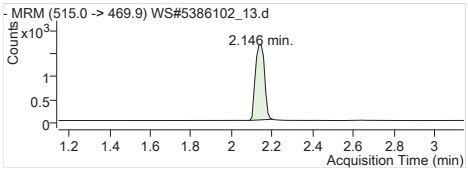



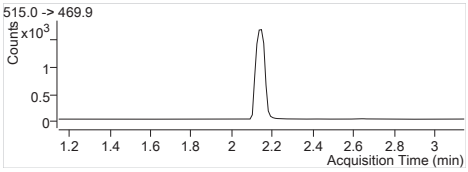

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 85.51 µg/L
Area ratio: 0.05177
Sample type: QC



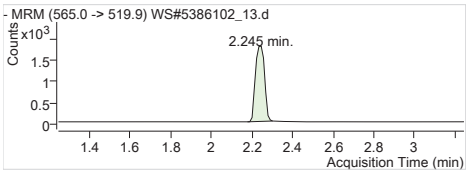



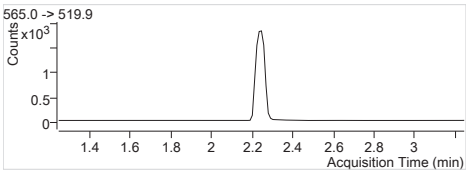

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 85.50 µg/L
Area ratio: 0.22910
Sample type: QC



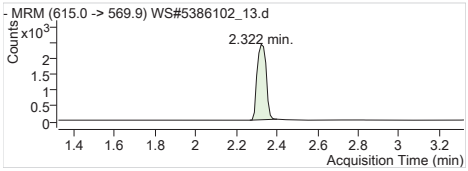



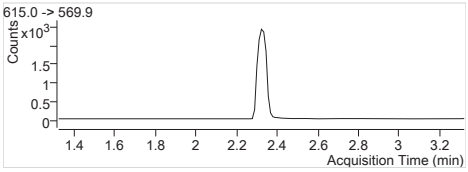

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 79.62 µg/L
Area ratio: 0.13552
Sample type: QC



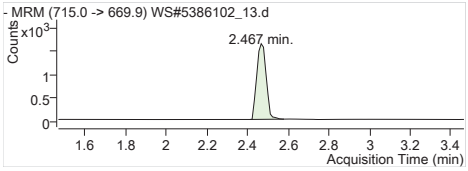



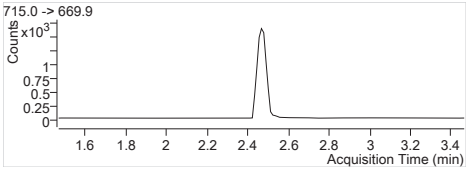

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 73.68 µg/L
Area ratio: 0.14872
Sample type: QC



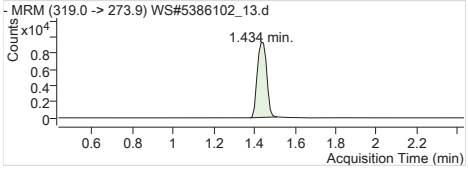



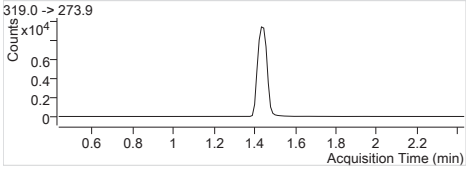

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 69.82 µg/L
Area ratio: 0.19565
Sample type: QC



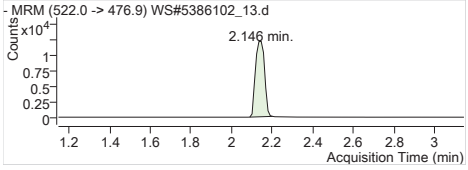



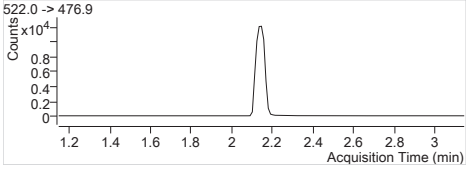

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 42.84 µg/L
Area ratio: 0.13693
Sample type: QC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.25 µg/L
Area ratio: 0
Sample type: QC



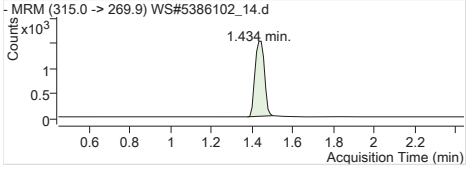

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 2.23 µg/L
Area ratio: 0
Sample type: QC

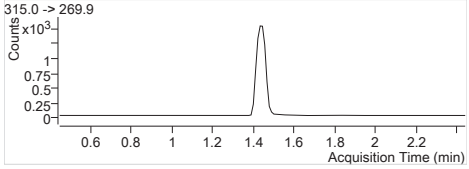
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:MTRX SPK:D1** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_14.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-E1 |
| **Acq. Date** | 2018/02/08 4:11:00 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | FZH347 | | |

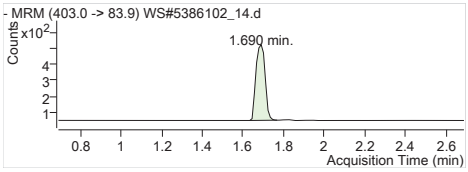
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 4778 | 1.43 | 1 µg/L | | |
| MPFHxS | 1487 | 1.69 | 1 µg/L | | |
| MPFHpA | 6260 | 1.70 | 1 µg/L | | |
| MPFOA | 6356 | 1.88 | 1 µg/L | | |
| MPFOS | 1600 | 1.98 | 1 µg/L | | |
| MPFNA | 5866 | 2.02 | 1 µg/L | | |
| MPFDA | 4886 | 2.14 | 1 µg/L | | |
| MPFUnA | 5546 | 2.23 | 1 µg/L | | |
| MPFDoA | 7713 | 2.32 | 1 µg/L | | |
| MPFTeDA | 7596 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 29149 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 36576 | 2.13 | 1 µg/L | | |

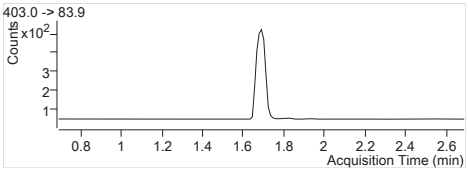
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 13220 | 1.10 | 20.80 | 0.50 µg/L | 100.77 |
| PFHxA 1 | 40987 | 1.43 | 20.80 | 0.51 µg/L | 101.63 |
| PFHxS 1 | 11982 | 1.69 | 20.80 | 0.47 µg/L | 93.48 |
| PFHpA 1 | 52062 | 1.70 | 20.80 | 0.50 µg/L | 100.91 |
| PFOA 1 | 56543 | 1.88 | 20.80 | 0.51 µg/L | 102.53 |
| PFOS 1 | 11160 | 1.98 | 20.80 | 0.46 µg/L | 91.26 |
| PFNA 1 | 46602 | 2.03 | 20.80 | 0.52 µg/L | 104.59 |
| PFDA 1 | 49371 | 2.14 | 20.80 | 0.50 µg/L | 100.40 |
| PFUnA 1 | 54852 | 2.23 | 20.80 | 0.51 µg/L | 101.46 |
| PFDoA 1 | 62046 | 2.32 | 20.80 | 0.46 µg/L | 92.99 |
| PFTrDA 1 | 73215 | 2.40 | 20.80 | 0.56 µg/L | 112.13 |
| PFTeDA 1 | 58092 | 2.47 | 20.80 | 0.53 µg/L | 105.39 |
| 13C2-PFHxA | 4778 | 1.43 | 100.00 | 84.35 µg/L | 84.35 |
| 18O2-PFHxS | 1487 | 1.69 | 100.00 | 102.60 µg/L | 102.60 |
| 13C4-PFHpA | 6260 | 1.70 | 100.00 | 84.39 µg/L | 84.39 |
| 13C4-PFOA | 6356 | 1.88 | 100.00 | 81.22 µg/L | 81.22 |
| 13C4-PFOS | 1600 | 1.98 | 100.00 | 90.66 µg/L | 90.66 |
| 13C5-PFNA | 5866 | 2.02 | 100.00 | 75.11 µg/L | 75.11 |
| 13C2-PFDA | 4794 | 2.14 | 100.00 | 77.01 µg/L | 77.01 |
| 13C2-PFUnA | 5546 | 2.23 | 100.00 | 75.12 µg/L | 75.12 |
| 13C2-PFDoA | 7713 | 2.32 | 100.00 | 75.26 µg/L | 75.26 |
| 13C2-PFTeDA | 7722 | 2.47 | 100.00 | 66.05 µg/L | 66.05 |
| 13C6-PFHxA | 29149 | 1.43 | 100.00 | 2.21 µg/L | 91.89 |
| 13C9-PFDA | 36576 | 2.13 | 100.00 | 2.16 µg/L | 90.19 |



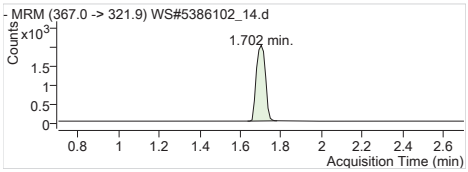



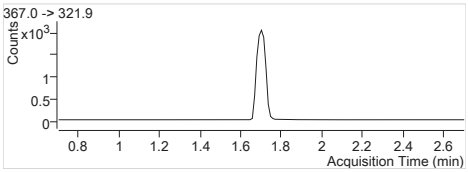

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.445)
Concentration: 1 µg/L
Sample type: QC



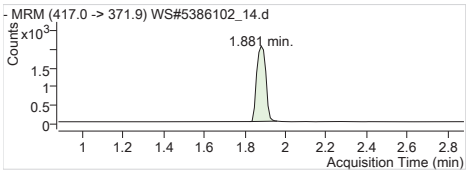



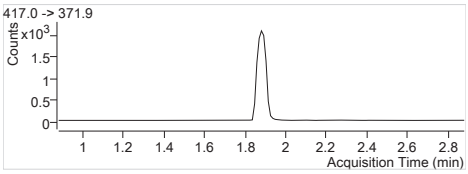

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: QC



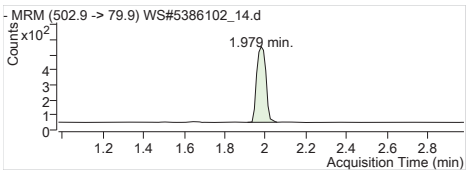



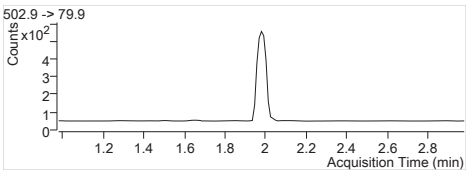

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: QC



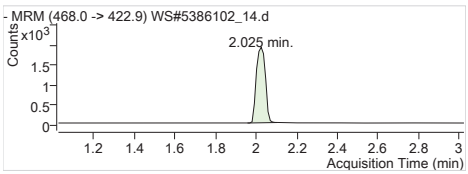



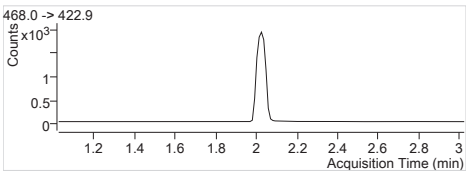

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: QC



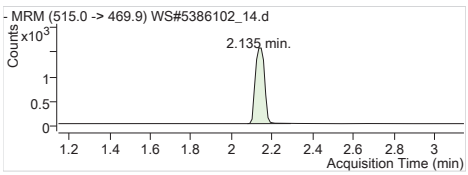



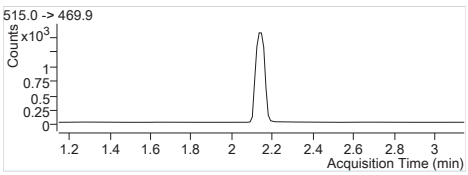

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: QC



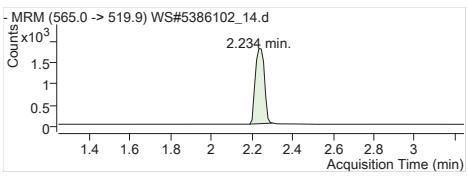



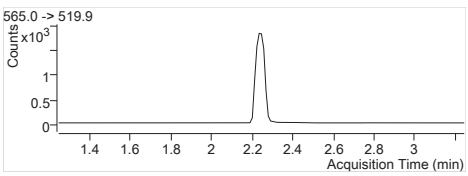

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: QC



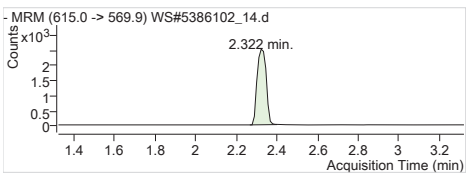



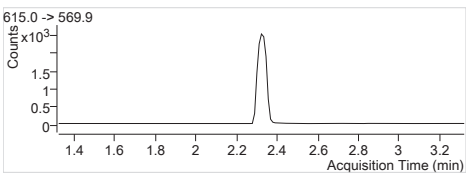

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: QC



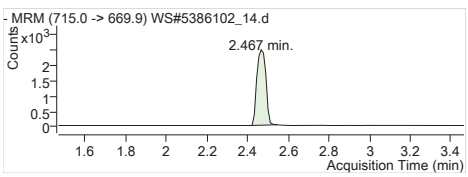



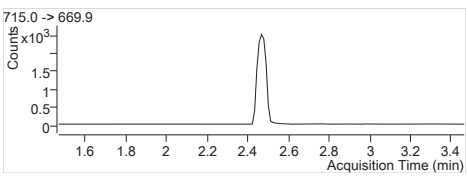

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.245)
Concentration: 1 µg/L
Sample type: QC



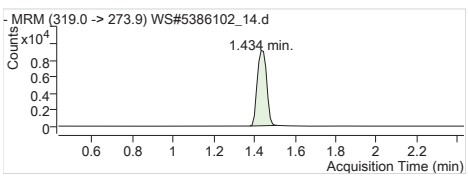



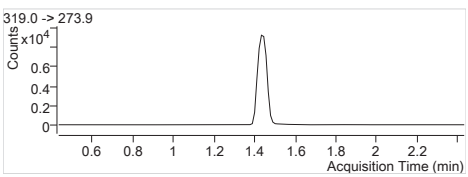

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: QC



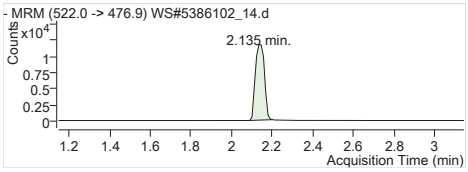



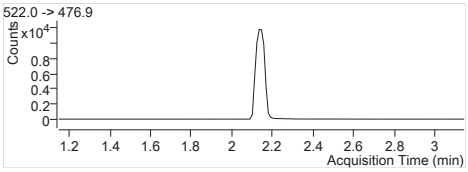

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: QC



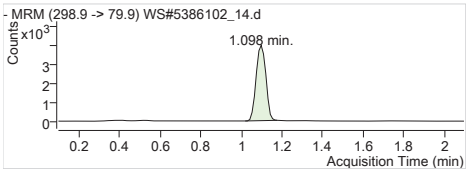



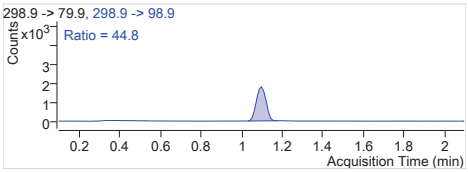

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: QC



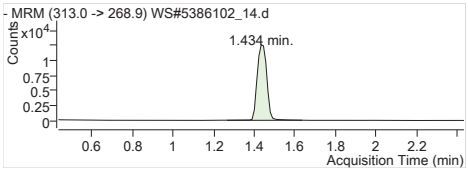



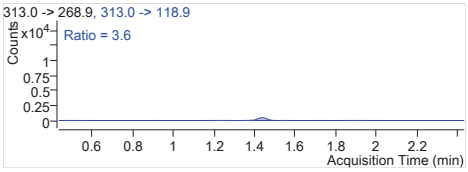

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: QC



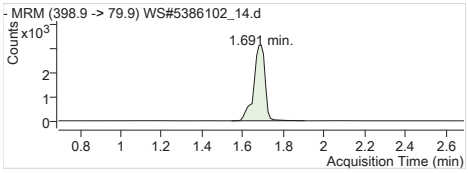



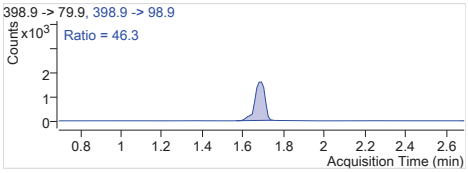

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.098 (1.098)
Calc. conc. 0.50 µg/L
Area ratio: 8.89038
Sample type: QC



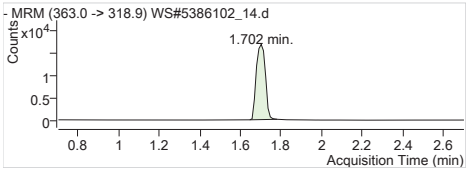



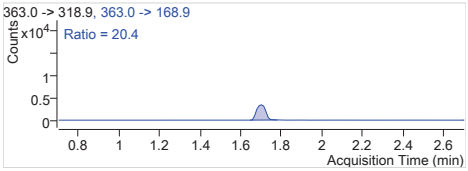

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 0.51 µg/L
Area ratio: 8.57828
Sample type: QC



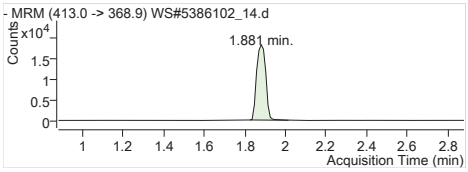



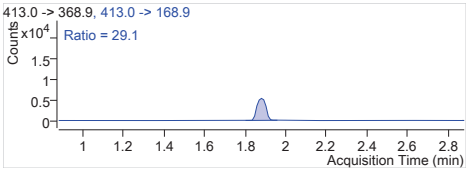

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.47 µg/L
Area ratio: 8.05783
Sample type: QC



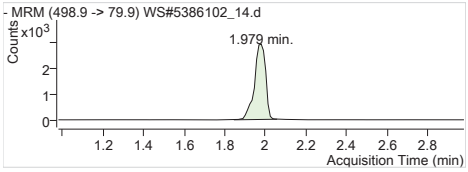



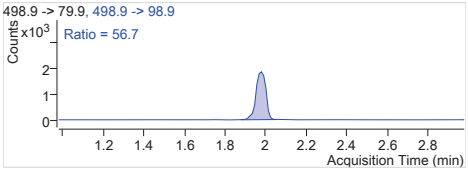

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 0.50 µg/L
Area ratio: 8.31661
Sample type: QC



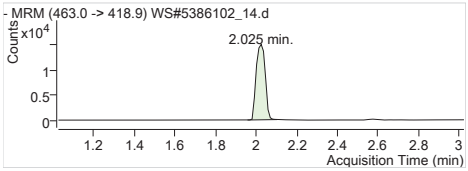



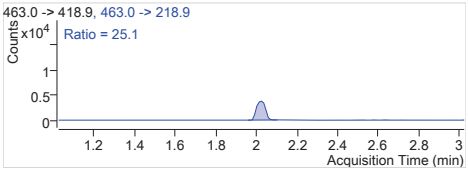

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 0.51 µg/L
Area ratio: 8.89600
Sample type: QC



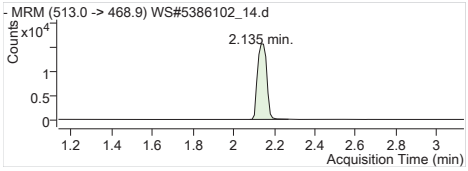



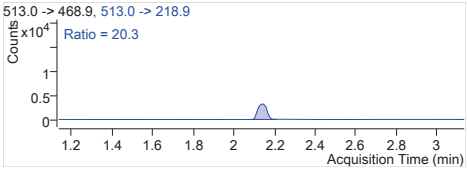

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 0.46 µg/L
Area ratio: 6.97500
Sample type: QC



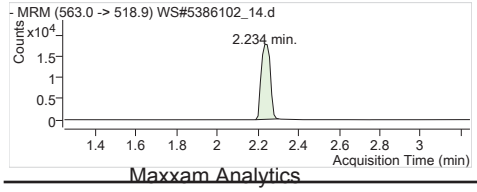



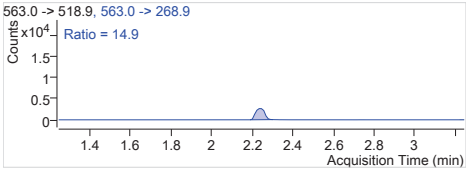

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 0.52 µg/L
Area ratio: 7.94443
Sample type: QC



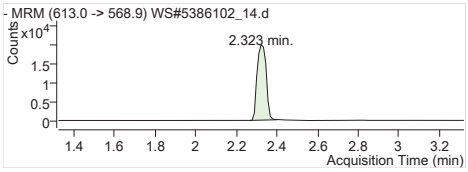



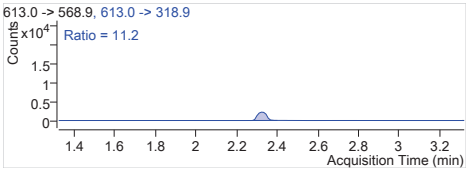

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 0.50 µg/L
Area ratio: 10.10458
Sample type: QC



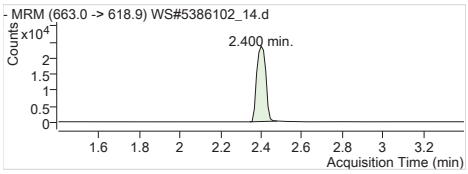



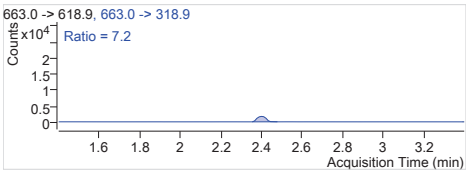

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.246)
Calc. conc. 0.51 µg/L
Area ratio: 9.89037
Sample type: QC



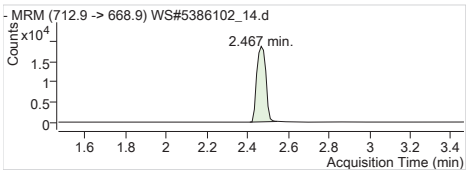



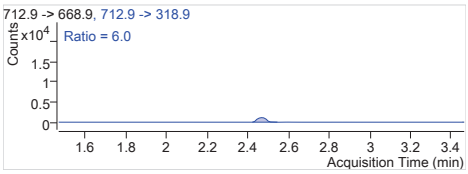

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.46 µg/L
Area ratio: 8.04434
Sample type: QC



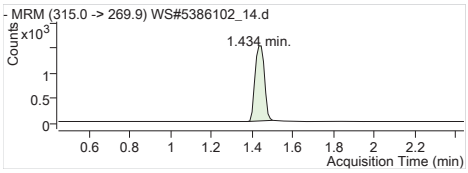



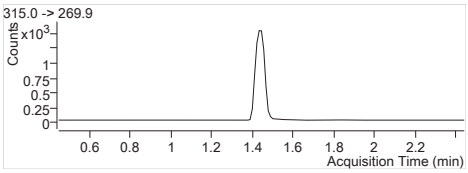

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.56 µg/L
Area ratio: 9.63863
Sample type: QC



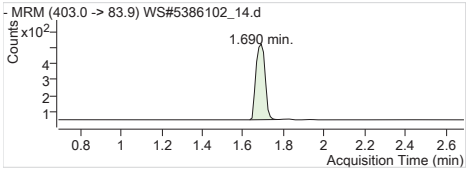



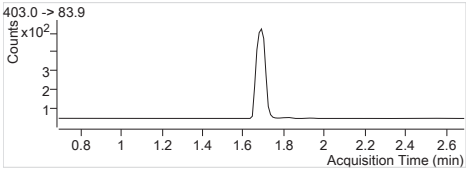

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 0.53 µg/L
Area ratio: 7.64771
Sample type: QC



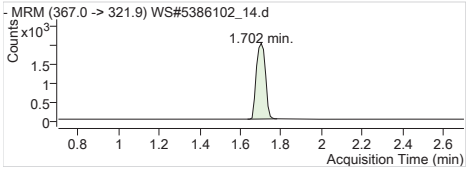



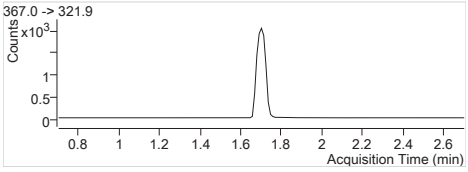

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 84.35 µg/L
Area ratio: 0.16392
Sample type: QC



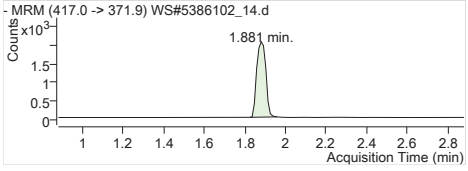



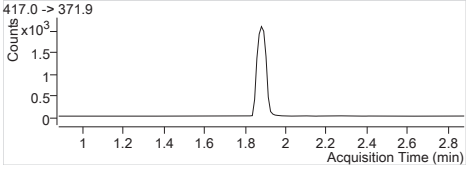

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 102.60 µg/L
Area ratio: 0.05101
Sample type: QC



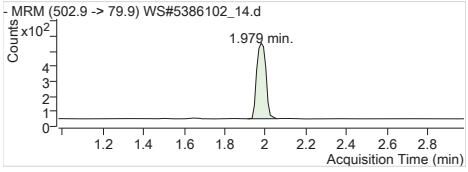



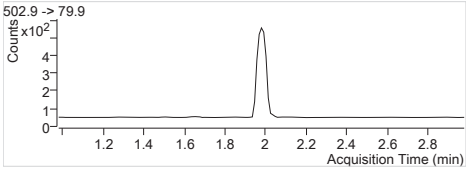

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 84.39 µg/L
Area ratio: 0.21476
Sample type: QC



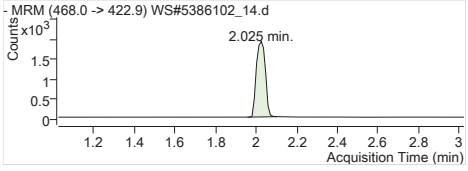



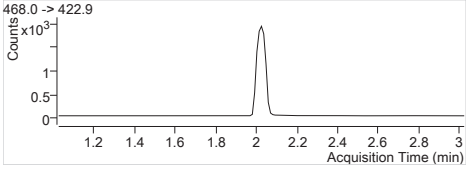

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 81.22 µg/L
Area ratio: 0.21805
Sample type: QC



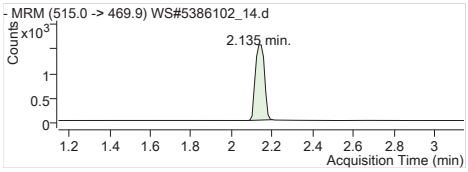



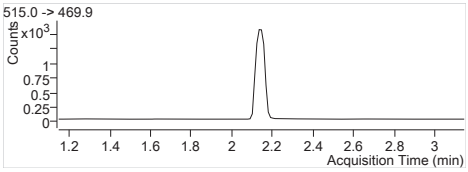

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 90.66 µg/L
Area ratio: 0.05489
Sample type: QC



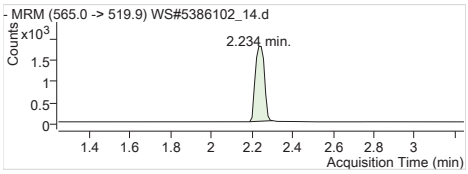



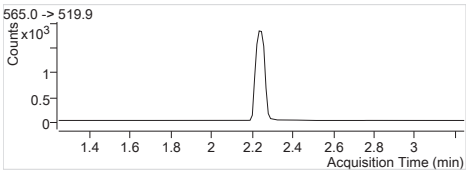

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 75.11 µg/L
Area ratio: 0.20124
Sample type: QC



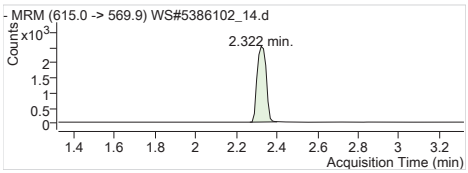



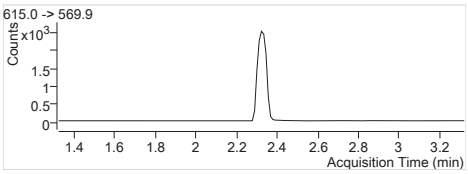

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 77.01 µg/L
Area ratio: 0.13107
Sample type: QC



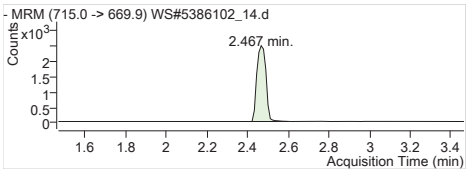



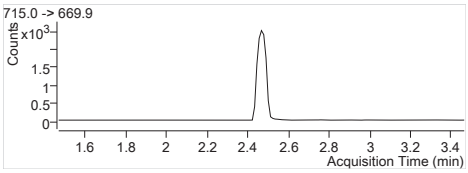

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.245)
Calc. conc. 75.12 µg/L
Area ratio: 0.15163
Sample type: QC



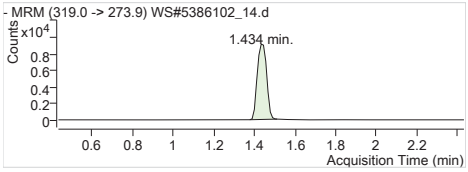



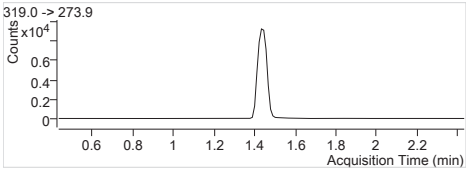

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 75.26 µg/L
Area ratio: 0.21088
Sample type: QC



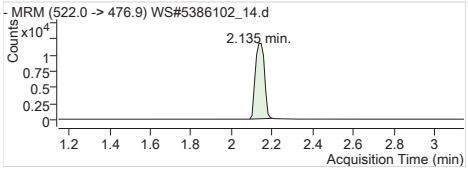



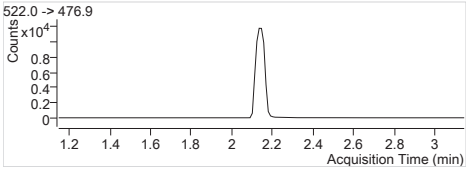

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 66.05 µg/L
Area ratio: 0.21112
Sample type: QC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.21 µg/L
Area ratio: 0
Sample type: QC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 2.16 µg/L
Area ratio: 0
Sample type: QC

# Quantitation Results

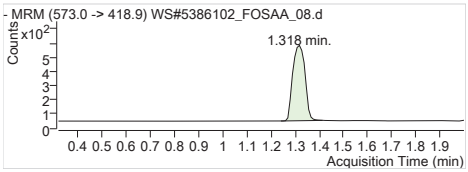
Agilent Technologies

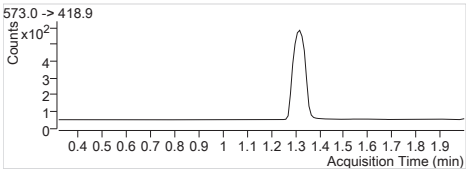
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_08.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-D5 |
| **Acq. Date** | 2018/02/08 9:50:50 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

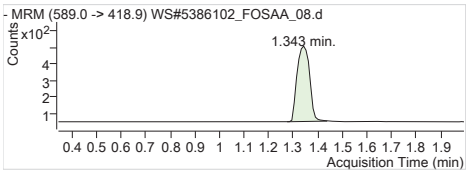
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1882 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1626 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 33293 | 0.92 | 1 µg/L | | |

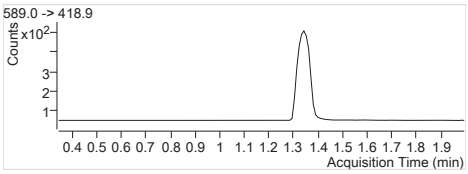
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1882 | 1.32 | - | 106.23 µg/L | - |
| D5-EtFOSAA | 1640 | 1.34 | - | 106.69 µg/L | - |
| 13C9-PFDA | 32617 | 0.92 | - | 2.34 µg/L | - |



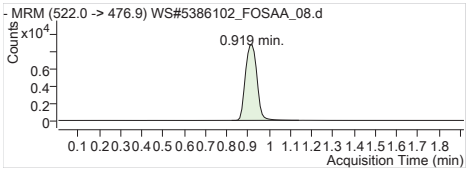



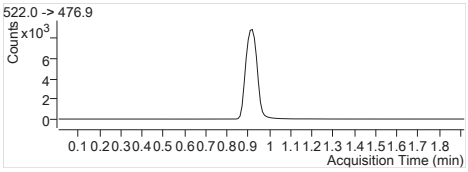

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Sample



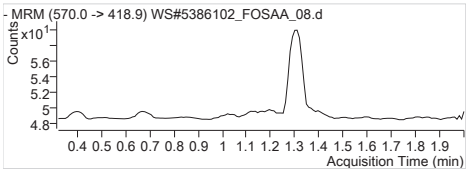



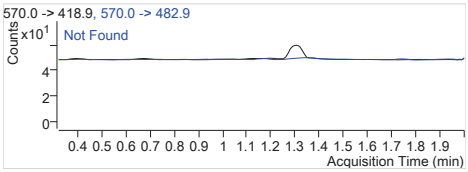

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



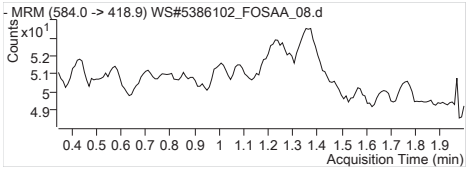



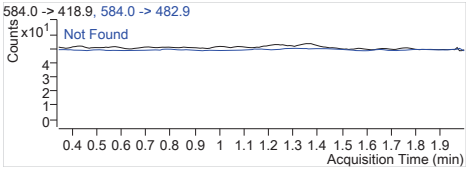

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.919 (0.919)
Concentration: 1 µg/L
Sample type: Sample



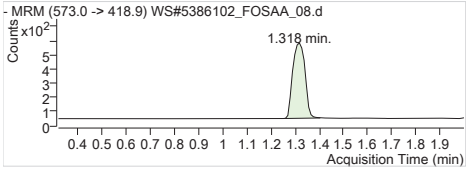



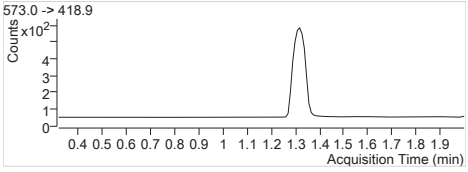

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.319)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



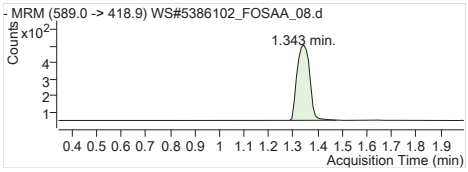



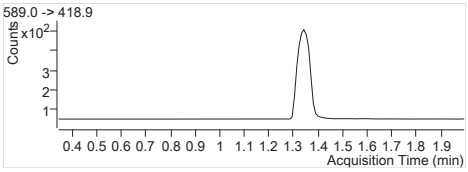

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



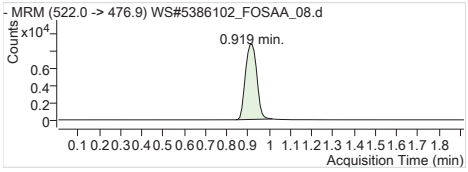



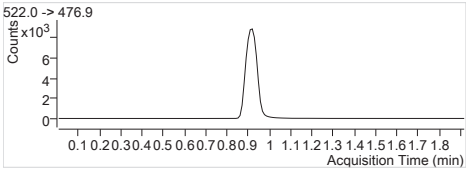

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 106.23 µg/L
Area ratio: 0.05653
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 106.69 µg/L |
| Area ratio: | 0.04926 |
| Sample type: | Sample |



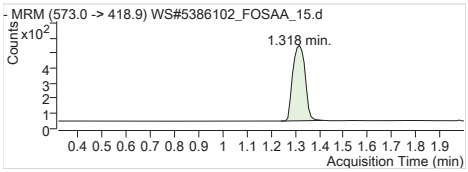

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.919 (0.919) |
| Calc. conc. | 2.34 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

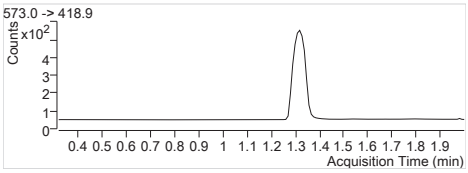
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_15.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-D5 |
| **Acq. Date** | 2018/02/08 10:07:43 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

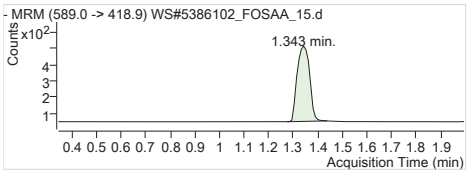
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1782 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1632 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 33061 | 0.92 | 1 µg/L | | |

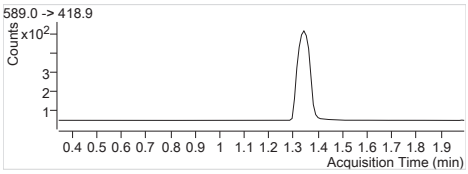
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1796 | 1.32 | - | 102.09 µg/L | - |
| D5-EtFOSAA | 1659 | 1.34 | - | 108.68 µg/L | - |
| 13C9-PFDA | 32431 | 0.92 | - | 2.33 µg/L | - |



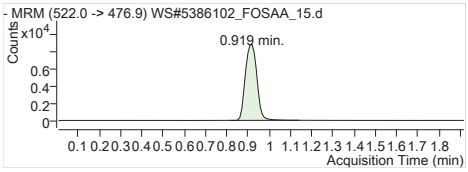



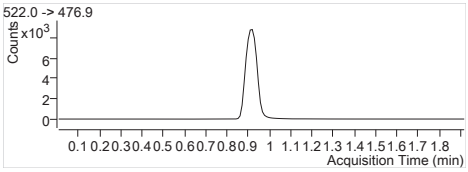

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Sample



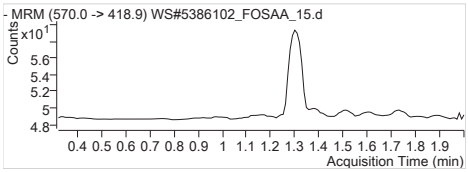



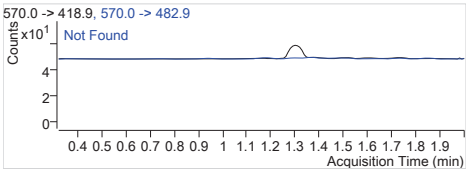

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



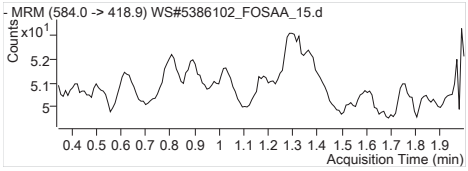



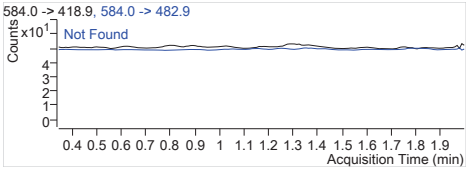

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.919 (0.919)
Concentration: 1 µg/L
Sample type: Sample



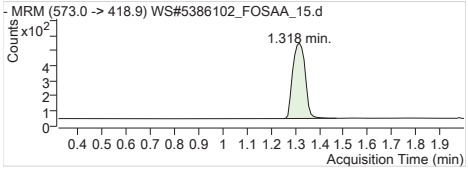



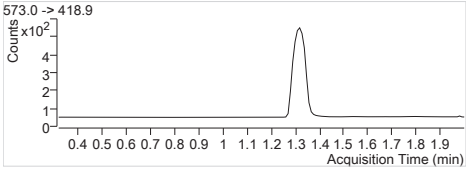

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.319)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



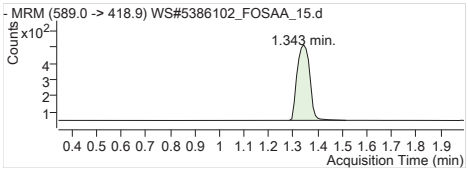



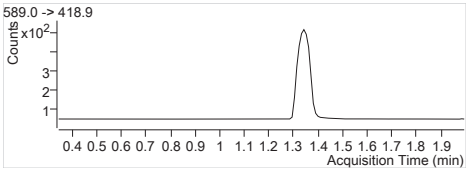

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



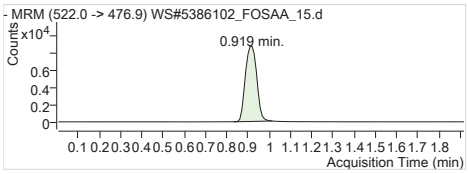



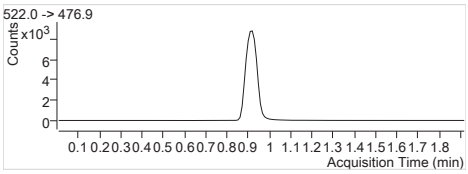

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 102.09 µg/L
Area ratio: 0.05432
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 108.68 µg/L |
| Area ratio: | 0.05018 |
| Sample type: | Sample |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.919 (0.919) |
| Calc. conc. | 2.33 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

# Quantitation Results

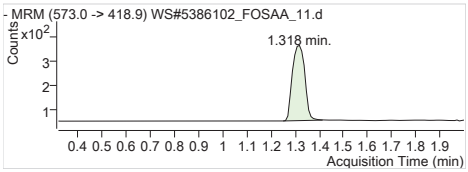
Agilent Technologies

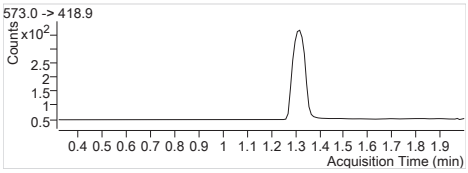
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:BLANK** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_11.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-D7 |
| **Acq. Date** | 2018/02/08 9:58:04 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

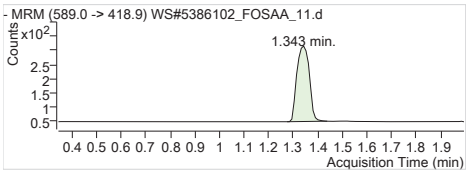
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1124 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 940 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 34795 | 0.89 | 1 µg/L | | |

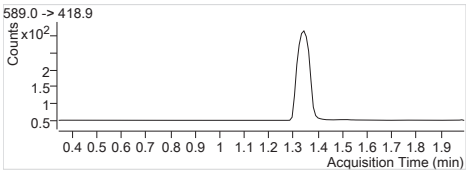
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1126 | 1.32 | - | 60.82 µg/L | - |
| D5-EtFOSAA | 944 | 1.34 | - | 58.76 µg/L | - |
| 13C9-PFDA | 33885 | 0.89 | - | 2.43 µg/L | - |



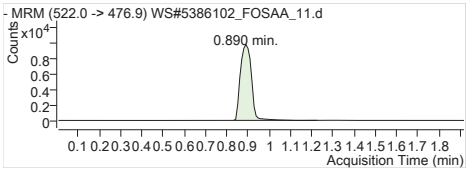



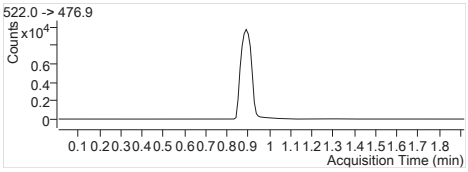

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Sample



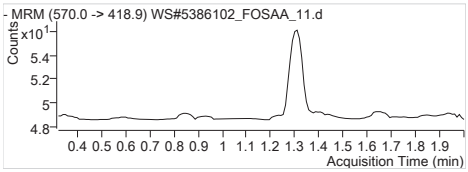



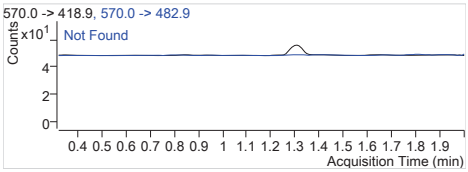

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



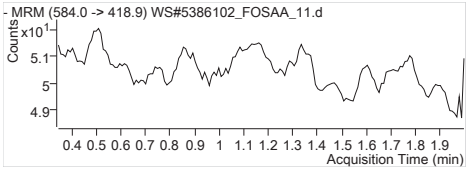



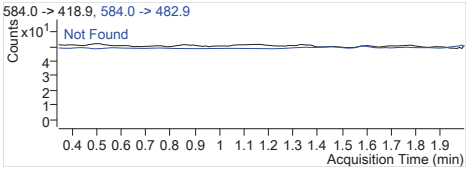

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.890 (0.919)
Concentration: 1 µg/L
Sample type: Sample



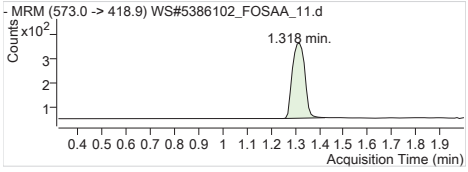



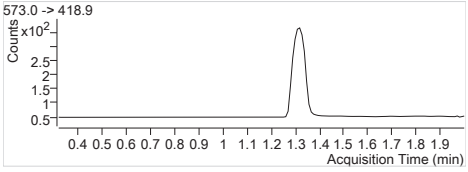

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.319)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



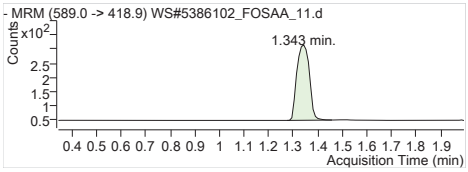



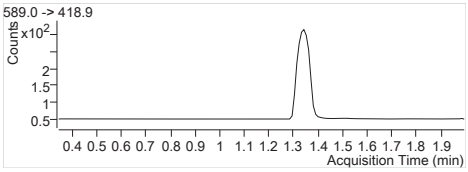

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



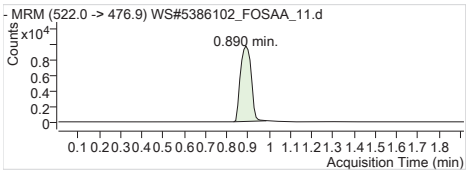



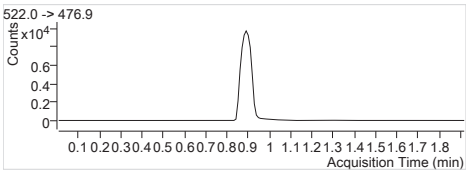

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 60.82 µg/L
Area ratio: 0.03236
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 58.76 µg/L |
| Area ratio: | 0.02713 |
| Sample type: | Sample |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.890 (0.919) |
| Calc. conc. | 2.43 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

# Quantitation Results

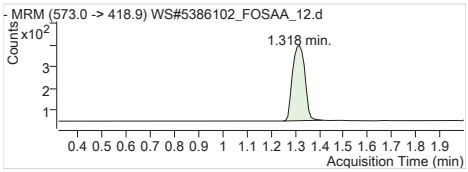
Agilent Technologies

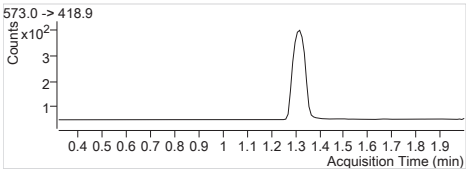
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:SPIKE** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_12.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-D8 |
| **Acq. Date** | 2018/02/08 10:00:30 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

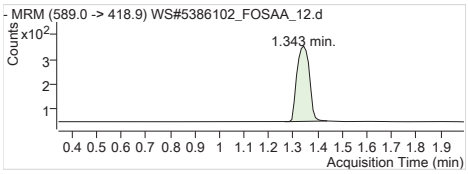
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1239 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1077 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 34284 | 0.89 | 1 µg/L | | |

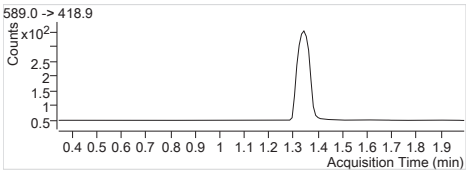
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 8955 | 1.31 | 20.80 | 0.49 µg/L | 97.94 |
| EtFOSAA 1 | 9281 | 1.34 | 20.80 | 0.49 µg/L | 98.26 |
| D3-MeFOSAA | 1248 | 1.32 | 100.00 | 68.41 µg/L | 68.41 |
| D5-EtFOSAA | 1089 | 1.34 | 100.00 | 68.80 µg/L | 68.80 |
| 13C9-PFDA | 33412 | 0.89 | 100.00 | 2.40 µg/L | 100.01 |



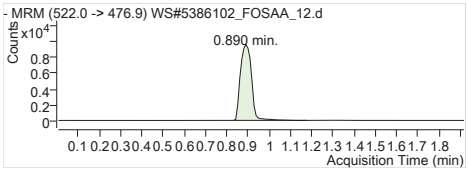



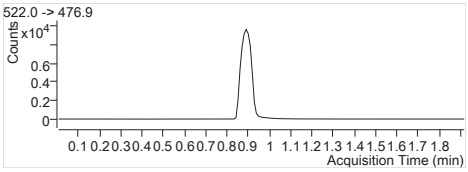

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: QC



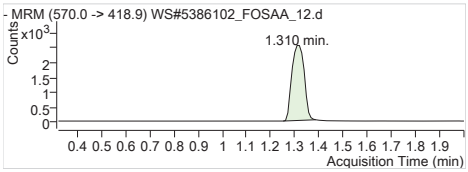



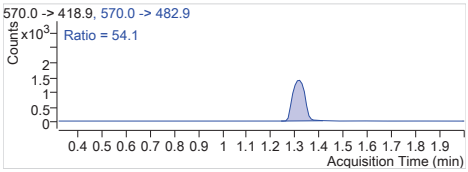

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: QC



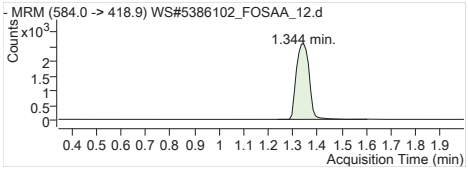



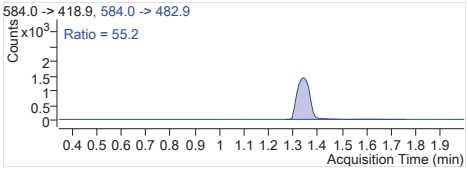

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.890 (0.919)
Concentration: 1 µg/L
Sample type: QC



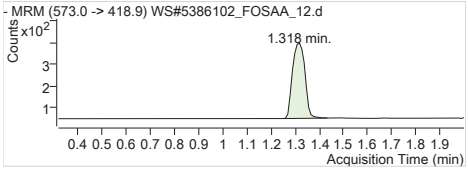



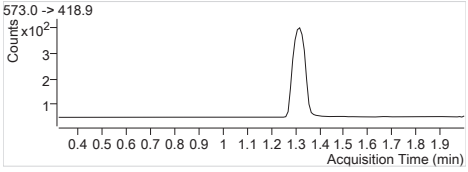

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.319)
Calc. conc. 0.49 µg/L
Area ratio: 7.22760
Sample type: QC



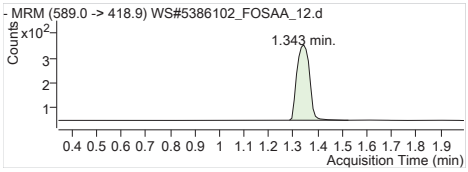



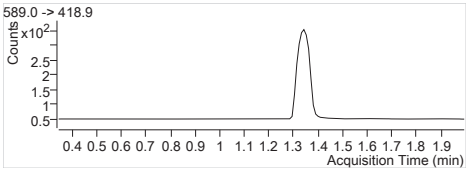

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 0.49 µg/L
Area ratio: 8.61746
Sample type: QC



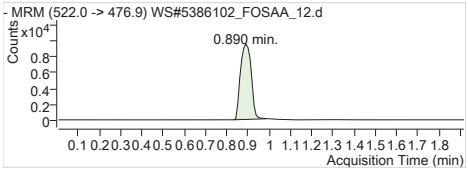



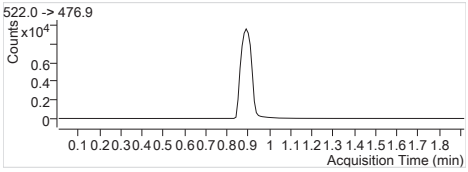

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 68.41 µg/L
Area ratio: 0.03640
Sample type: QC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 68.80 µg/L |
| Area ratio: | 0.03176 |
| Sample type: | QC |



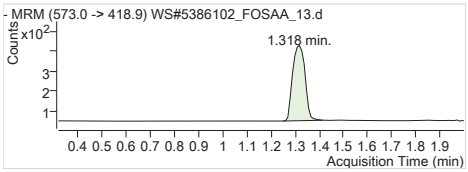

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.890 (0.919) |
| Calc. conc. | 2.40 µg/L |
| Area ratio: | 0 |
| Sample type: | QC |

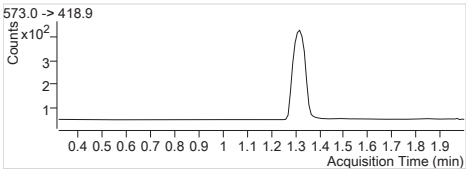
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:MTRX SPK** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_13.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-D9 |
| **Acq. Date** | 2018/02/08 10:02:55 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | FZH347 | | |

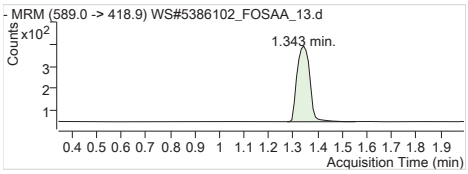
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1350 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1246 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 32623 | 0.90 | 1 µg/L | | |

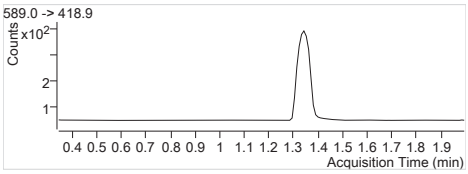
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 10156 | 1.31 | 20.80 | 0.51 µg/L | 101.94 |
| EtFOSAA 1 | 10434 | 1.34 | 20.80 | 0.48 µg/L | 95.49 |
| D3-MeFOSAA | 1354 | 1.32 | 100.00 | 78.00 µg/L | 78.00 |
| D5-EtFOSAA | 1229 | 1.34 | 100.00 | 81.59 µg/L | 81.59 |
| 13C9-PFDA | 31685 | 0.90 | 100.00 | 2.28 µg/L | 94.84 |



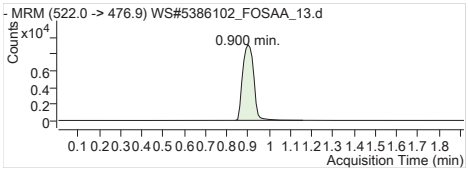



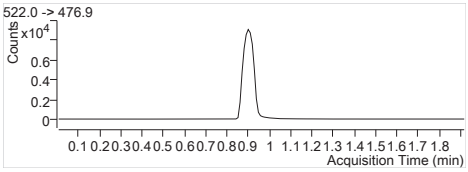

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: QC



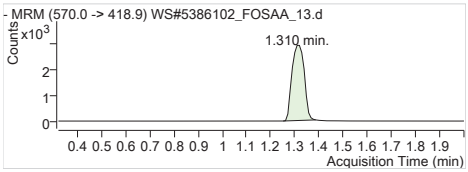



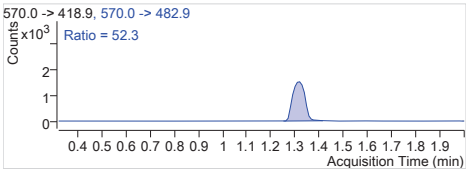

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: QC



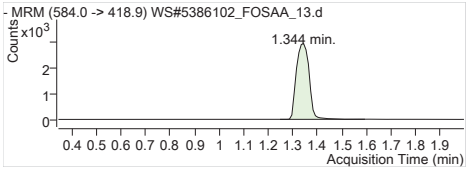



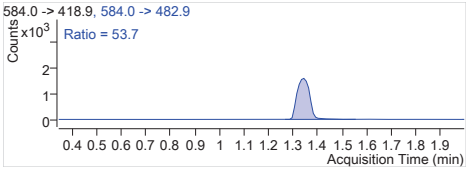

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.900 (0.919)
Concentration: 1 µg/L
Sample type: QC



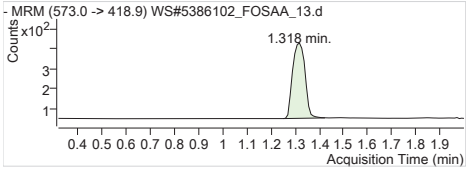



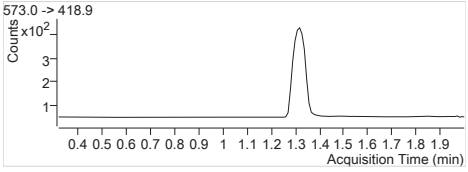

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.319)
Calc. conc. 0.51 µg/L
Area ratio: 7.52296
Sample type: QC



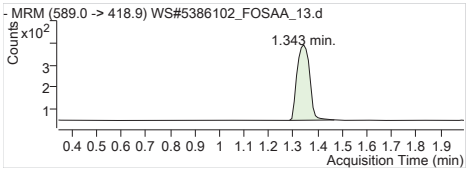



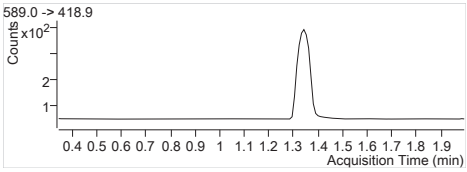

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 0.48 µg/L
Area ratio: 8.37400
Sample type: QC



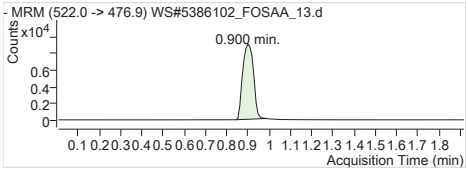



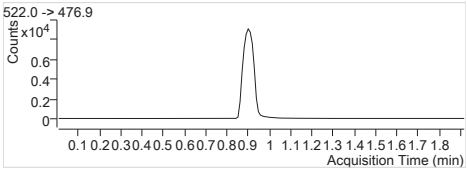

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 78.00 µg/L
Area ratio: 0.04150
Sample type: QC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 81.59 µg/L |
| Area ratio: | 0.03767 |
| Sample type: | QC |



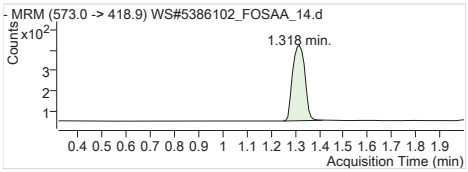

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.900 (0.919) |
| Calc. conc. | 2.28 µg/L |
| Area ratio: | 0 |
| Sample type: | QC |

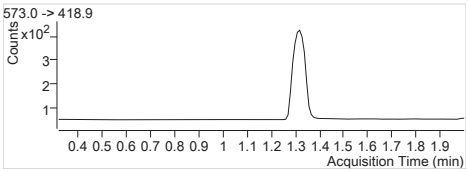
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5386102:MTRX SPK:D1** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_14.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-E1 |
| **Acq. Date** | 2018/02/08 10:05:20 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | FZH347 | | |

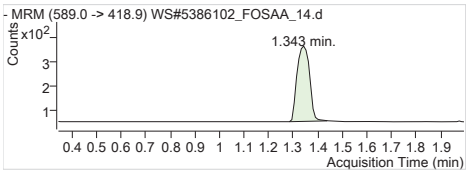
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1331 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1117 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 32730 | 0.89 | 1 µg/L | | |

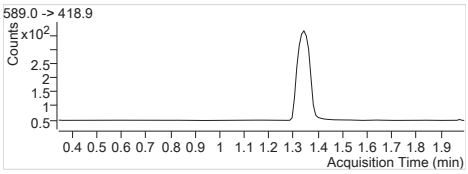
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 9835 | 1.31 | - | 0.50 µg/L | - |
| EtFOSAA 1 | 10248 | 1.34 | - | 0.52 µg/L | - |
| D3-MeFOSAA | 1331 | 1.32 | - | 76.42 µg/L | - |
| D5-EtFOSAA | 1131 | 1.34 | - | 74.84 µg/L | - |
| 13C9-PFDA | 31716 | 0.89 | - | 2.28 µg/L | - |



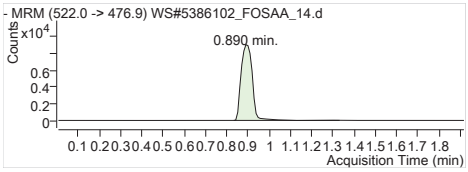



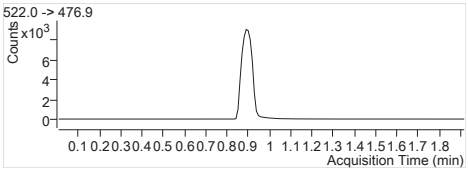

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Sample



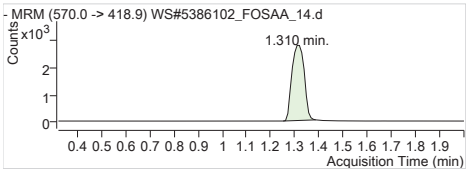



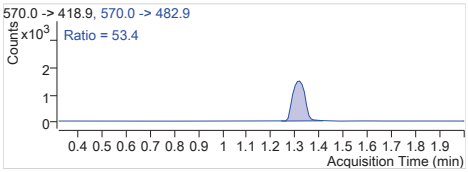

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



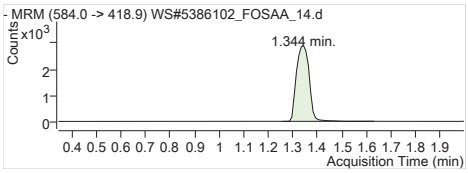



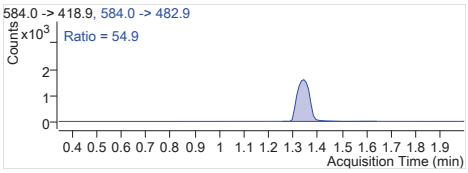

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.890 (0.919)
Concentration: 1 µg/L
Sample type: Sample



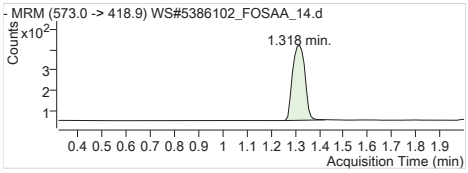



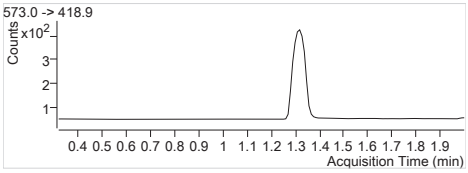

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.319)
Calc. conc. 0.50 µg/L
Area ratio: 7.38918
Sample type: Sample



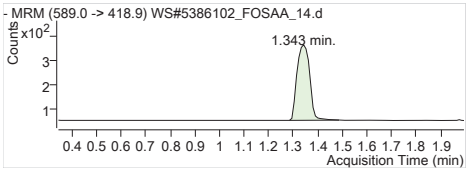



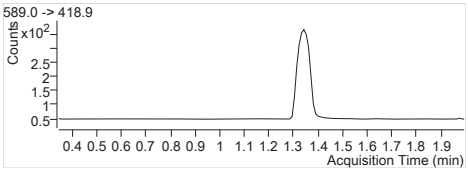

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 0.52 µg/L
Area ratio: 9.17457
Sample type: Sample



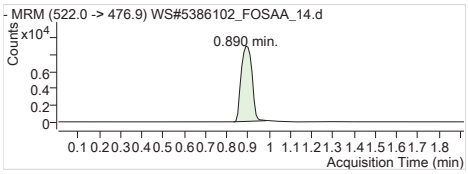



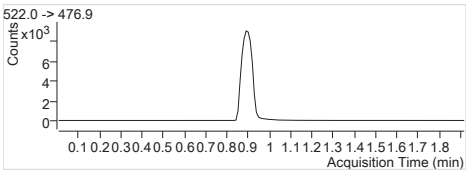

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 76.42 µg/L
Area ratio: 0.04067
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 74.84 µg/L |
| Area ratio: | 0.03456 |
| Sample type: | Sample |



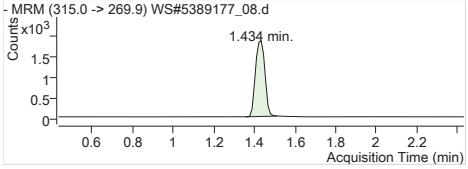

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.890 (0.919) |
| Calc. conc. | 2.28 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

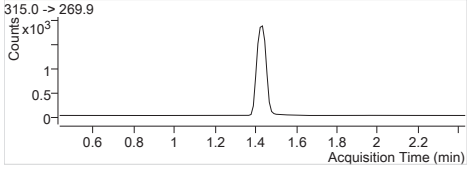
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_08.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A8 |
| **Acq. Date** | 2018/02/09 12:31:57 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

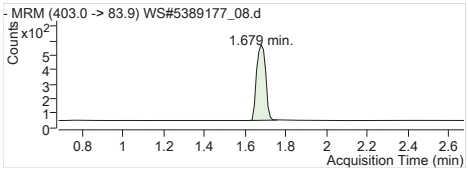
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5921 | 1.43 | 1 µg/L | | |
| MPFHxS | 1614 | 1.68 | 1 µg/L | | |
| MPFHpA | 7762 | 1.69 | 1 µg/L | | |
| MPFOA | 9047 | 1.87 | 1 µg/L | | |
| MPFOS | 1899 | 1.98 | 1 µg/L | | |
| MPFNA | 8841 | 2.01 | 1 µg/L | | |
| MPFDA | 7249 | 2.14 | 1 µg/L | | |
| MPFUnA | 8516 | 2.23 | 1 µg/L | | |
| MPFDoA | 12042 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12687 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 22297 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 29387 | 2.13 | 1 µg/L | | |

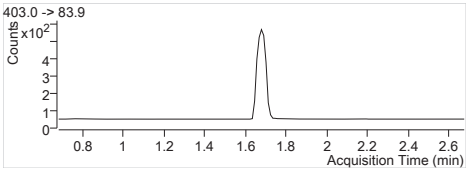
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 5921 | 1.43 | - | 94.72 µg/L | - |
| 18O2-PFHxS | 1614 | 1.68 | - | 100.21 µg/L | - |
| 13C4-PFHpA | 7762 | 1.69 | - | 93.35 µg/L | - |
| 13C4-PFOA | 9047 | 1.87 | - | 101.69 µg/L | - |
| 13C4-PFOS | 1899 | 1.98 | - | 96.16 µg/L | - |
| 13C5-PFNA | 8840 | 2.01 | - | 98.56 µg/L | - |
| 13C2-PFDA | 7084 | 2.14 | - | 95.70 µg/L | - |
| 13C2-PFUnA | 8516 | 2.23 | - | 96.47 µg/L | - |
| 13C2-PFDoA | 12042 | 2.32 | - | 103.40 µg/L | - |
| 13C2-PFTeDA | 13099 | 2.47 | - | 93.98 µg/L | - |
| 13C6-PFHxA | 22297 | 1.43 | - | 2.50 µg/L | - |
| 13C9-PFDA | 29387 | 2.13 | - | 2.47 µg/L | - |



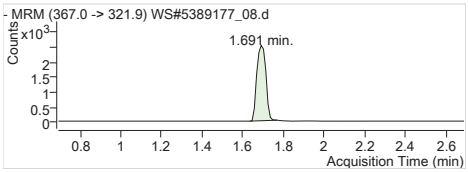



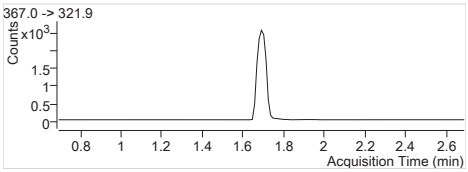

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



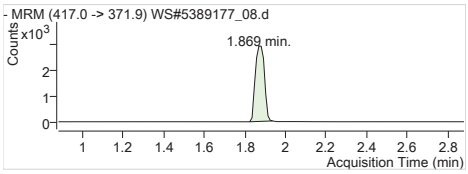



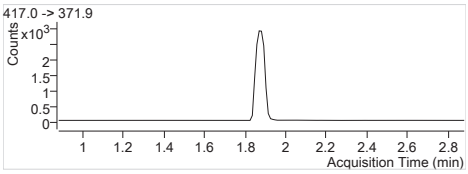

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



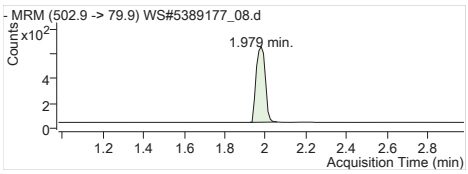



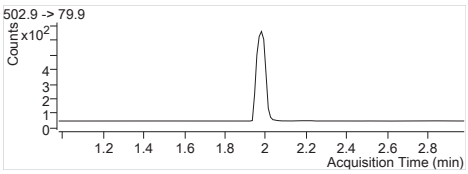

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



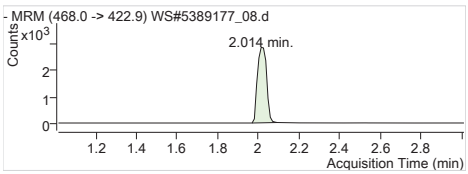



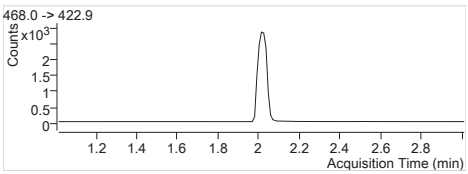

**MPFOA** Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Sample



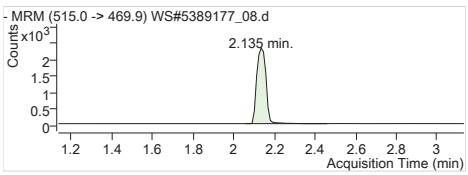



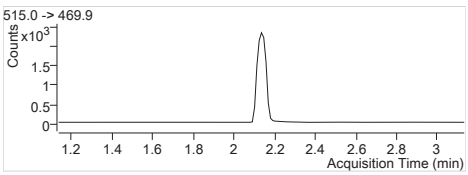

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



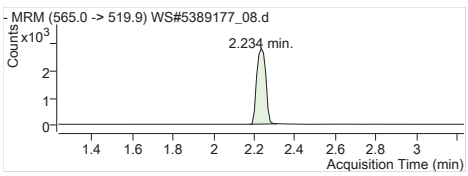



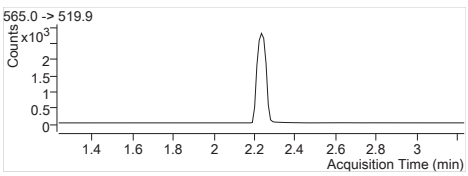

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



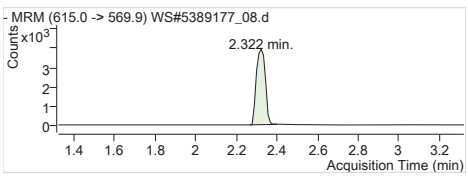



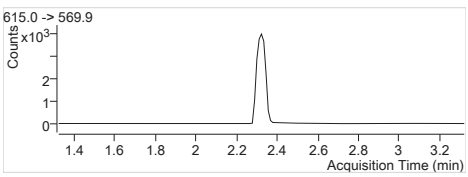

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



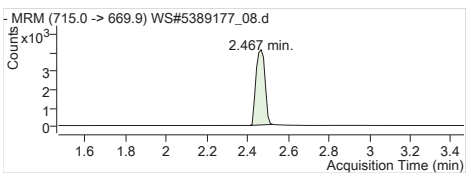



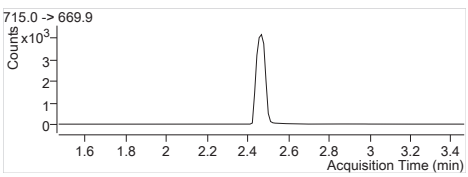

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



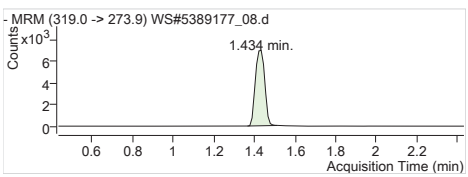



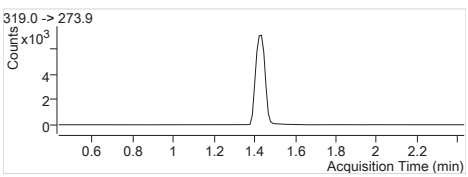

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



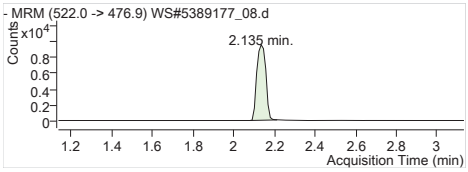



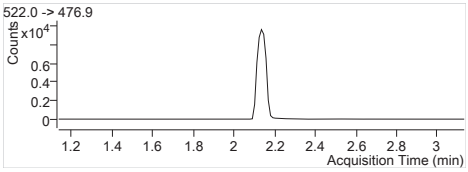

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



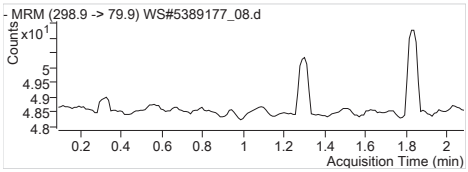



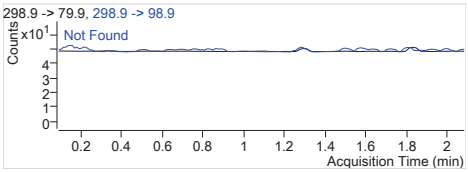

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



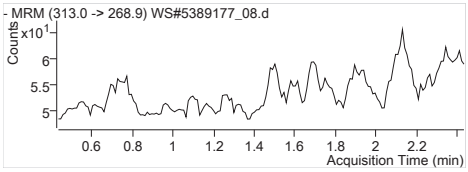



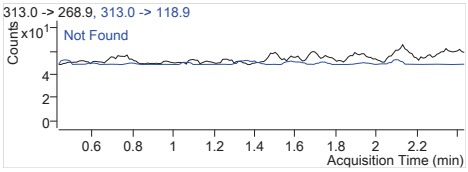

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



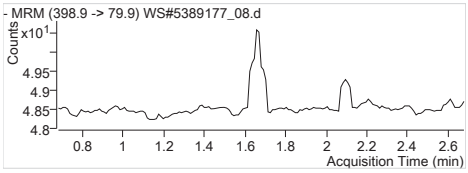



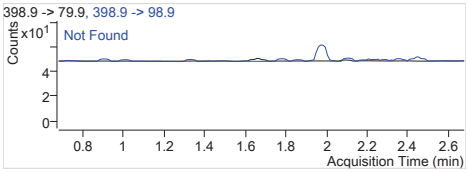

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



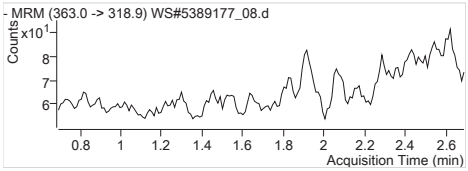



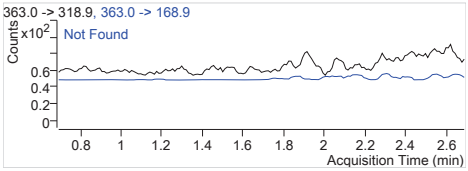

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



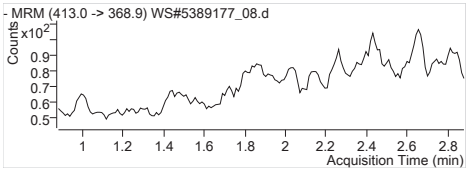



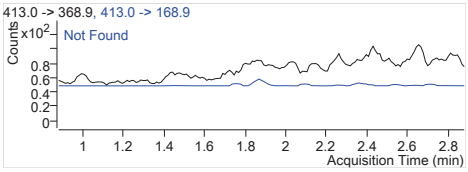

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.679)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



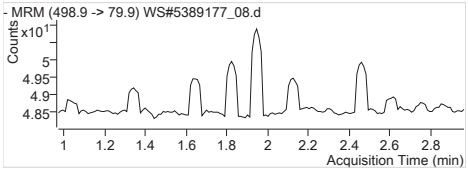



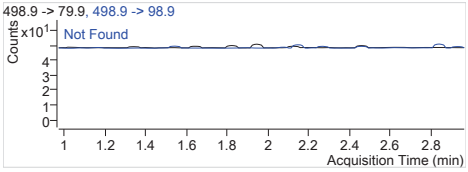

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



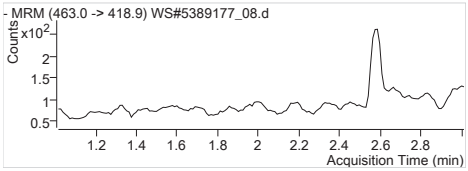



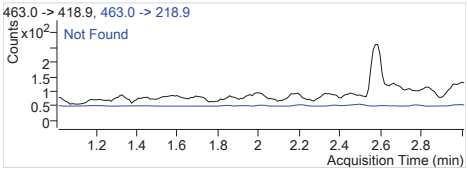

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



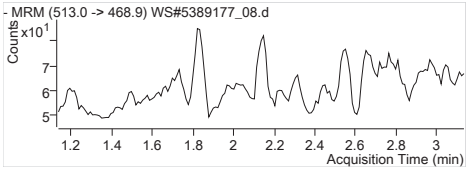



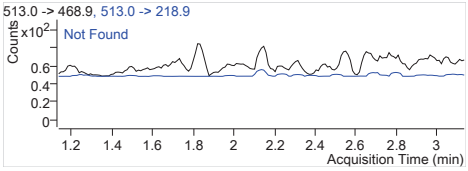

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.968)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



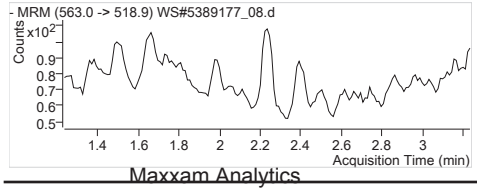



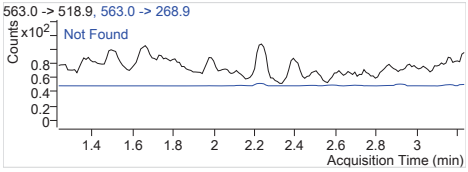

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



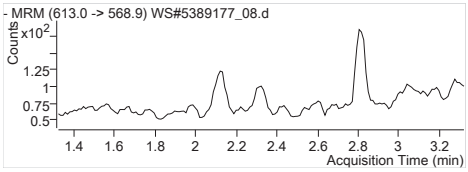



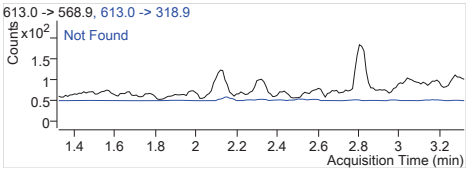

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



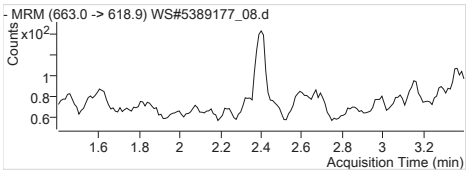



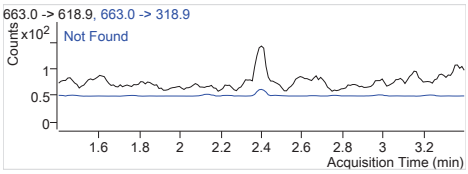

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



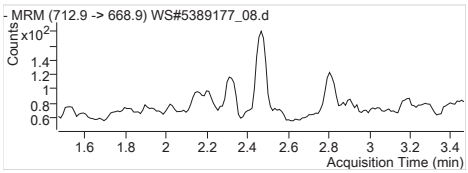



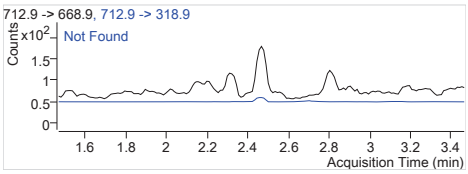

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.323) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



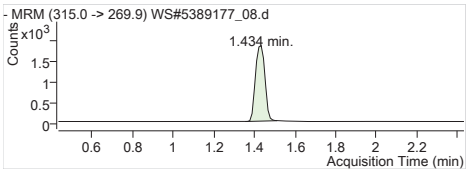



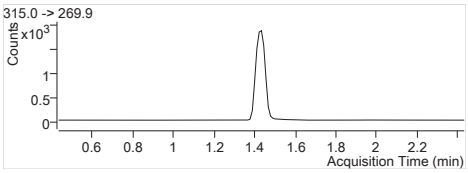

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.400) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



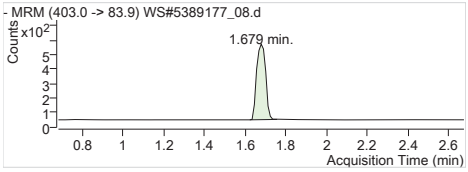



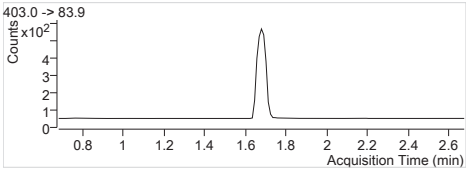

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.467) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



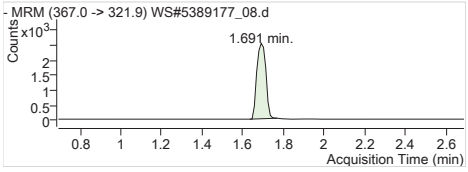



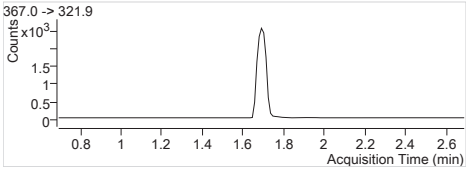

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.434 (1.434) |
| Calc. conc. | 94.72 µg/L |
| Area ratio: | 0.26555 |
| Sample type: | Sample |



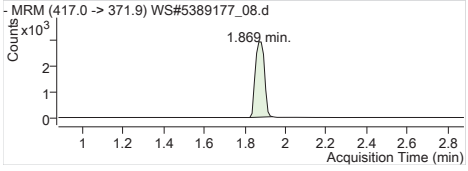



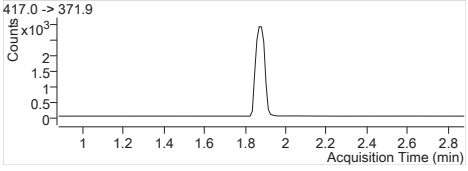

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.679 (1.679) |
| Calc. conc. | 100.21 µg/L |
| Area ratio: | 0.07239 |
| Sample type: | Sample |



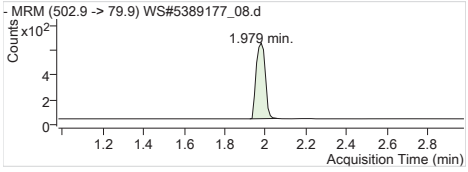



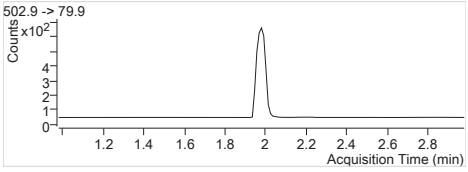

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.691 (1.691) |
| Calc. conc. | 93.35 µg/L |
| Area ratio: | 0.34812 |
| Sample type: | Sample |



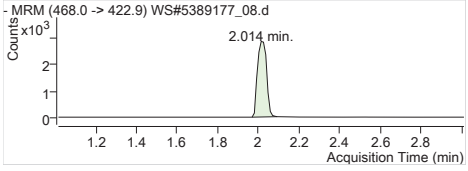



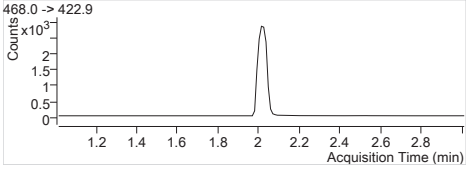

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.869 (1.881) |
| Calc. conc. | 101.69 µg/L |
| Area ratio: | 0.40575 |
| Sample type: | Sample |



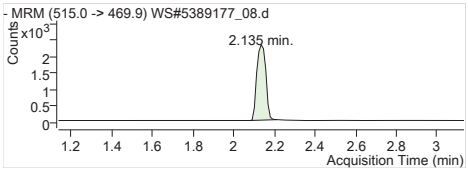



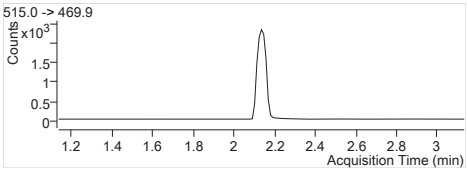

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.979 (1.979) |
| Calc. conc. | 96.16 µg/L |
| Area ratio: | 0.08517 |
| Sample type: | Sample |



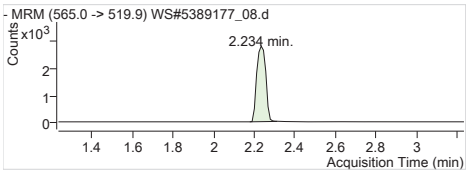



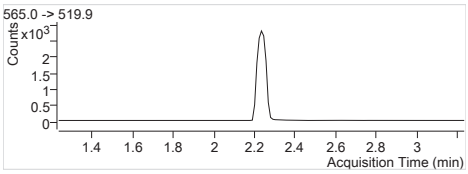

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.014 (2.014) |
| Calc. conc. | 98.56 µg/L |
| Area ratio: | 0.39647 |
| Sample type: | Sample |



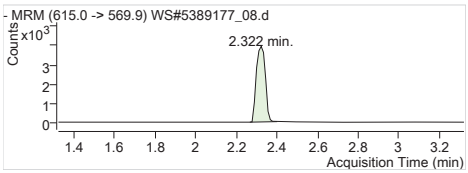



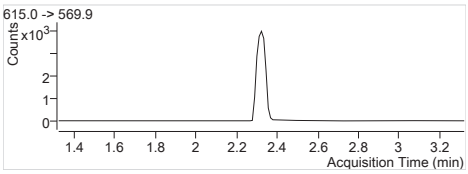

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 95.70 µg/L
Area ratio: 0.24106
Sample type: Sample



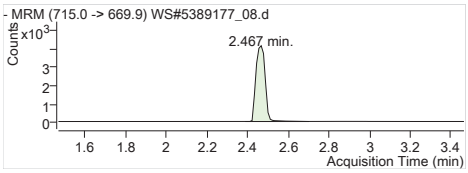



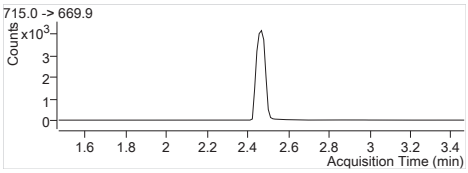

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 96.47 µg/L
Area ratio: 0.28979
Sample type: Sample



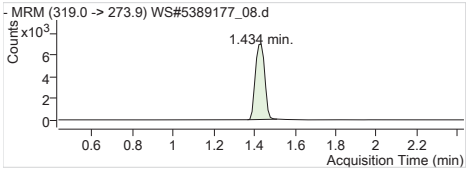



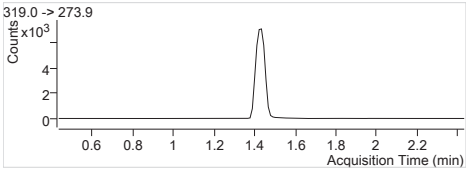

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 103.40 µg/L
Area ratio: 0.40977
Sample type: Sample



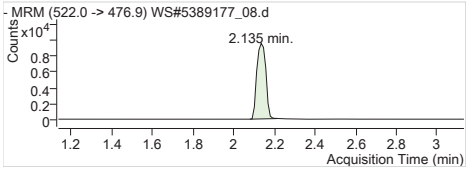



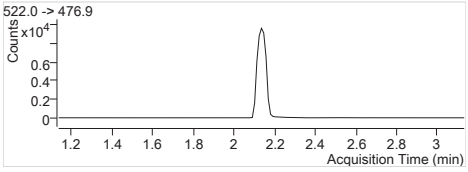

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 93.98 µg/L
Area ratio: 0.44574
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.50 µg/L
Area ratio: 0
Sample type: Sample



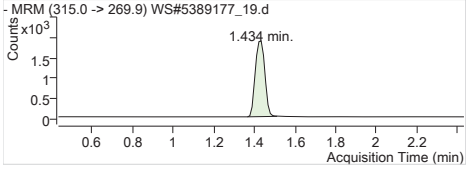

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 2.47 µg/L
Area ratio: 0
Sample type: Sample

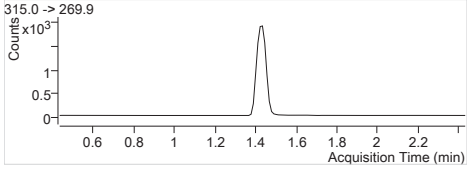
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_19.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A8 |
| **Acq. Date** | 2018/02/09 1:26:13 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

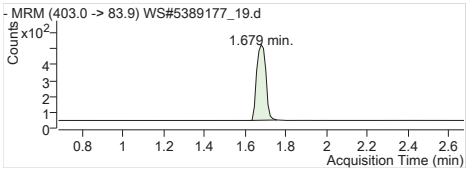
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6127 | 1.43 | 1 µg/L | | |
| MPFHxS | 1498 | 1.68 | 1 µg/L | | |
| MPFHpA | 8286 | 1.69 | 1 µg/L | | |
| MPFOA | 8948 | 1.88 | 1 µg/L | | |
| MPFOS | 1956 | 1.98 | 1 µg/L | | |
| MPFNA | 8616 | 2.02 | 1 µg/L | | |
| MPFDA | 7559 | 2.14 | 1 µg/L | | |
| MPFUnA | 8334 | 2.23 | 1 µg/L | | |
| MPFDoA | 11618 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13190 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 22580 | 1.42 | 1 µg/L | | |
| 13C9-PFDA IS | 27966 | 2.13 | 1 µg/L | | |

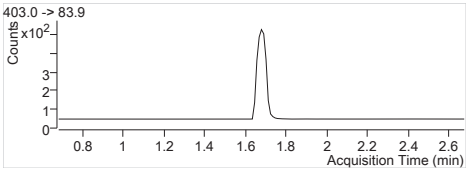
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6127 | 1.43 | - | 96.78 µg/L | - |
| 18O2-PFHxS | 1498 | 1.68 | - | 91.84 µg/L | - |
| 13C4-PFHpA | 8286 | 1.69 | - | 98.40 µg/L | - |
| 13C4-PFOA | 8948 | 1.88 | - | 99.32 µg/L | - |
| 13C4-PFOS | 1956 | 1.98 | - | 97.80 µg/L | - |
| 13C5-PFNA | 8616 | 2.02 | - | 94.86 µg/L | - |
| 13C2-PFDA | 7460 | 2.14 | - | 105.90 µg/L | - |
| 13C2-PFUnA | 8334 | 2.23 | - | 99.20 µg/L | - |
| 13C2-PFDoA | 11618 | 2.32 | - | 104.83 µg/L | - |
| 13C2-PFTeDA | 13320 | 2.47 | - | 100.42 µg/L | - |
| 13C6-PFHxA | 22580 | 1.42 | - | 2.53 µg/L | - |
| 13C9-PFDA | 27966 | 2.13 | - | 2.35 µg/L | - |



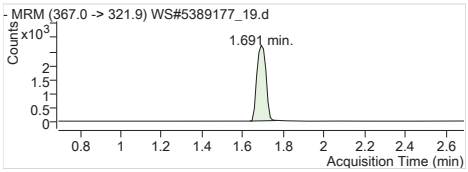



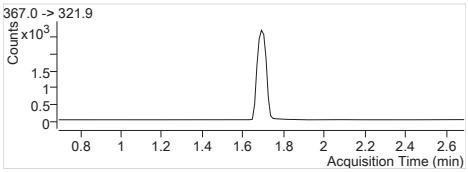

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.434) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



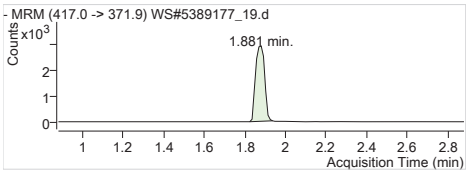



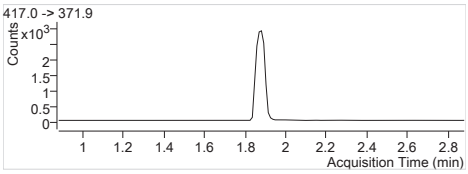

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



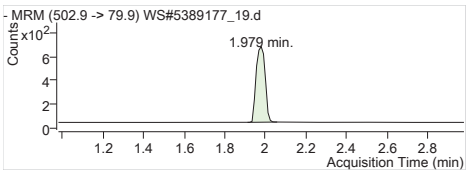



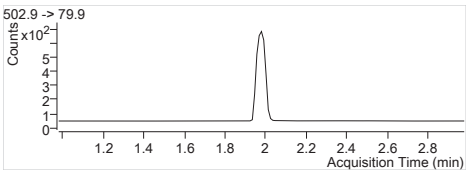

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



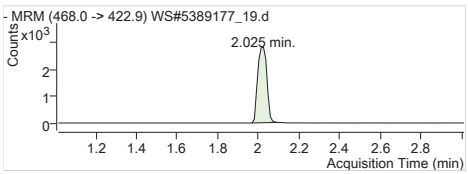



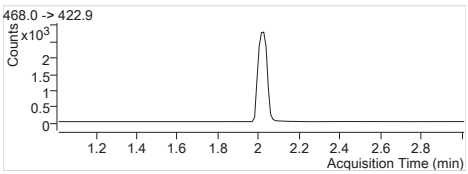

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



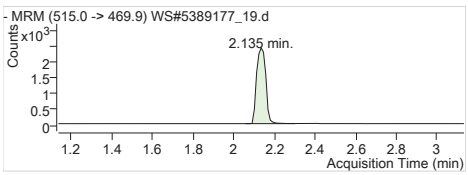



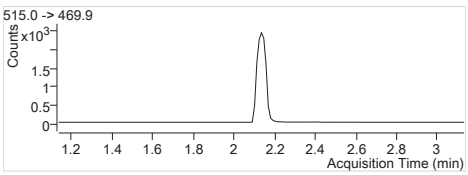

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



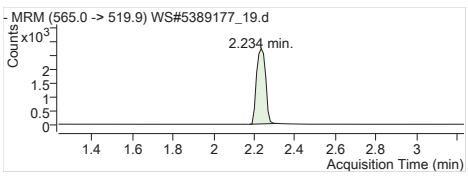



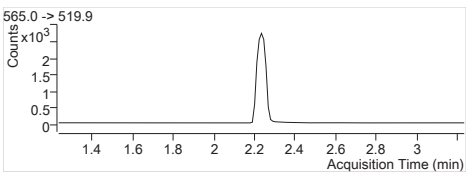

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.014)
Concentration: 1 µg/L
Sample type: Sample



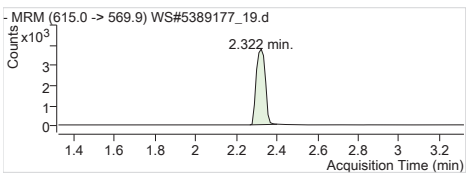



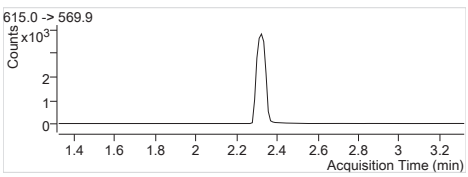

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



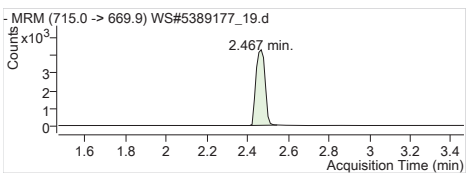



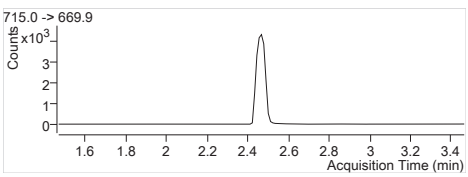

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



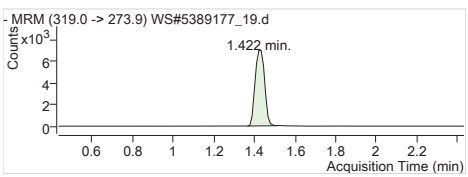



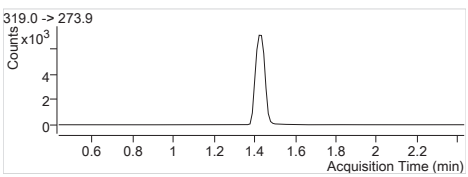

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



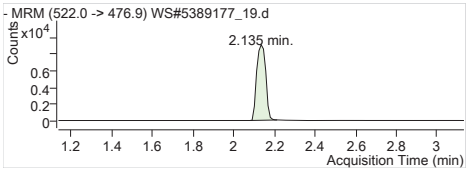



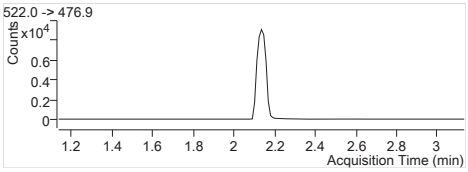

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



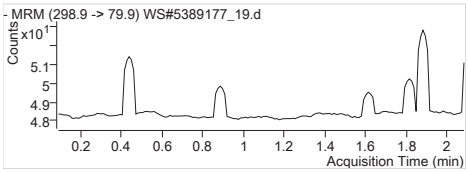



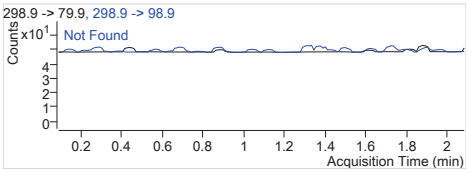

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.422 (1.434)
Concentration: 1 µg/L
Sample type: Sample



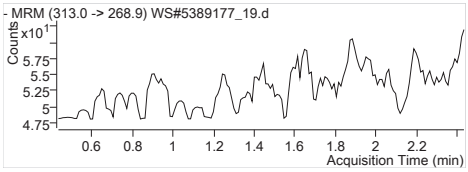



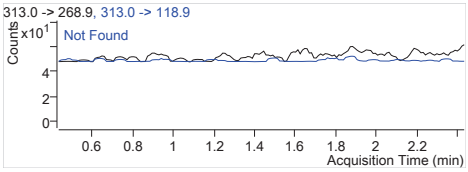

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



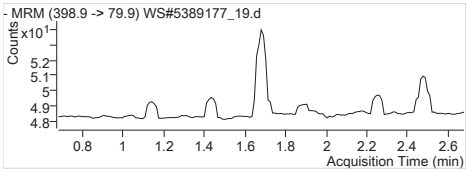



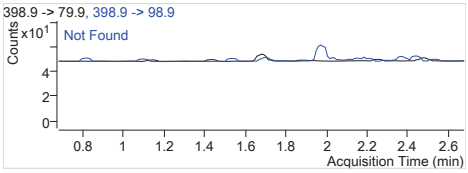

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



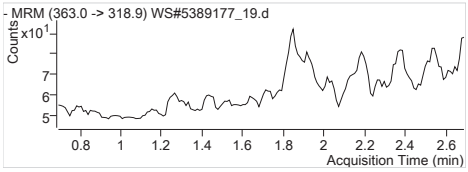



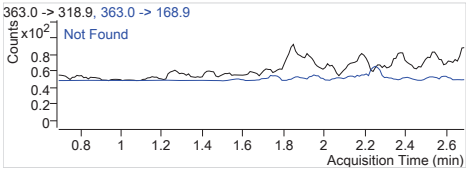

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



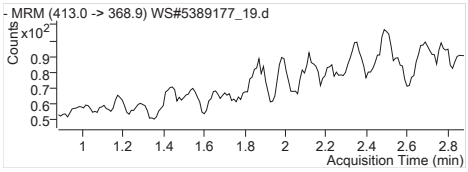



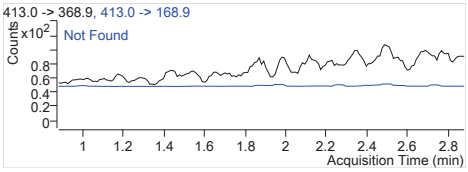

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.679)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



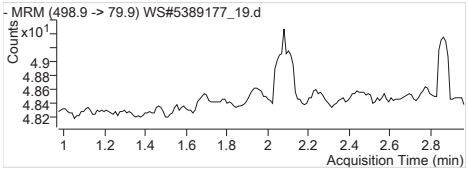



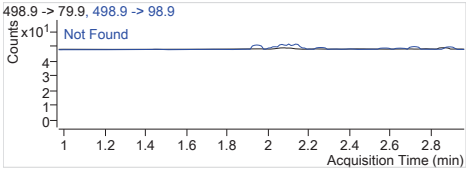

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



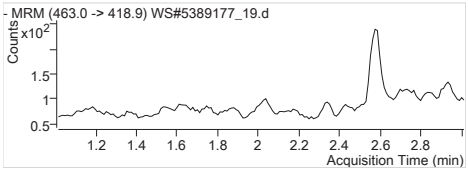



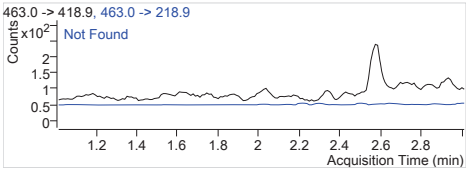

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



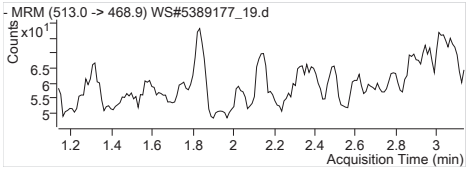



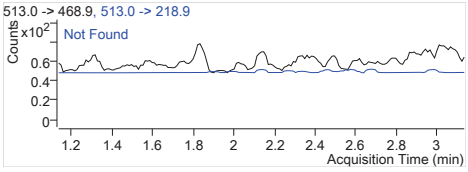

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.968)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



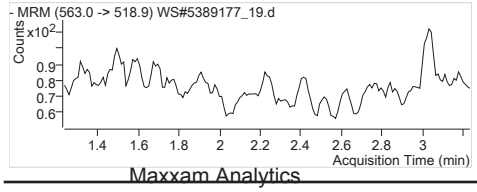



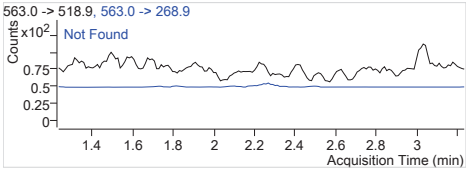

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



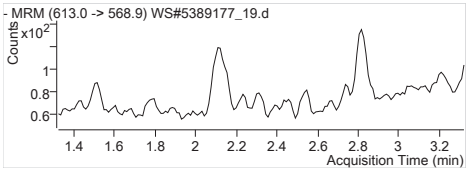



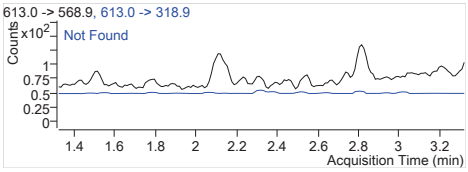

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



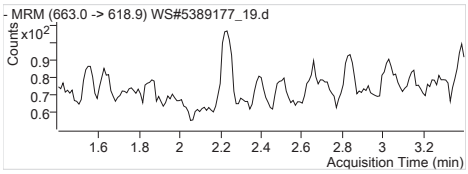



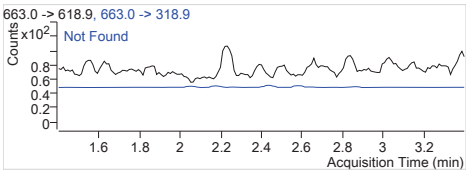

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



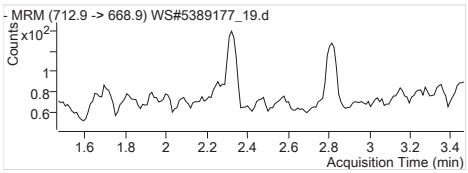



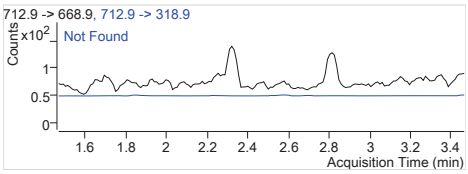

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



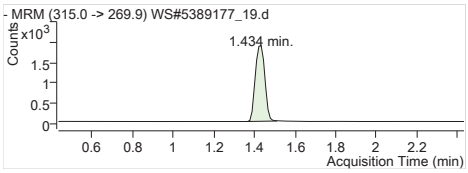



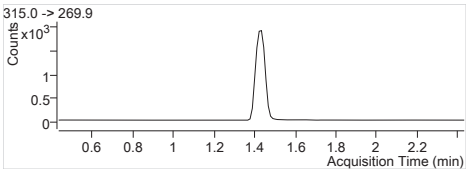

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



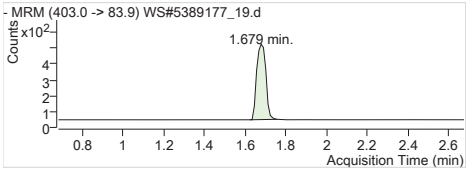



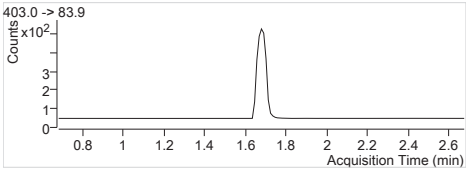

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



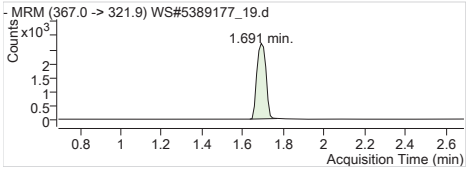



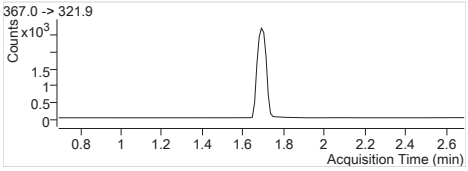

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 96.78 µg/L
Area ratio: 0.27135
Sample type: Sample



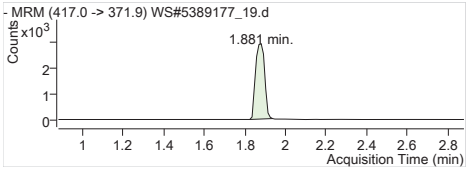



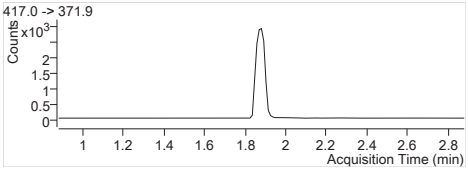

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 91.84 µg/L
Area ratio: 0.06634
Sample type: Sample



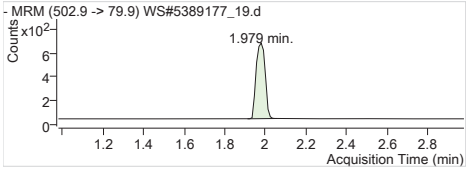



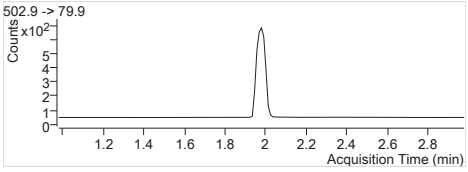

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 98.40 µg/L
Area ratio: 0.36696
Sample type: Sample



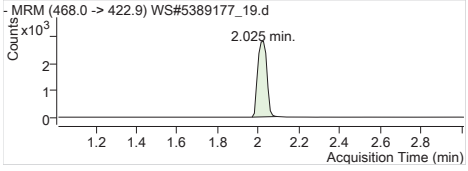



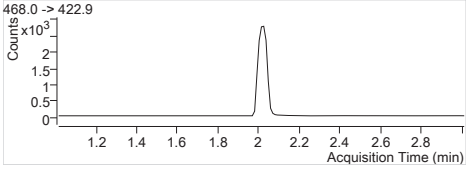

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 99.32 µg/L
Area ratio: 0.39628
Sample type: Sample



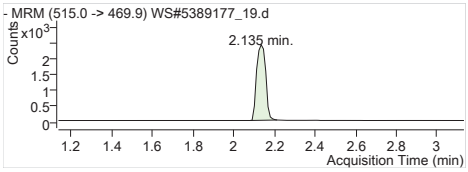



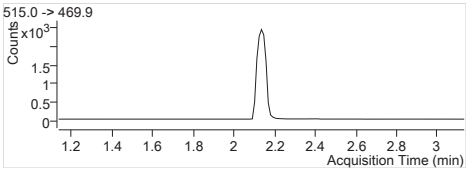

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 97.80 µg/L
Area ratio: 0.08663
Sample type: Sample



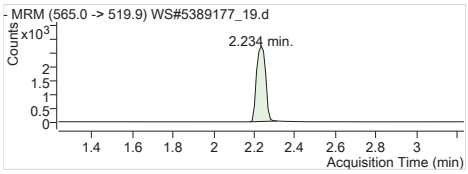



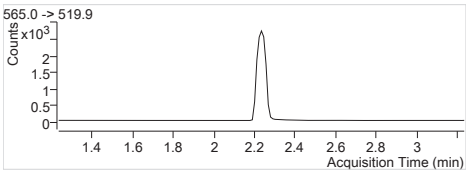

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.014)
Calc. conc. 94.86 µg/L
Area ratio: 0.38158
Sample type: Sample



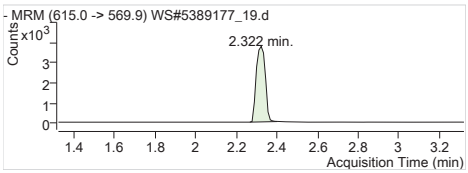



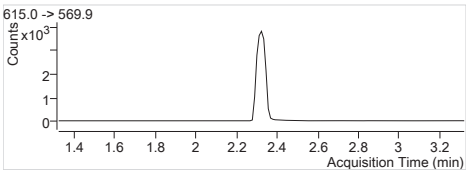

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 105.90 µg/L
Area ratio: 0.26675
Sample type: Sample



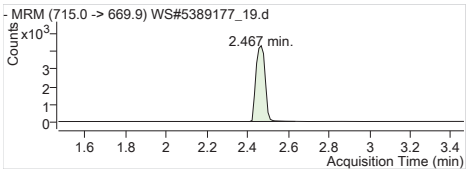



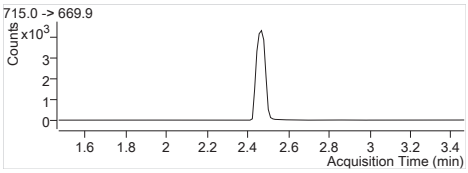

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 99.20 µg/L
Area ratio: 0.29800
Sample type: Sample



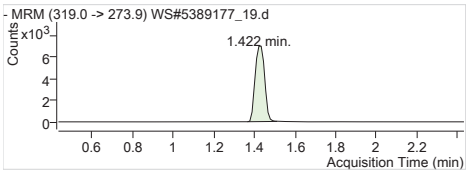



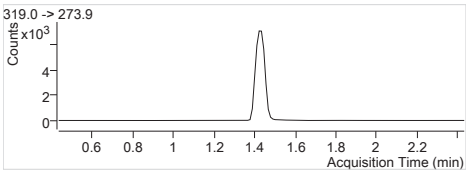

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 104.83 µg/L
Area ratio: 0.41543
Sample type: Sample



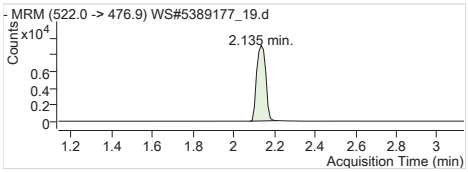



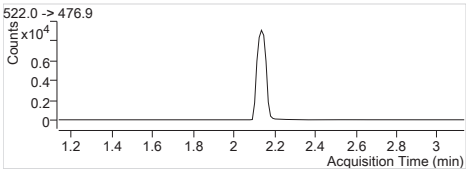

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 100.42 µg/L
Area ratio: 0.47629
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.422 (1.434)
Calc. conc. 2.53 µg/L
Area ratio: 0
Sample type: Sample



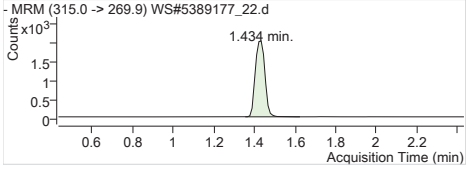

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 2.35 µg/L
Area ratio: 0
Sample type: Sample

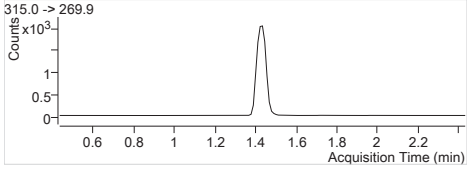
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_22.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A8 |
| **Acq. Date** | 2018/02/09 1:41:01 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

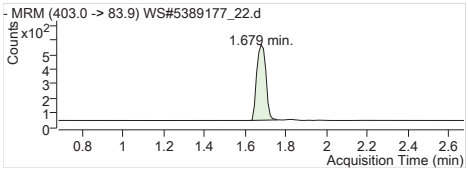
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6619 | 1.43 | 1 µg/L | | |
| MPFHxS | 1625 | 1.68 | 1 µg/L | | |
| MPFHpA | 8358 | 1.69 | 1 µg/L | | |
| MPFOA | 8541 | 1.88 | 1 µg/L | | |
| MPFOS | 1675 | 1.98 | 1 µg/L | | |
| MPFNA | 8820 | 2.01 | 1 µg/L | | |
| MPFDA | 7528 | 2.14 | 1 µg/L | | |
| MPFUnA | 8554 | 2.23 | 1 µg/L | | |
| MPFDoA | 11531 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12903 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 22526 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 29513 | 2.13 | 1 µg/L | | |

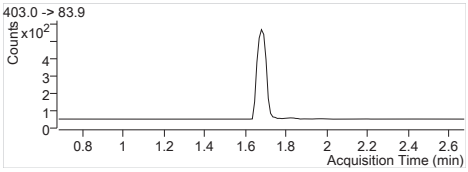
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6619 | 1.43 | - | 104.80 µg/L | - |
| 18O2-PFHxS | 1625 | 1.68 | - | 99.87 µg/L | - |
| 13C4-PFHpA | 8358 | 1.69 | - | 99.50 µg/L | - |
| 13C4-PFOA | 8541 | 1.88 | - | 95.03 µg/L | - |
| 13C4-PFOS | 1675 | 1.98 | - | 83.95 µg/L | - |
| 13C5-PFNA | 8820 | 2.01 | - | 97.34 µg/L | - |
| 13C2-PFDA | 7383 | 2.14 | - | 99.32 µg/L | - |
| 13C2-PFUnA | 8554 | 2.23 | - | 96.48 µg/L | - |
| 13C2-PFDoA | 11531 | 2.32 | - | 98.59 µg/L | - |
| 13C2-PFTeDA | 13170 | 2.47 | - | 94.08 µg/L | - |
| 13C6-PFHxA | 22526 | 1.43 | - | 2.53 µg/L | - |
| 13C9-PFDA | 29513 | 2.13 | - | 2.48 µg/L | - |



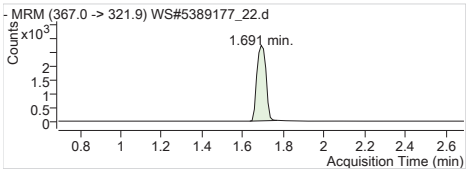



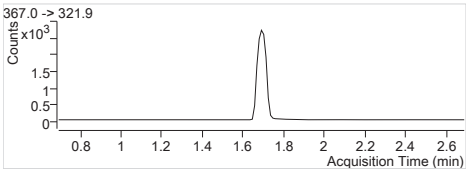

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.434) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



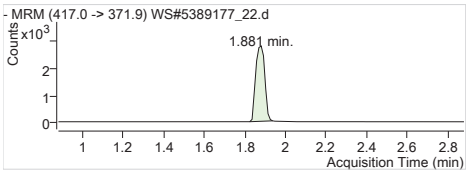



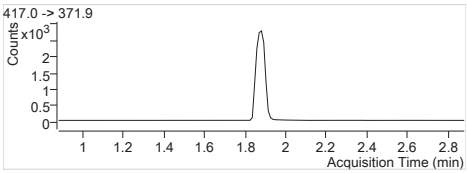

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



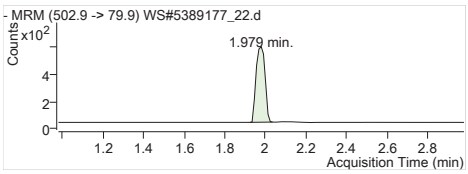



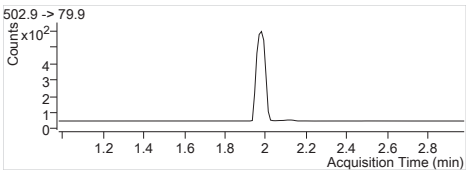

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



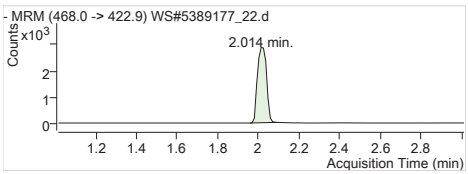



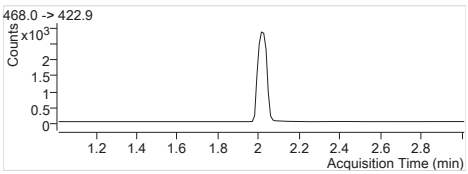

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



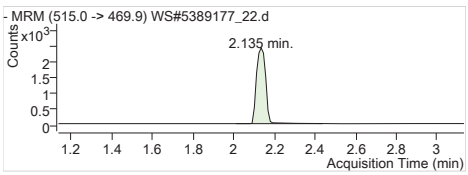



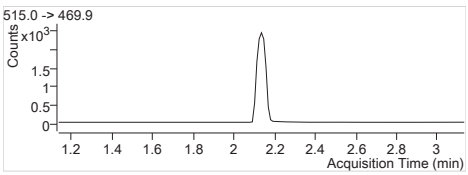

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



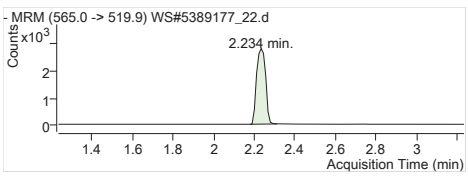



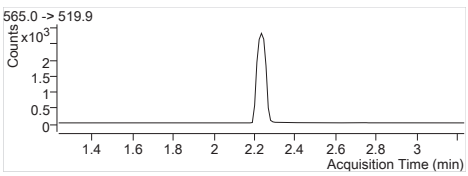

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



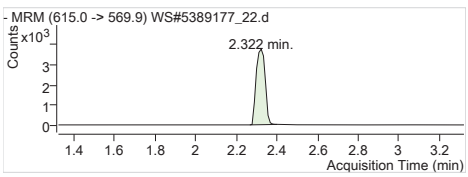



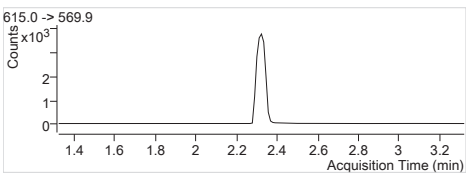

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



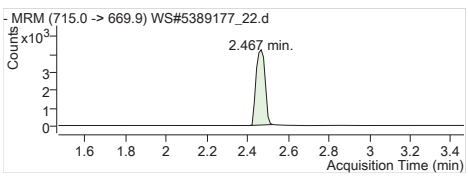



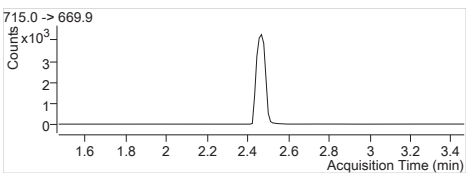

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



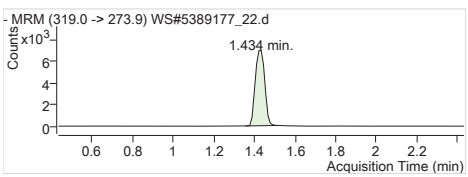



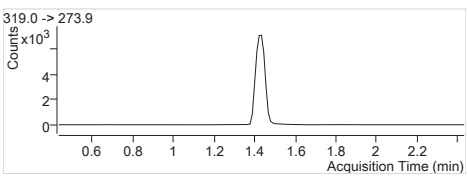

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



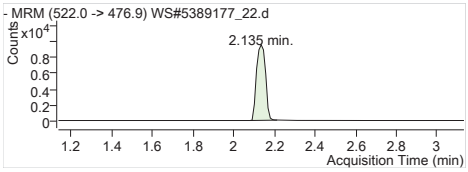



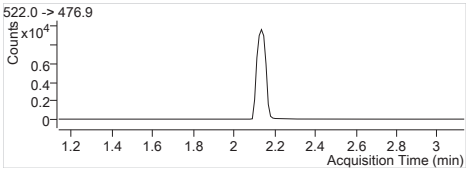

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



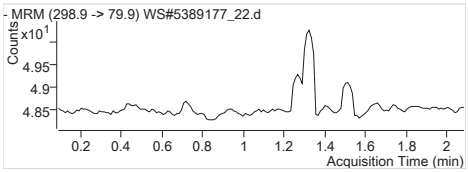



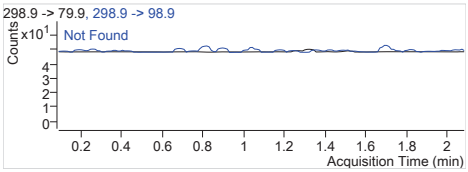

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



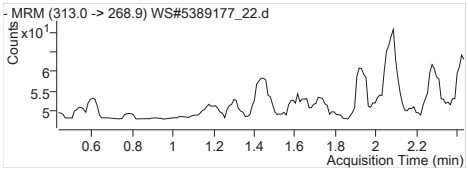



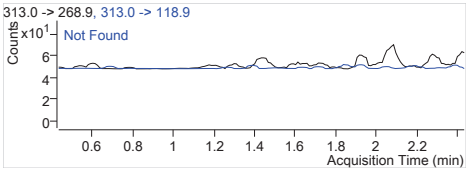

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



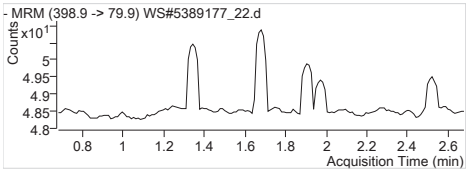



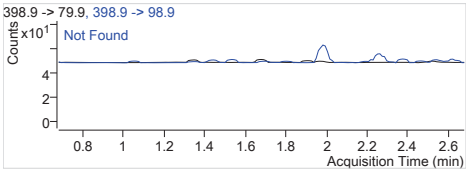

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



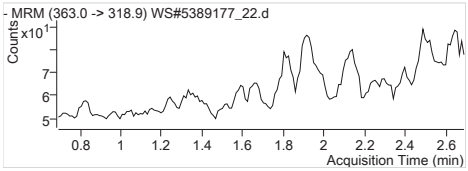



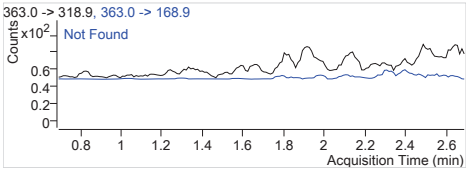

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



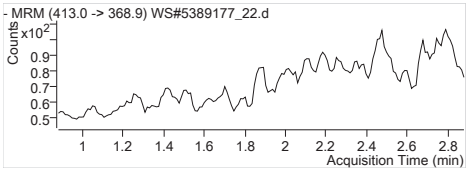



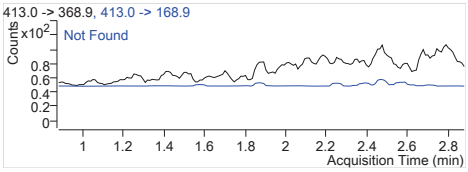

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.679)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



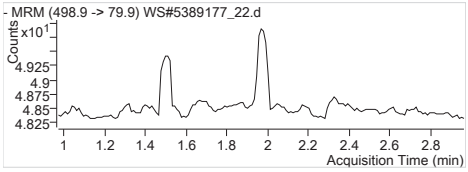



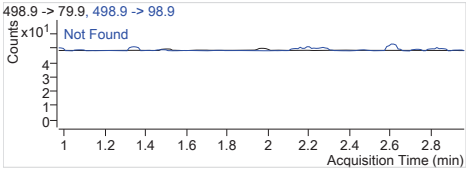

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



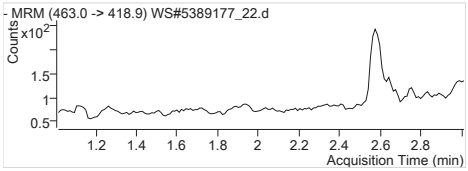



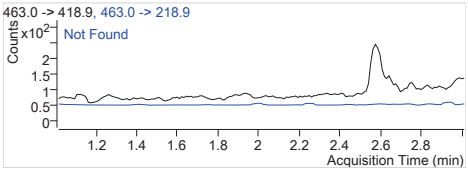

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



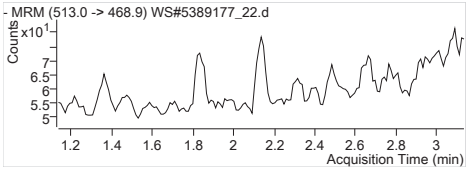



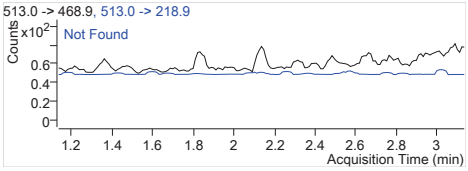

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.968)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



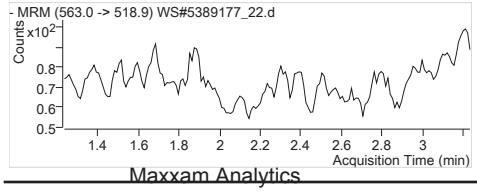



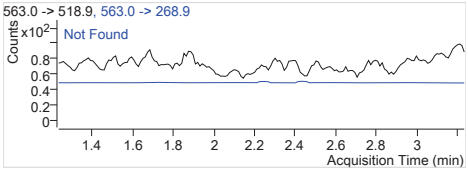

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



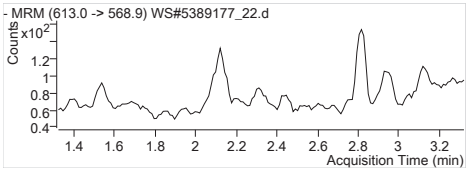



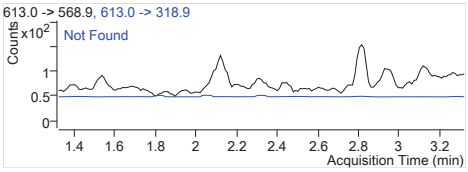

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



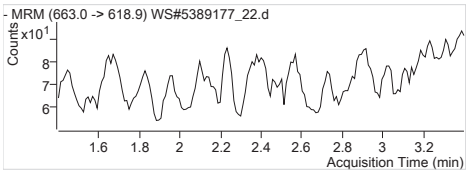



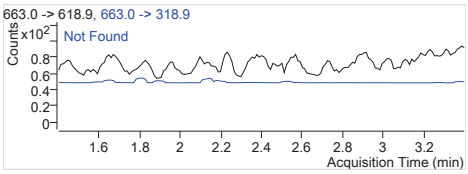

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



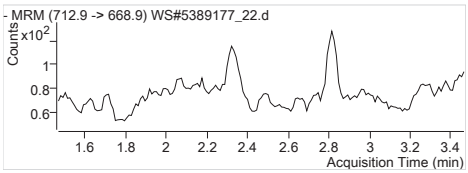



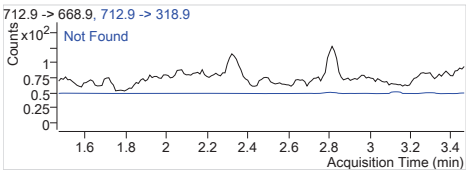

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.323) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



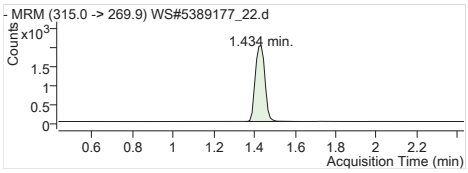



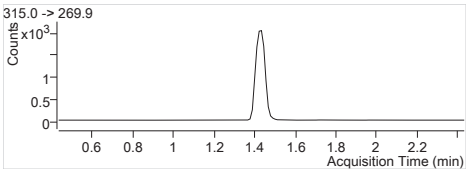

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.400) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



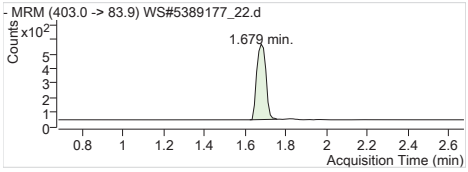



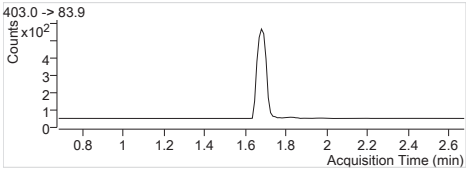

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.467) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



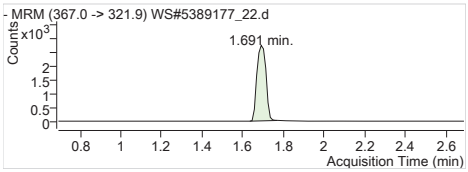



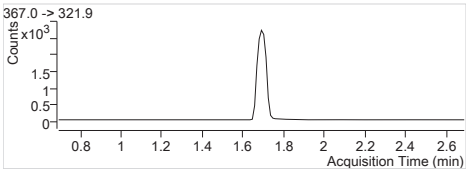

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.434 (1.434) |
| Calc. conc. | 104.80 µg/L |
| Area ratio: | 0.29384 |
| Sample type: | Sample |



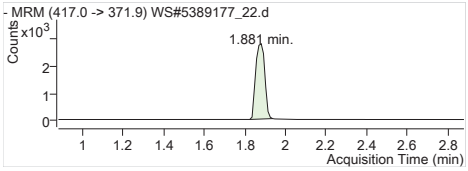



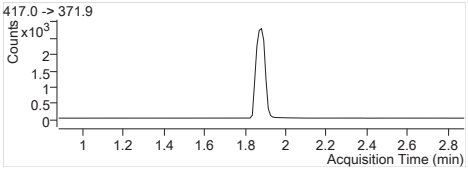

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.679 (1.679) |
| Calc. conc. | 99.87 µg/L |
| Area ratio: | 0.07214 |
| Sample type: | Sample |



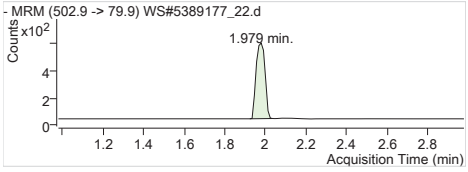



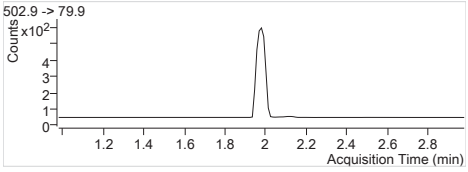

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.691 (1.691) |
| Calc. conc. | 99.50 µg/L |
| Area ratio: | 0.37104 |
| Sample type: | Sample |



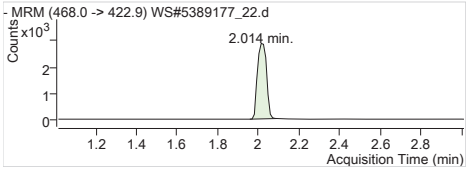



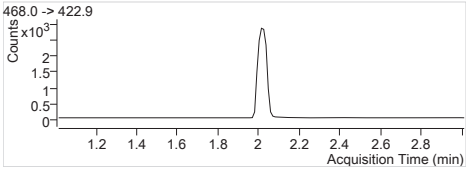

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.881 (1.881) |
| Calc. conc. | 95.03 µg/L |
| Area ratio: | 0.37916 |
| Sample type: | Sample |



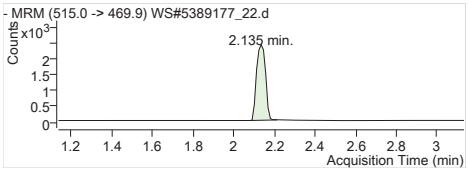



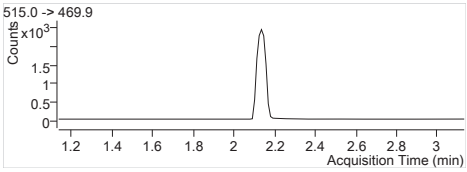

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.979 (1.979) |
| Calc. conc. | 83.95 µg/L |
| Area ratio: | 0.07436 |
| Sample type: | Sample |



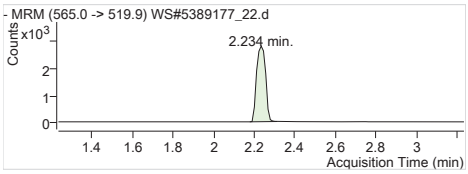



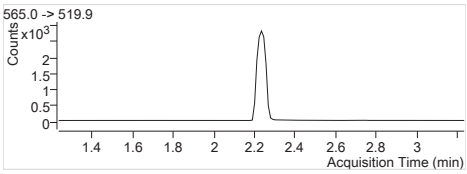

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.014 (2.014) |
| Calc. conc. | 97.34 µg/L |
| Area ratio: | 0.39155 |
| Sample type: | Sample |



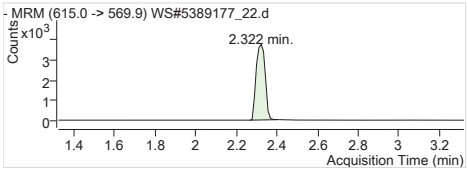



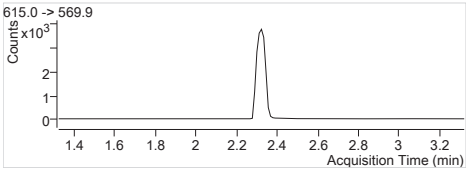

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 99.32 µg/L
Area ratio: 0.25016
Sample type: Sample



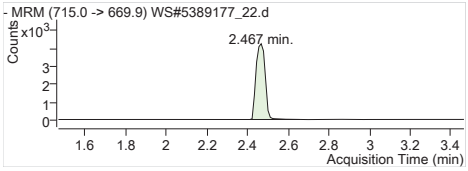



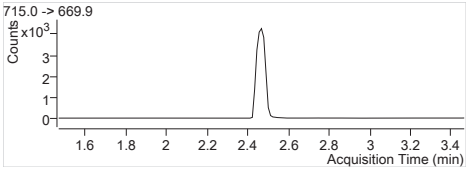

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 96.48 µg/L
Area ratio: 0.28984
Sample type: Sample



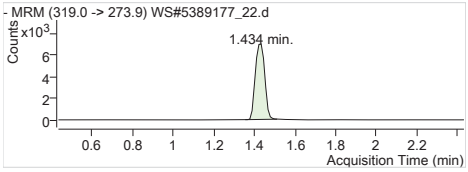



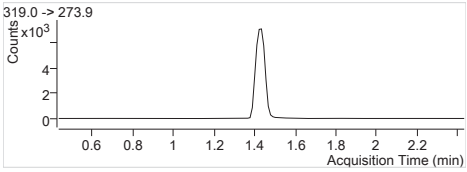

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 98.59 µg/L
Area ratio: 0.39071
Sample type: Sample



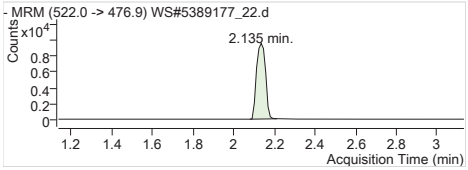



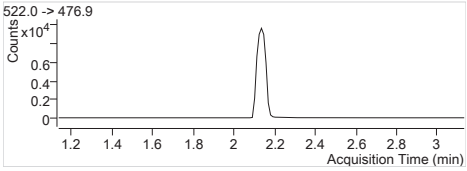

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 94.08 µg/L
Area ratio: 0.44624
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.53 µg/L
Area ratio: 0
Sample type: Sample



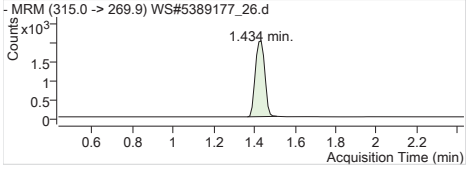

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 2.48 µg/L
Area ratio: 0
Sample type: Sample

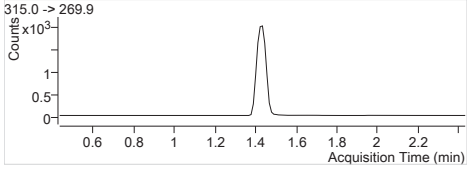
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_26.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A8 |
| **Acq. Date** | 2018/02/09 2:00:45 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

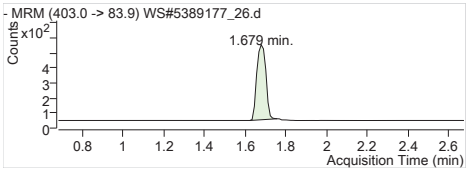
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6424 | 1.43 | 1 µg/L | | |
| MPFHxS | 1564 | 1.68 | 1 µg/L | | |
| MPFHpA | 8342 | 1.69 | 1 µg/L | | |
| MPFOA | 9379 | 1.88 | 1 µg/L | | |
| MPFOS | 1939 | 1.98 | 1 µg/L | | |
| MPFNA | 9072 | 2.01 | 1 µg/L | | |
| MPFDA | 7409 | 2.14 | 1 µg/L | | |
| MPFUnA | 8081 | 2.23 | 1 µg/L | | |
| MPFDoA | 11348 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12928 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 23136 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 29942 | 2.13 | 1 µg/L | | |

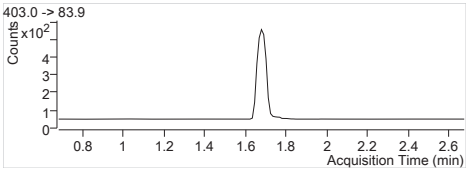
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6424 | 1.43 | - | 99.04 µg/L | - |
| 18O2-PFHxS | 1564 | 1.68 | - | 93.58 µg/L | - |
| 13C4-PFHpA | 8342 | 1.69 | - | 96.69 µg/L | - |
| 13C4-PFOA | 9379 | 1.88 | - | 101.60 µg/L | - |
| 13C4-PFOS | 1939 | 1.98 | - | 94.62 µg/L | - |
| 13C5-PFNA | 9072 | 2.01 | - | 97.48 µg/L | - |
| 13C2-PFDA | 7332 | 2.14 | - | 97.22 µg/L | - |
| 13C2-PFUnA | 8081 | 2.23 | - | 89.84 µg/L | - |
| 13C2-PFDoA | 11348 | 2.32 | - | 95.64 µg/L | - |
| 13C2-PFTeDA | 13199 | 2.47 | - | 92.94 µg/L | - |
| 13C6-PFHxA | 23136 | 1.43 | - | 2.59 µg/L | - |
| 13C9-PFDA | 29942 | 2.13 | - | 2.51 µg/L | - |



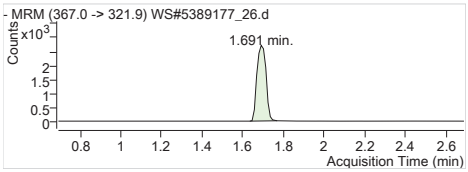



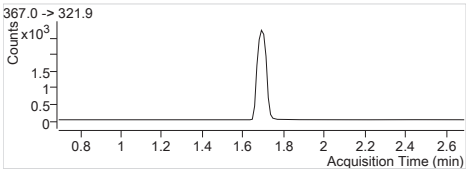

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.434) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



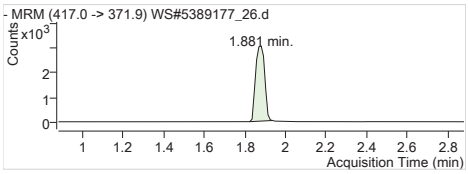



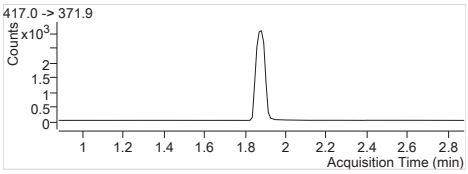

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



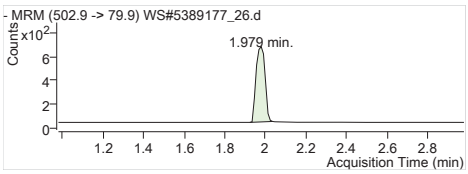



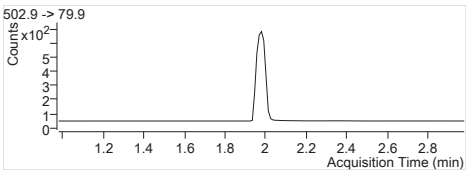

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



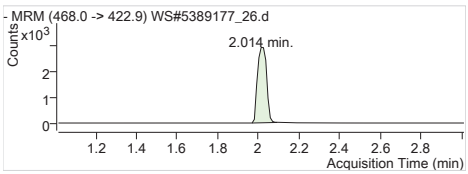



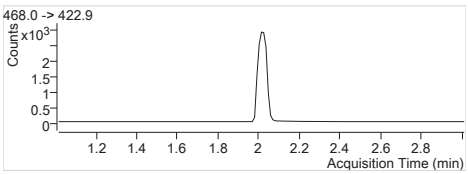

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



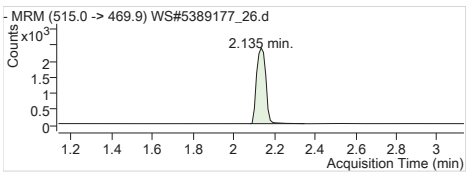



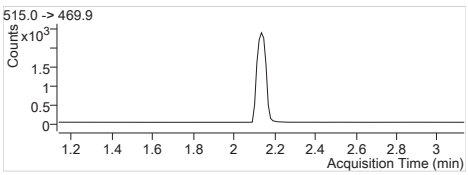

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



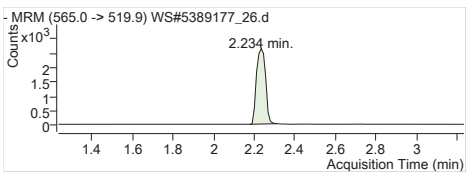



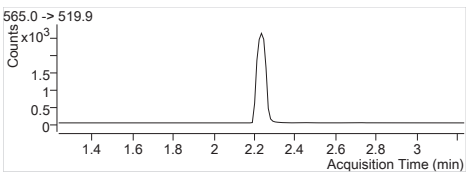

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



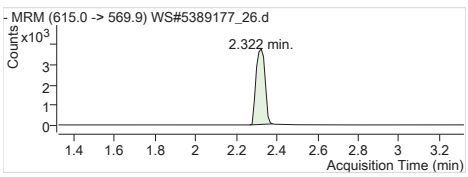



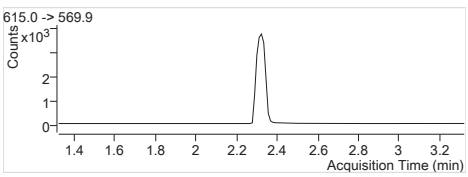

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



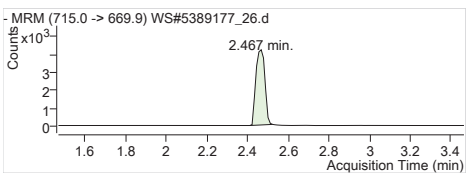



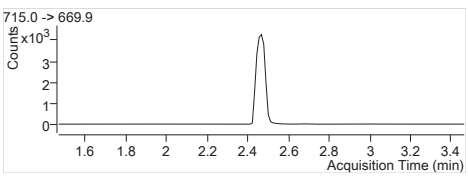

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



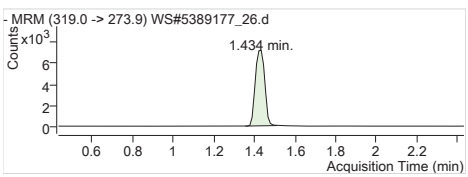



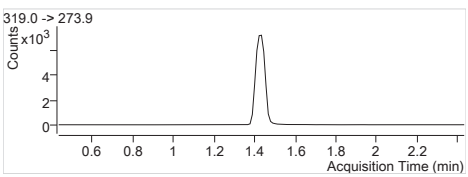

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



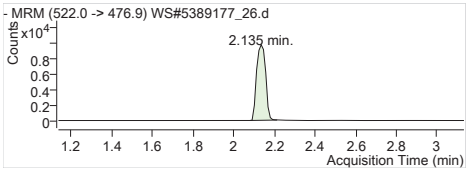



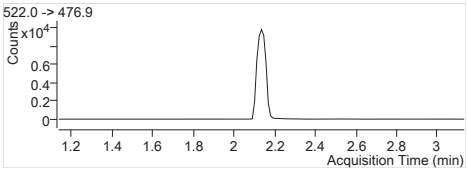

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



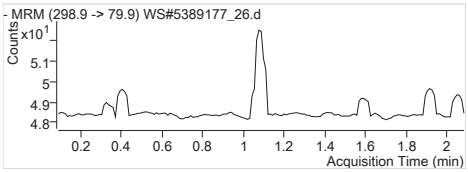



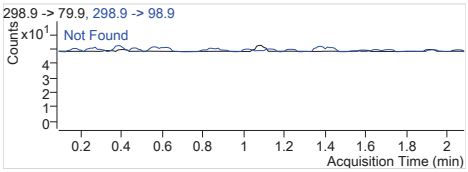

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



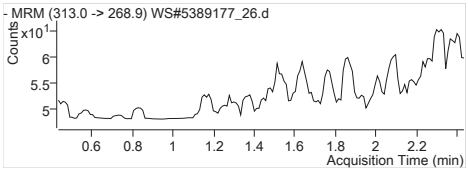



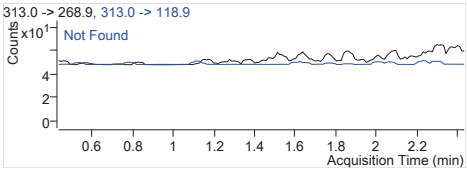

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



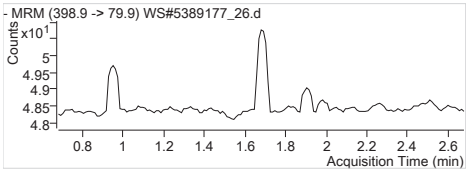



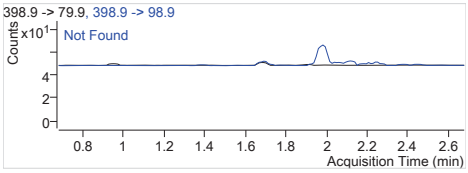

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



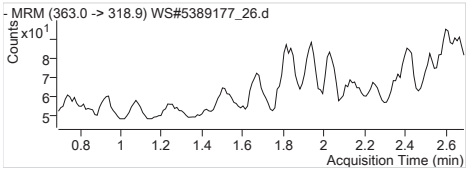



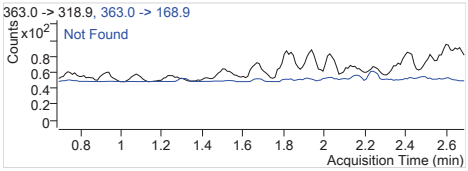

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



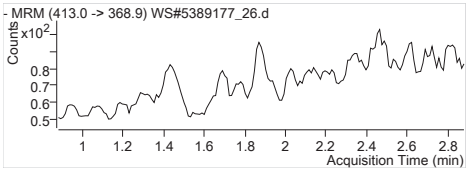



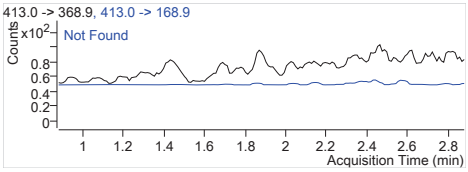

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.679)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



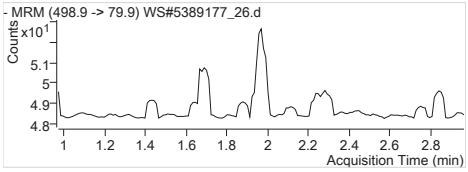



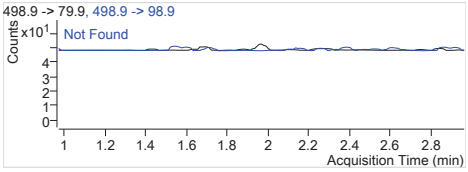

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



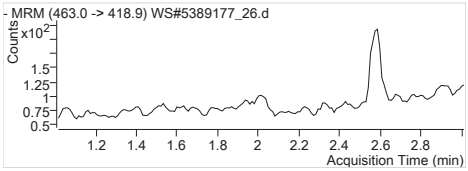



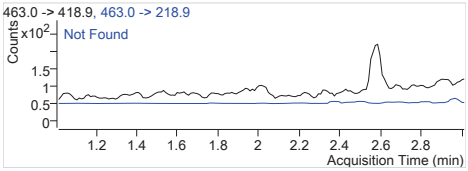

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



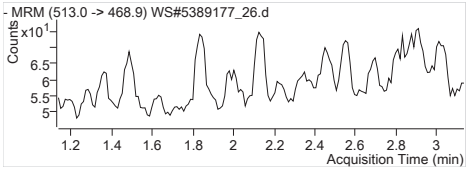



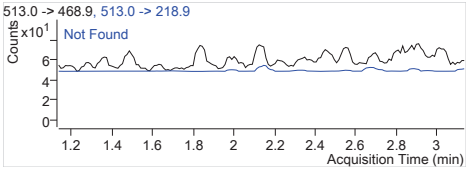

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.968)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



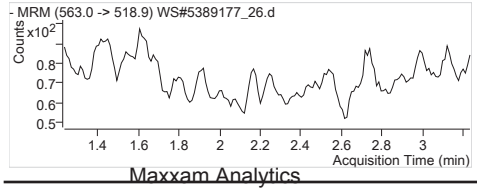



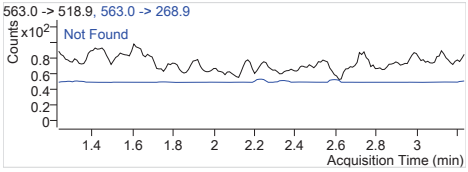

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



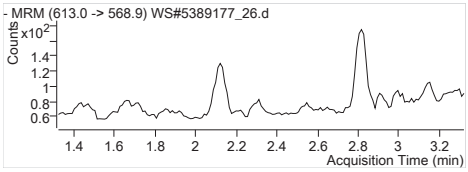



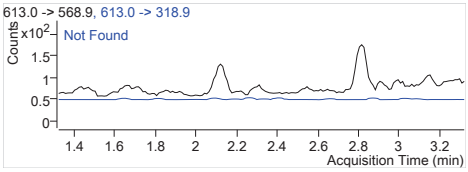

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



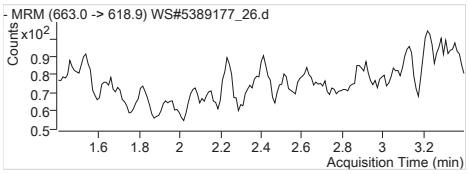



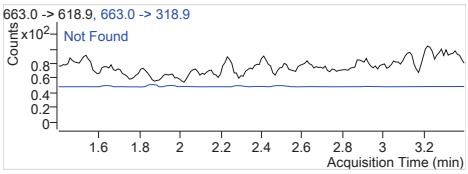

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



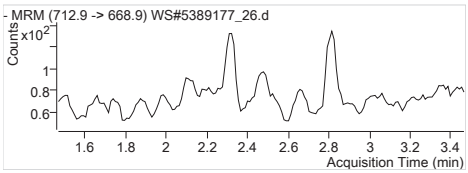



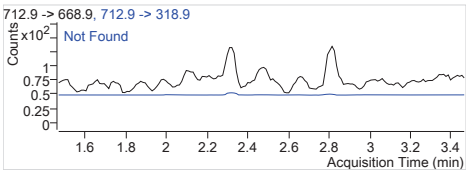

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



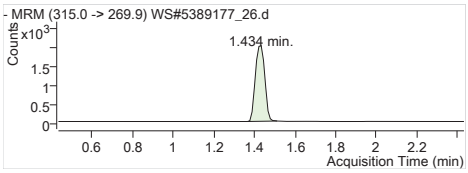



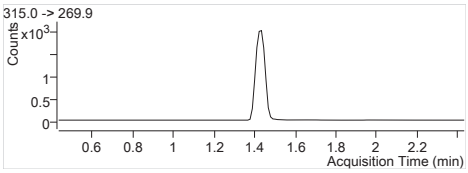

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



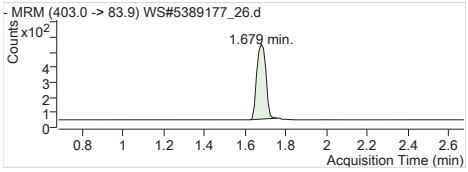



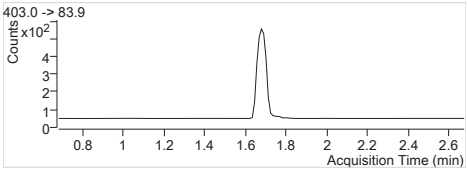

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



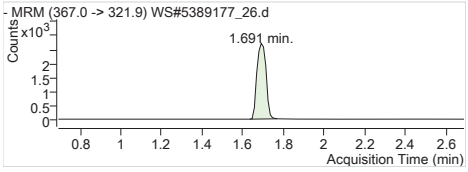



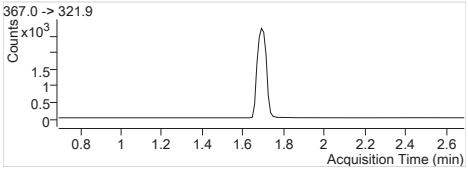

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 99.04 µg/L
Area ratio: 0.27766
Sample type: Sample



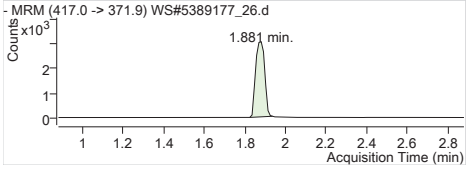



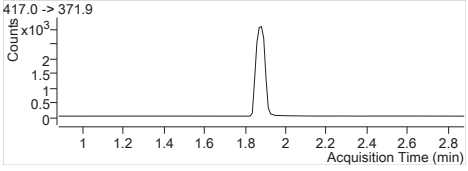

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 93.58 µg/L
Area ratio: 0.06760
Sample type: Sample



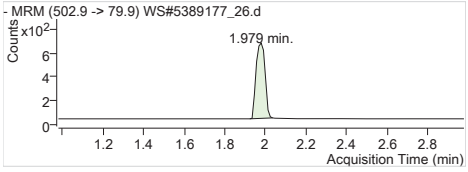



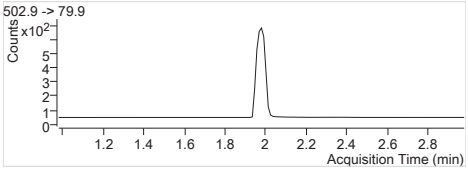

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 96.69 µg/L
Area ratio: 0.36056
Sample type: Sample



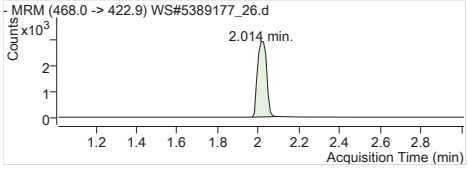



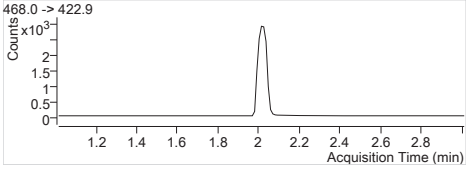

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 101.60 µg/L
Area ratio: 0.40539
Sample type: Sample



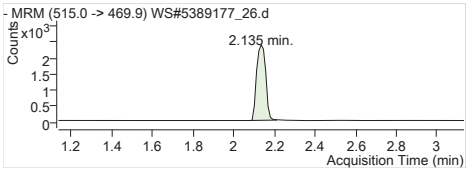



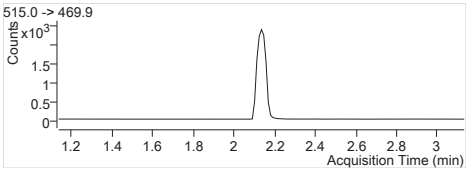

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 94.62 µg/L
Area ratio: 0.08381
Sample type: Sample



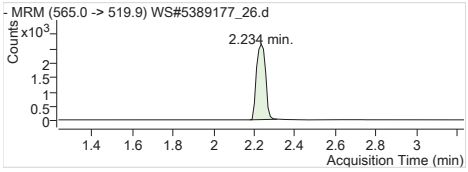



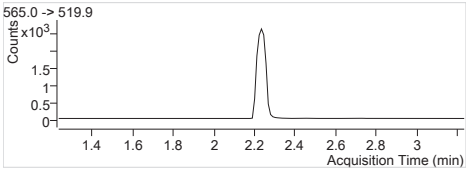

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 97.48 µg/L
Area ratio: 0.39212
Sample type: Sample



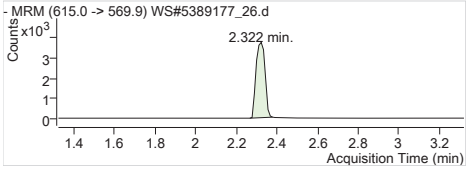



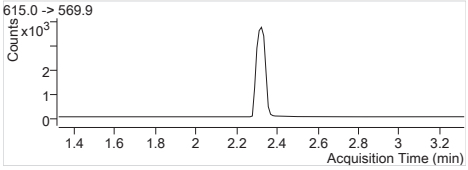

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 97.22 µg/L
Area ratio: 0.24487
Sample type: Sample



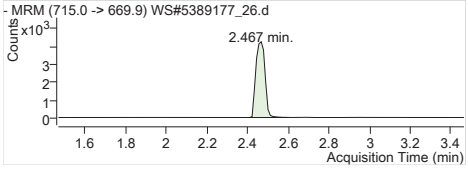



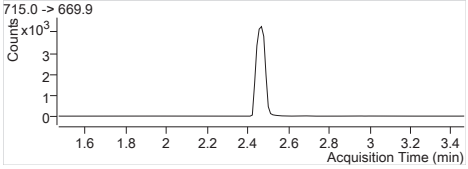

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 89.84 µg/L
Area ratio: 0.26989
Sample type: Sample



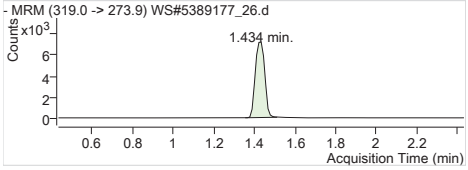



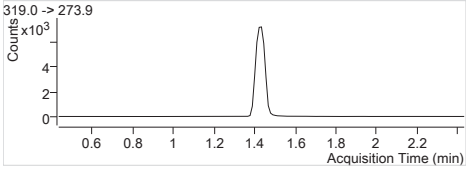

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 95.64 µg/L
Area ratio: 0.37900
Sample type: Sample



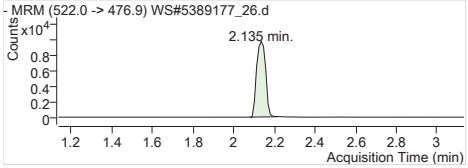



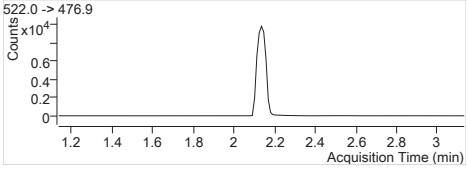

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 92.94 µg/L
Area ratio: 0.44082
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.59 µg/L
Area ratio: 0
Sample type: Sample



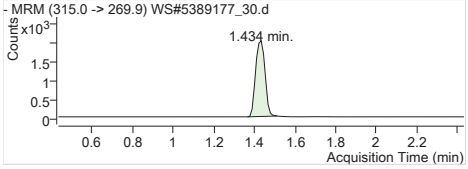

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 2.51 µg/L
Area ratio: 0
Sample type: Sample

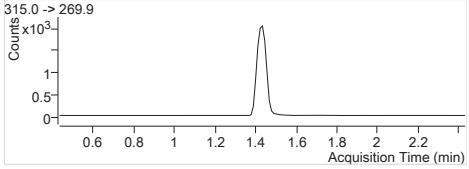
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_30.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A8 |
| **Acq. Date** | 2018/02/09 2:20:29 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

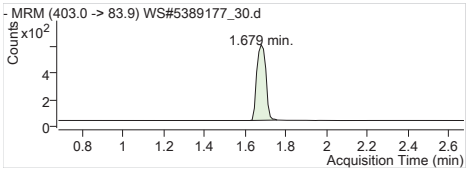
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6462 | 1.43 | 1 µg/L | | |
| MPFHxS | 1758 | 1.68 | 1 µg/L | | |
| MPFHpA | 8236 | 1.69 | 1 µg/L | | |
| MPFOA | 8839 | 1.88 | 1 µg/L | | |
| MPFOS | 1892 | 1.98 | 1 µg/L | | |
| MPFNA | 8791 | 2.01 | 1 µg/L | | |
| MPFDA | 7340 | 2.14 | 1 µg/L | | |
| MPFUnA | 8675 | 2.23 | 1 µg/L | | |
| MPFDoA | 11158 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13769 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 22158 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 29196 | 2.13 | 1 µg/L | | |

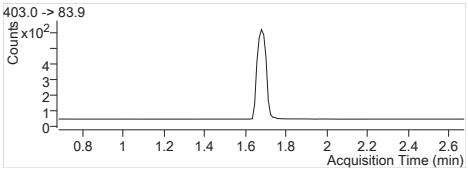
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6462 | 1.43 | - | 104.02 µg/L | - |
| 18O2-PFHxS | 1758 | 1.68 | - | 109.84 µg/L | - |
| 13C4-PFHpA | 8236 | 1.69 | - | 99.67 µg/L | - |
| 13C4-PFOA | 8839 | 1.88 | - | 99.98 µg/L | - |
| 13C4-PFOS | 1892 | 1.98 | - | 96.40 µg/L | - |
| 13C5-PFNA | 8791 | 2.01 | - | 98.63 µg/L | - |
| 13C2-PFDA | 7178 | 2.14 | - | 97.61 µg/L | - |
| 13C2-PFUnA | 8675 | 2.23 | - | 98.91 µg/L | - |
| 13C2-PFDoA | 11158 | 2.32 | - | 96.44 µg/L | - |
| 13C2-PFTeDA | 14175 | 2.47 | - | 102.36 µg/L | - |
| 13C6-PFHxA | 22158 | 1.43 | - | 2.48 µg/L | - |
| 13C9-PFDA | 29196 | 2.13 | - | 2.45 µg/L | - |



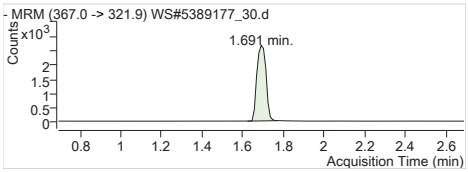



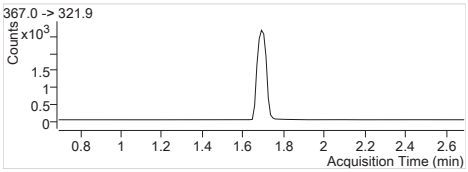

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.434) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



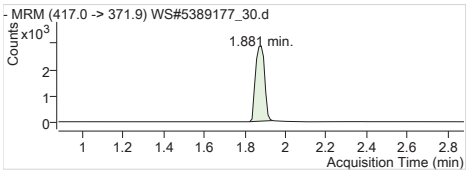



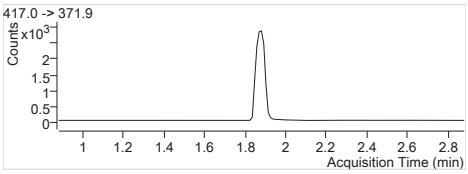

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



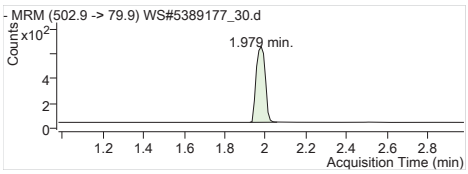



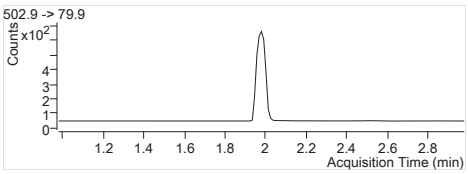

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



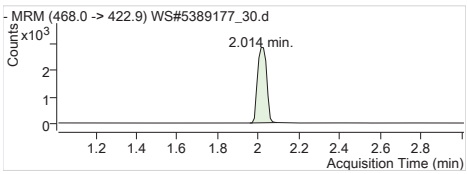



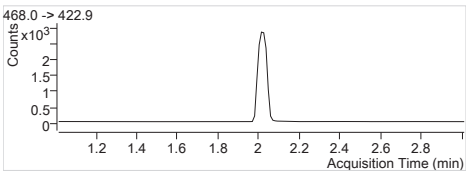

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



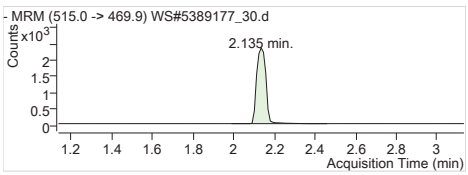



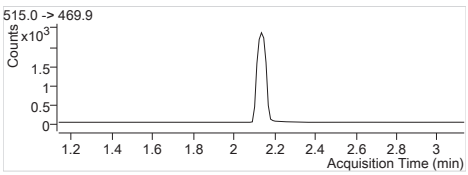

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



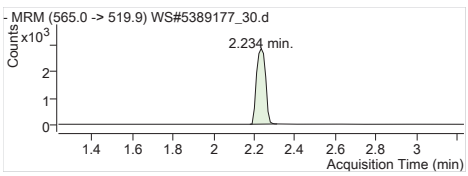



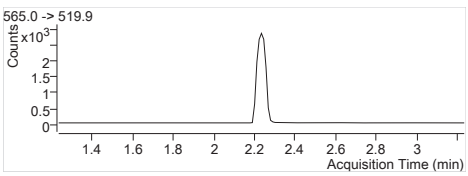

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



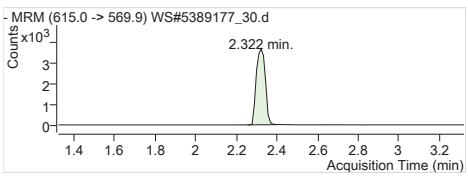



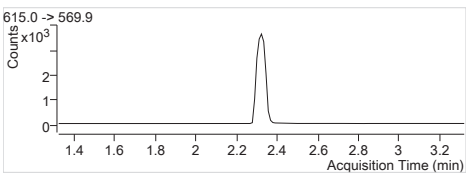

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



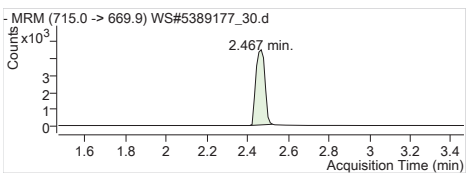



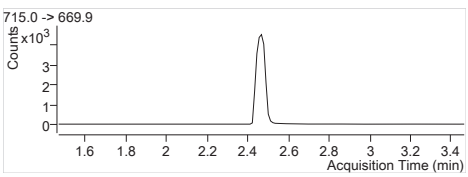

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



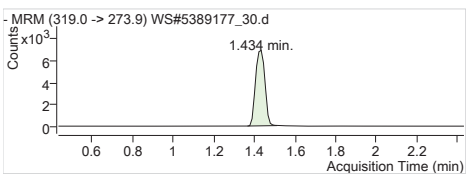



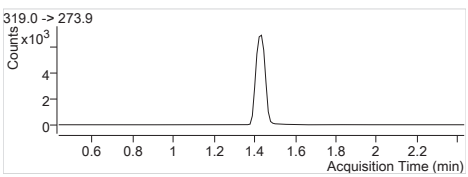

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



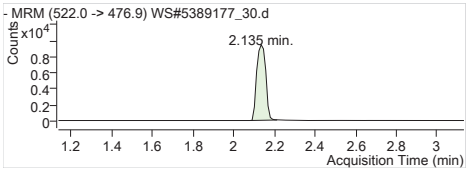



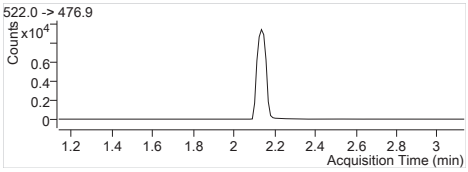

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



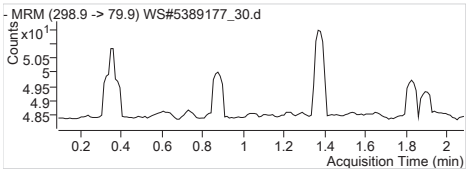



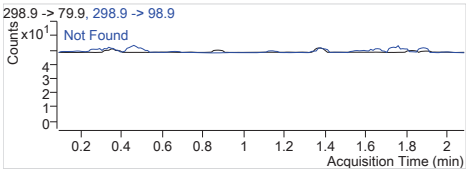

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



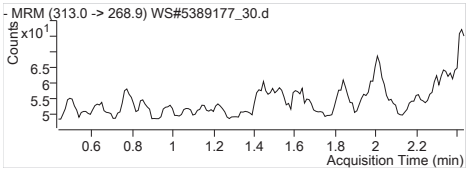



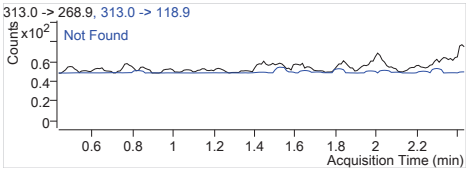

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



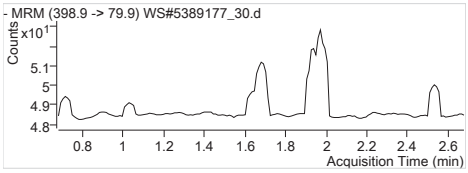



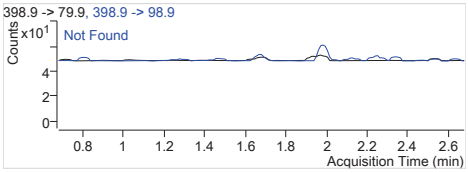

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



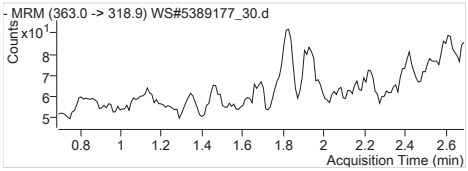



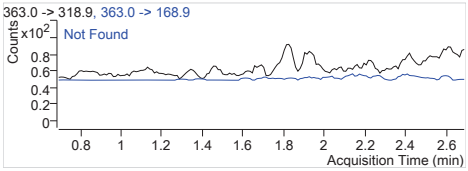

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



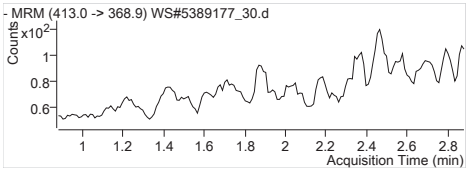



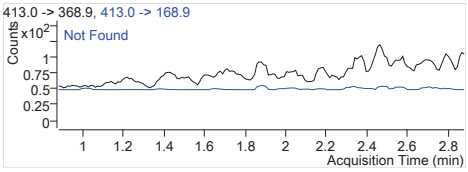

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.679)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



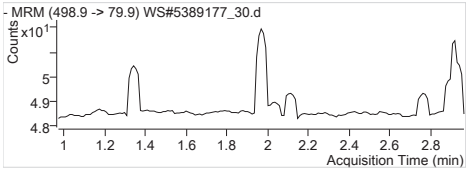



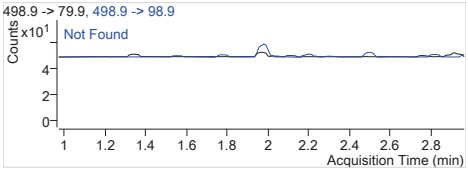

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



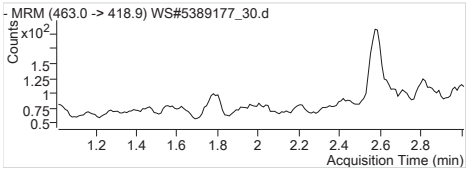



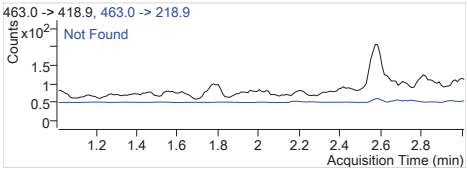

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



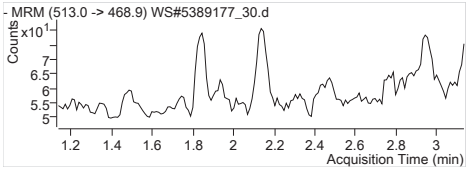



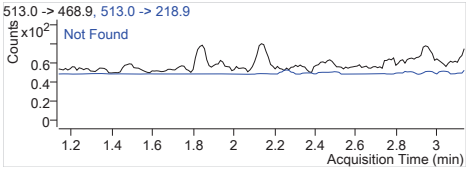

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.968)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



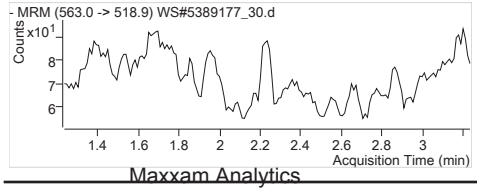



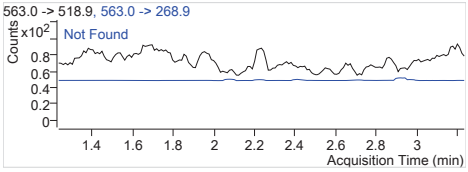

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



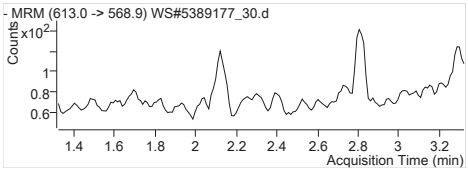



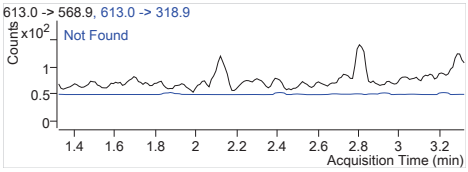

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



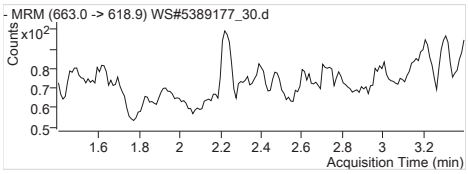



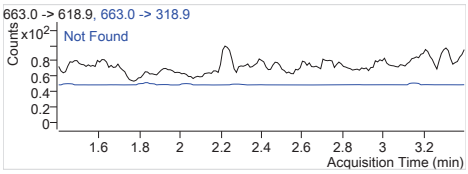

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



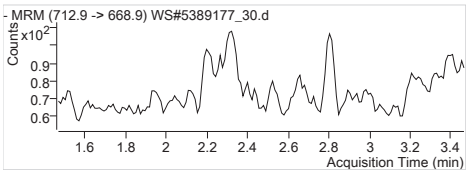



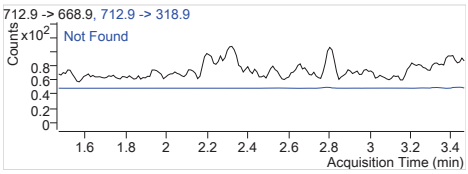

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



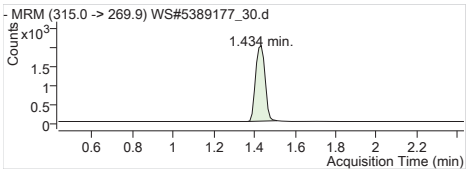



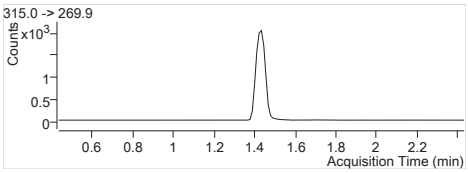

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



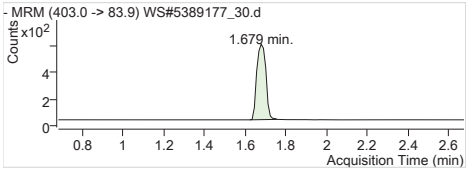



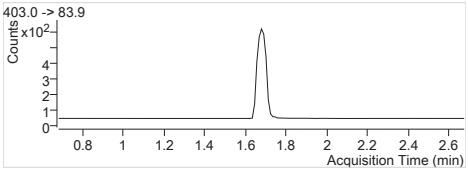

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



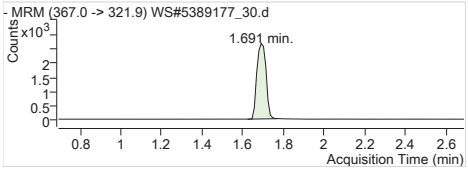



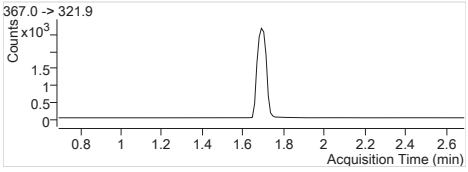

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 104.02 µg/L
Area ratio: 0.29163
Sample type: Sample



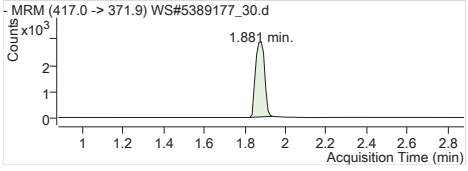



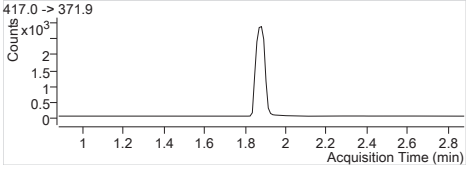

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 109.84 µg/L
Area ratio: 0.07934
Sample type: Sample



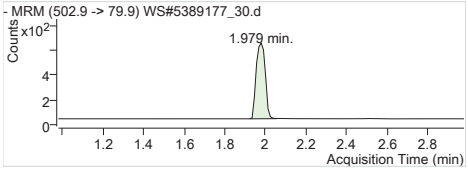



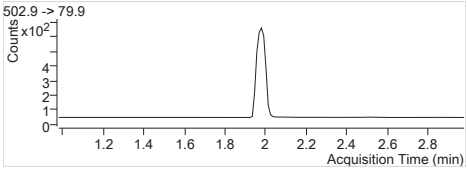

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 99.67 µg/L
Area ratio: 0.37169
Sample type: Sample



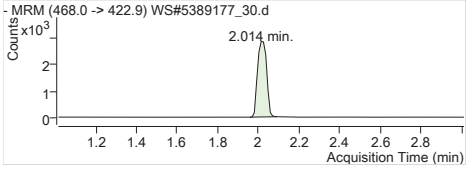



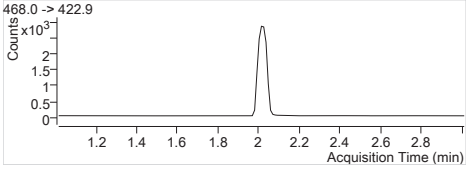

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 99.98 µg/L
Area ratio: 0.39891
Sample type: Sample



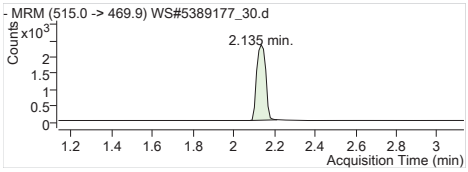



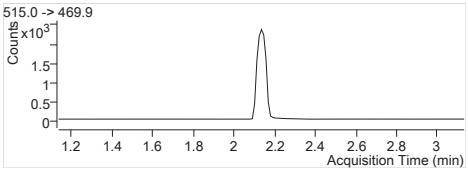

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 96.40 µg/L
Area ratio: 0.08539
Sample type: Sample



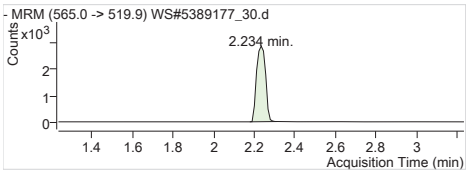



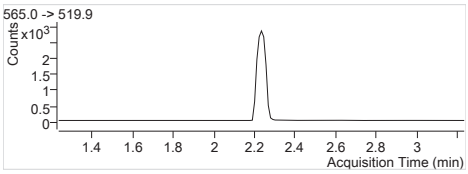

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 98.63 µg/L
Area ratio: 0.39674
Sample type: Sample



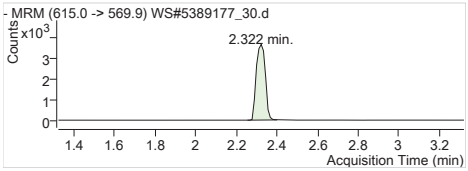



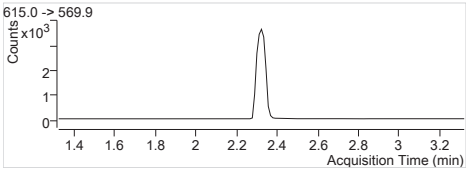

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 97.61 µg/L
Area ratio: 0.24586
Sample type: Sample



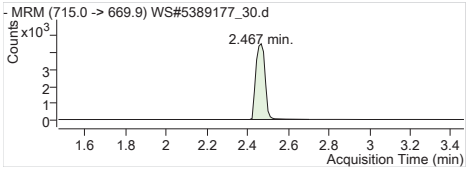



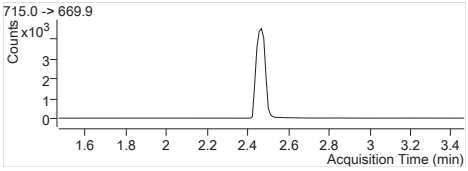

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 98.91 µg/L
Area ratio: 0.29713
Sample type: Sample



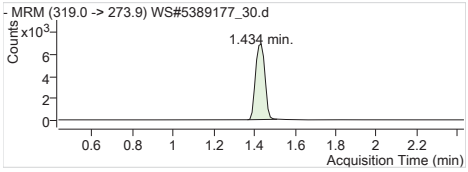



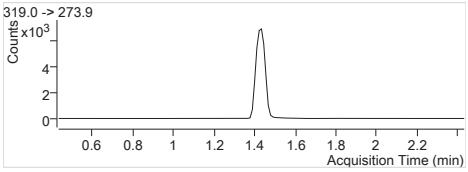

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 96.44 µg/L
Area ratio: 0.38218
Sample type: Sample



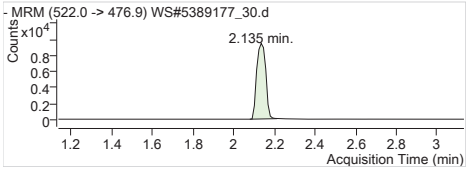



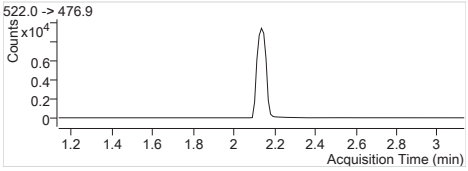

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 102.36 µg/L
Area ratio: 0.48551
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.48 µg/L
Area ratio: 0
Sample type: Sample



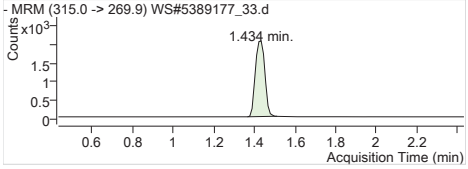

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 2.45 µg/L
Area ratio: 0
Sample type: Sample

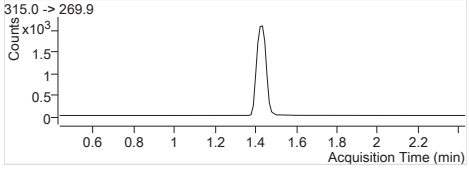
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_33.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A8 |
| **Acq. Date** | 2018/02/09 2:35:17 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

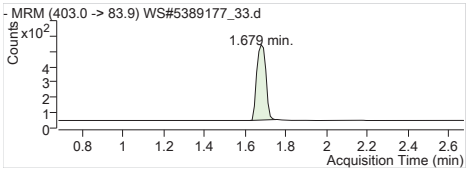
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6671 | 1.43 | 1 µg/L | | |
| MPFHxS | 1547 | 1.68 | 1 µg/L | | |
| MPFHpA | 8051 | 1.69 | 1 µg/L | | |
| MPFOA | 8361 | 1.88 | 1 µg/L | | |
| MPFOS | 1883 | 1.98 | 1 µg/L | | |
| MPFNA | 9266 | 2.01 | 1 µg/L | | |
| MPFDA | 7638 | 2.14 | 1 µg/L | | |
| MPFUnA | 8788 | 2.23 | 1 µg/L | | |
| MPFDoA | 11768 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13048 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 23315 | 1.42 | 1 µg/L | | |
| 13C9-PFDA IS | 30723 | 2.13 | 1 µg/L | | |

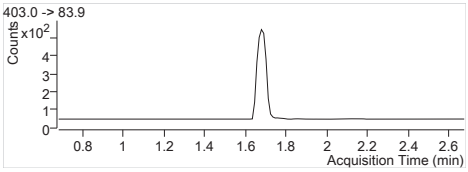
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 6671 | 1.43 | - | 102.05 µg/L | - |
| 18O2-PFHxS | 1547 | 1.68 | - | 91.86 µg/L | - |
| 13C4-PFHpA | 8051 | 1.69 | - | 92.60 µg/L | - |
| 13C4-PFOA | 8361 | 1.88 | - | 89.88 µg/L | - |
| 13C4-PFOS | 1883 | 1.98 | - | 91.18 µg/L | - |
| 13C5-PFNA | 9264 | 2.01 | - | 98.78 µg/L | - |
| 13C2-PFDA | 7520 | 2.14 | - | 97.18 µg/L | - |
| 13C2-PFUnA | 8788 | 2.23 | - | 95.22 µg/L | - |
| 13C2-PFDoA | 11768 | 2.32 | - | 96.65 µg/L | - |
| 13C2-PFTeDA | 13418 | 2.47 | - | 92.08 µg/L | - |
| 13C6-PFHxA | 23315 | 1.42 | - | 2.61 µg/L | - |
| 13C9-PFDA | 30723 | 2.13 | - | 2.58 µg/L | - |



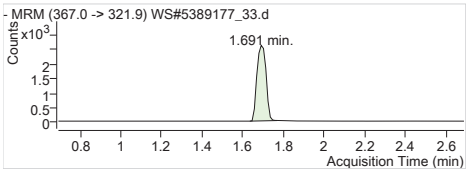



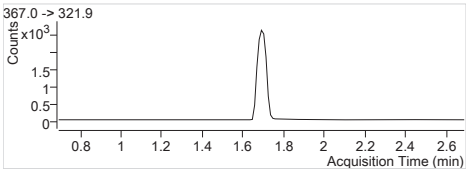

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.434) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



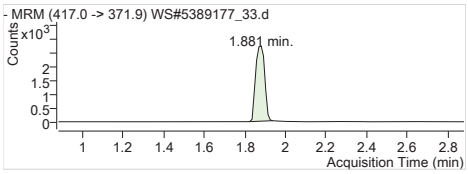



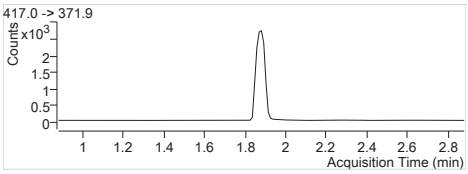

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



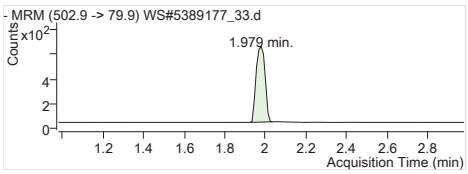



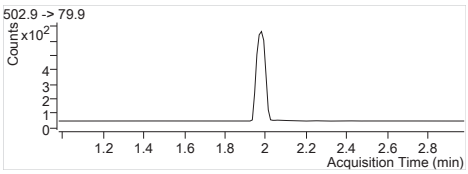

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



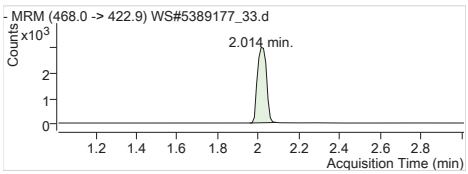



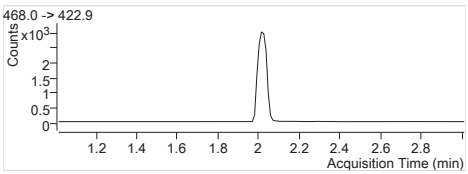

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



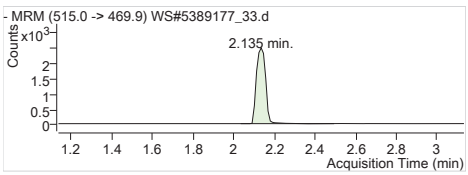



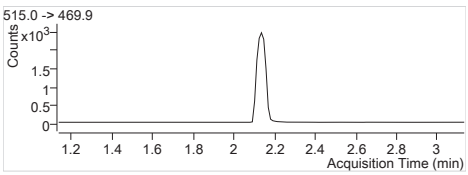

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



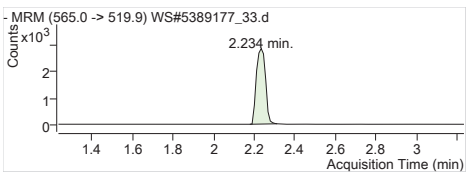



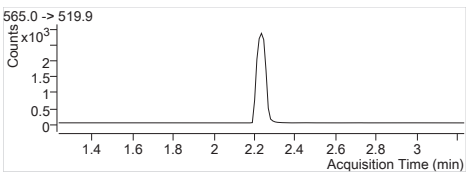

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



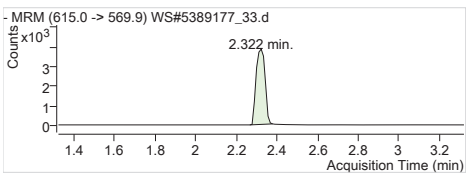



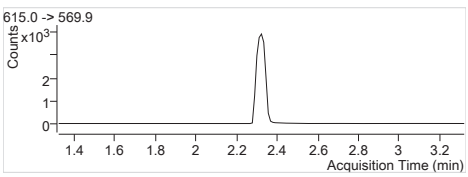

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



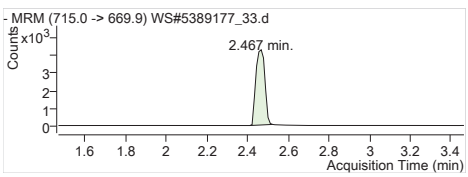



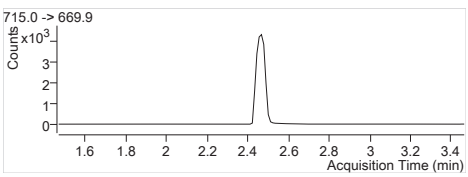

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



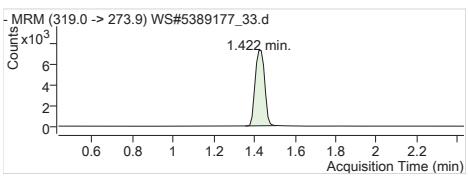



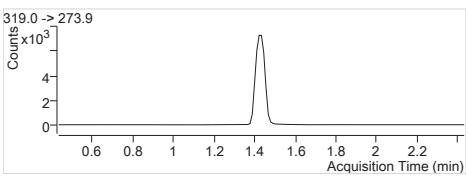

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



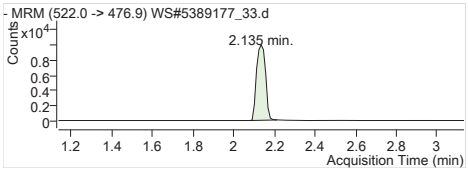



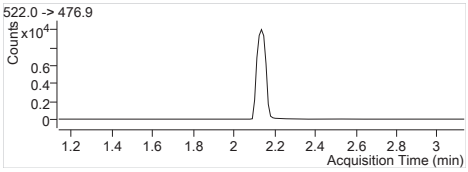

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



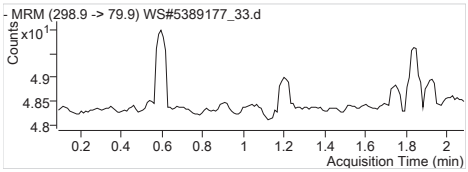



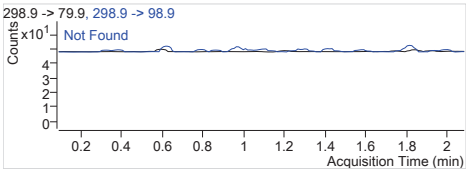

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.422 (1.434)
Concentration: 1 µg/L
Sample type: Sample



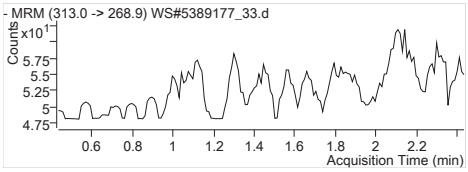



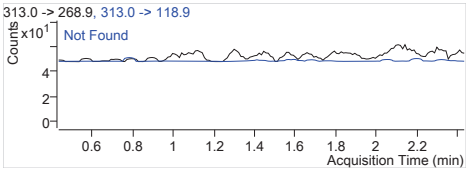

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



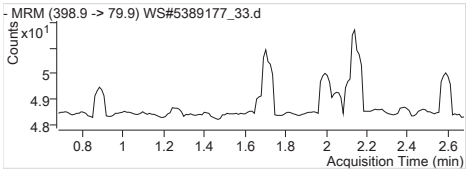



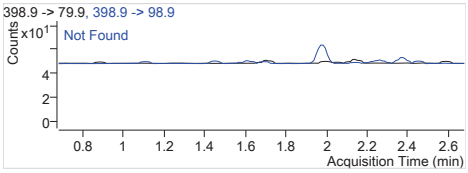

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



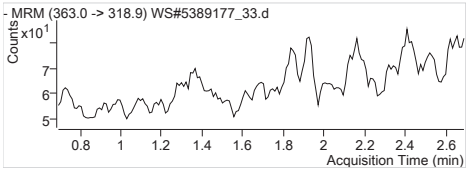



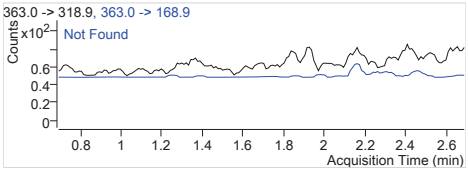

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



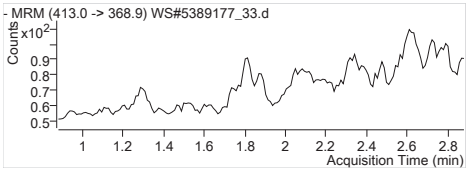



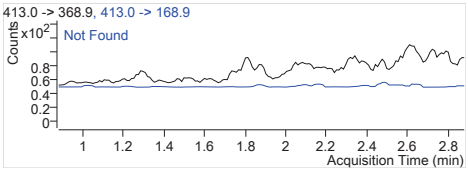

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.679)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



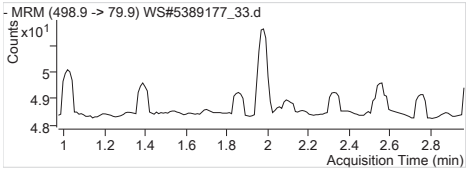



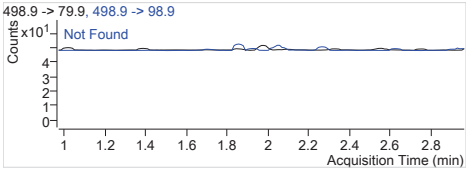

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



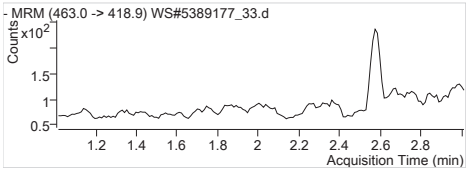



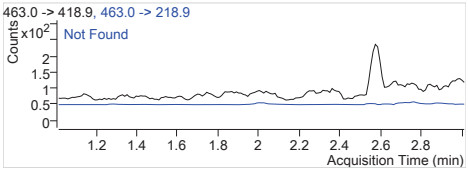

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



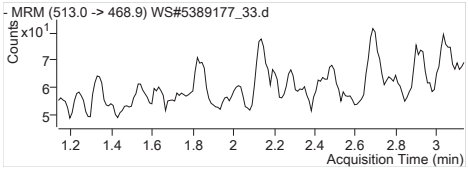



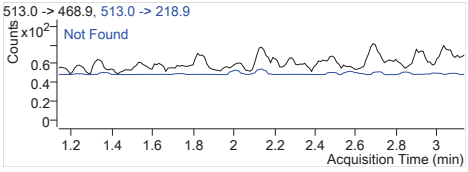

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.968)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



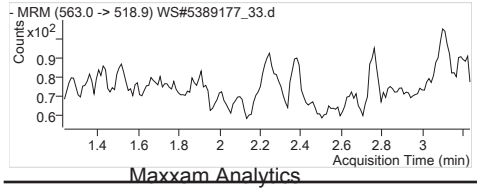



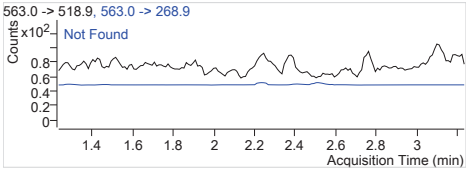

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



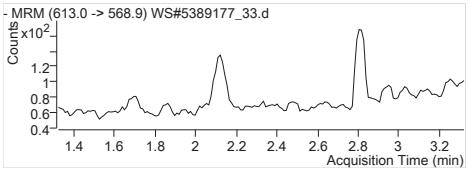



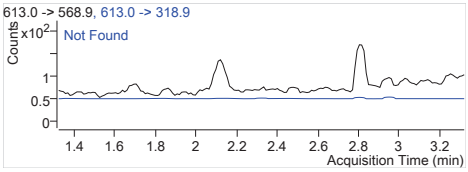

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



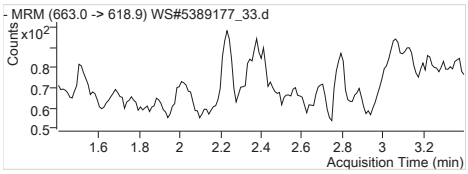



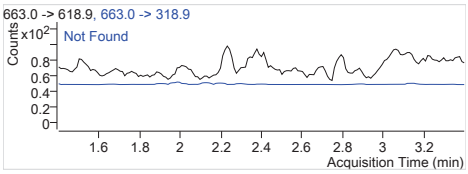

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



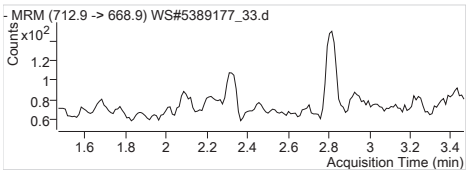



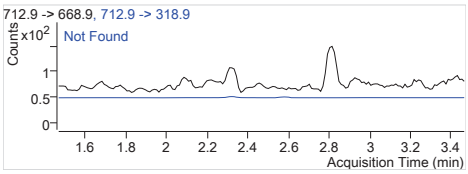

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



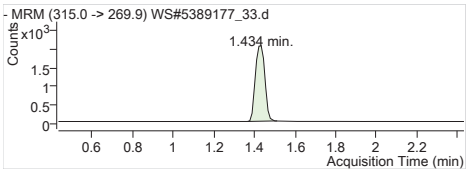



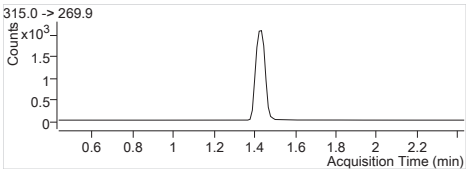

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



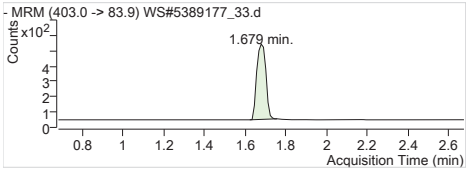



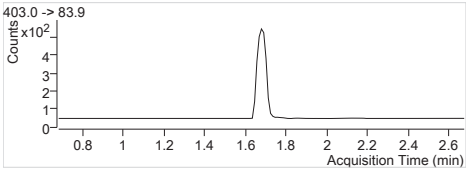

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



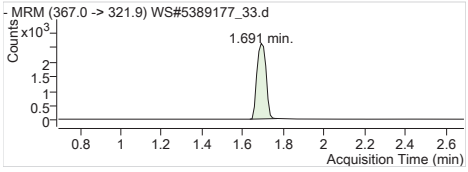



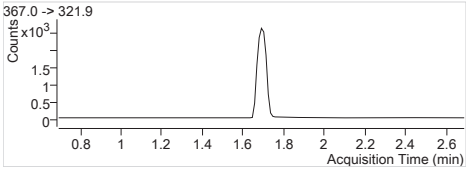

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 102.05 µg/L
Area ratio: 0.28612
Sample type: Sample



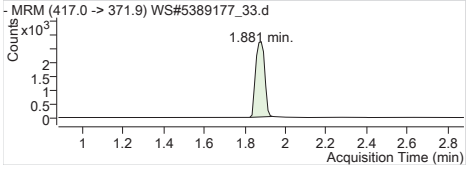



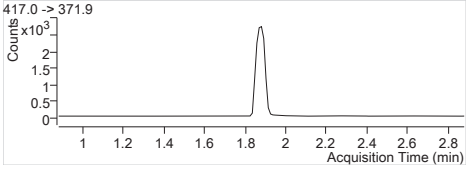

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 91.86 µg/L
Area ratio: 0.06635
Sample type: Sample



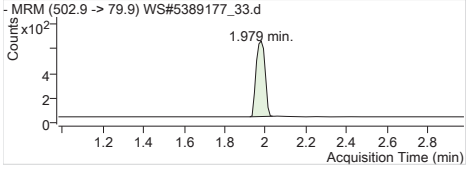



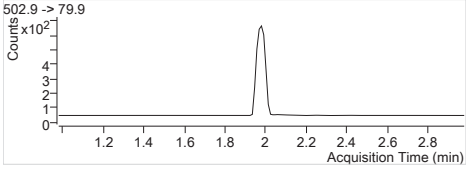

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 92.60 µg/L
Area ratio: 0.34531
Sample type: Sample



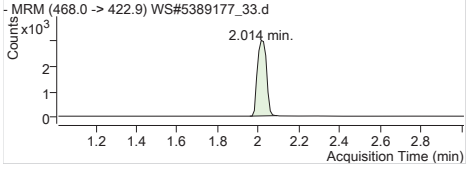



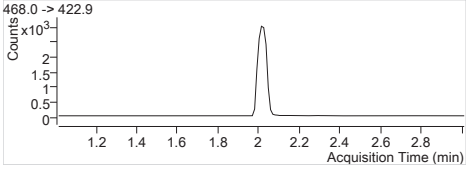

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 89.88 µg/L
Area ratio: 0.35861
Sample type: Sample



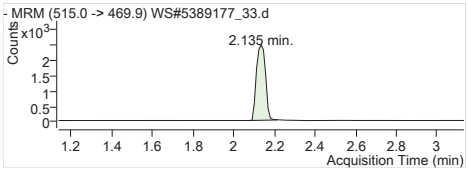



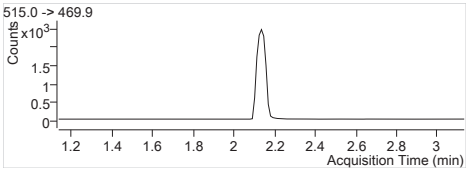

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 91.18 µg/L
Area ratio: 0.08076
Sample type: Sample



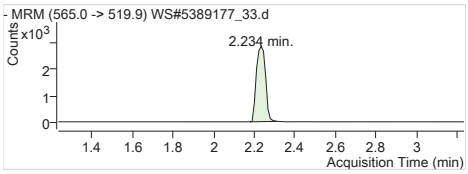



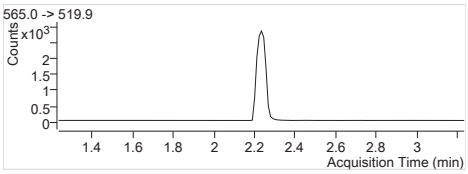

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 98.78 µg/L
Area ratio: 0.39734
Sample type: Sample



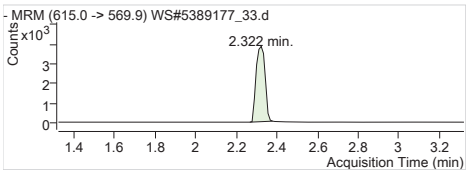



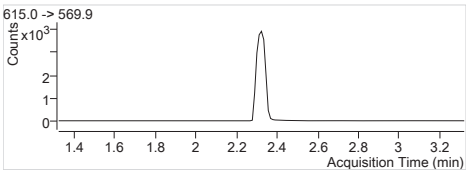

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 97.18 µg/L
Area ratio: 0.24477
Sample type: Sample



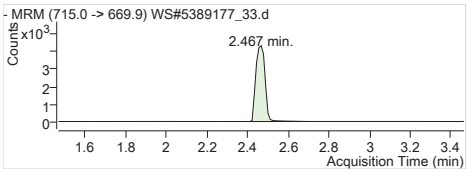



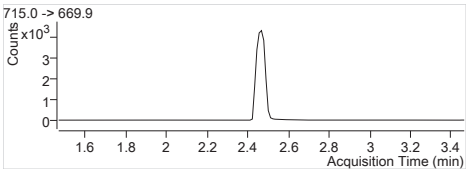

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 95.22 µg/L
Area ratio: 0.28604
Sample type: Sample



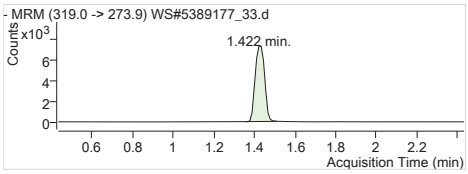



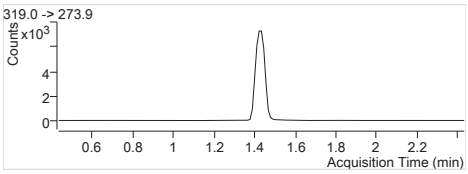

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 96.65 µg/L
Area ratio: 0.38304
Sample type: Sample



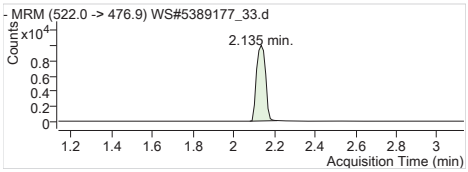



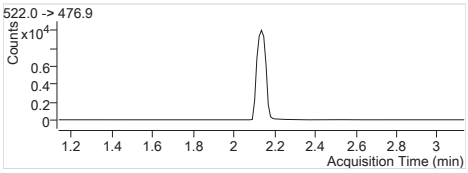

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 92.08 µg/L
Area ratio: 0.43674
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.422 (1.434)
Calc. conc. 2.61 µg/L
Area ratio: 0
Sample type: Sample




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 2.58 µg/L
Area ratio: 0
Sample type: Sample

# Quantitation Results

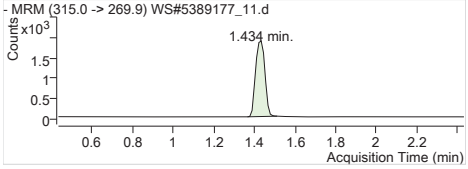
Agilent Technologies

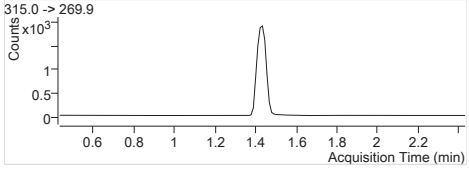
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5389177:BLANK** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_11.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-B1 |
| **Acq. Date** | 2018/02/09 12:46:45 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

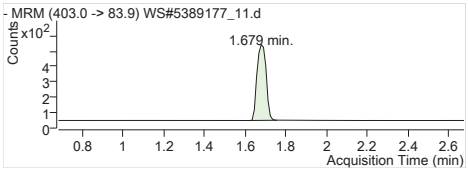
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5936 | 1.43 | 1 µg/L | | |
| MPFHxS | 1541 | 1.68 | 1 µg/L | | |
| MPFHpA | 7937 | 1.69 | 1 µg/L | | |
| MPFOA | 8769 | 1.88 | 1 µg/L | | |
| MPFOS | 1755 | 1.98 | 1 µg/L | | |
| MPFNA | 8060 | 2.01 | 1 µg/L | | |
| MPFDA | 6153 | 2.14 | 1 µg/L | | |
| MPFUnA | 7102 | 2.23 | 1 µg/L | | |
| MPFDoA | 9102 | 2.32 | 1 µg/L | | |
| MPFTeDA | 11493 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 22966 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 30416 | 2.13 | 1 µg/L | | |

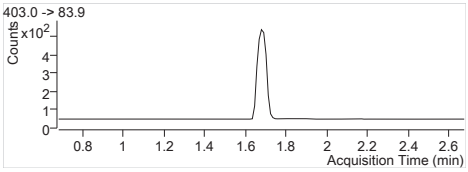
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 5936 | 1.43 | - | 92.19 µg/L | - |
| 18O2-PFHxS | 1541 | 1.68 | - | 92.89 µg/L | - |
| 13C4-PFHpA | 7937 | 1.69 | - | 92.67 µg/L | - |
| 13C4-PFOA | 8769 | 1.88 | - | 95.70 µg/L | - |
| 13C4-PFOS | 1755 | 1.98 | - | 86.28 µg/L | - |
| 13C5-PFNA | 8059 | 2.01 | - | 87.24 µg/L | - |
| 13C2-PFDA | 6076 | 2.14 | - | 79.31 µg/L | - |
| 13C2-PFUnA | 7102 | 2.23 | - | 77.73 µg/L | - |
| 13C2-PFDoA | 9102 | 2.32 | - | 75.51 µg/L | - |
| 13C2-PFTeDA | 11489 | 2.47 | - | 79.64 µg/L | - |
| 13C6-PFHxA | 22966 | 1.43 | - | 2.57 µg/L | - |
| 13C9-PFDA | 30416 | 2.13 | - | 2.55 µg/L | - |



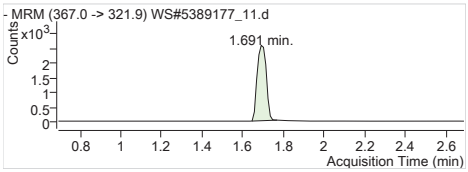



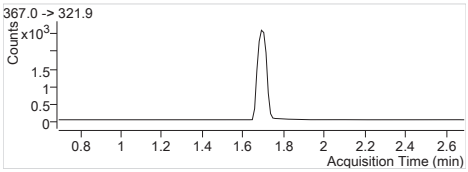

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.434) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



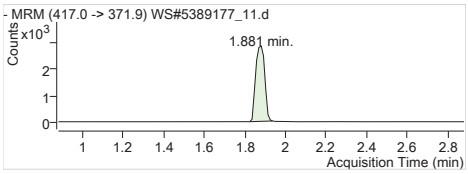



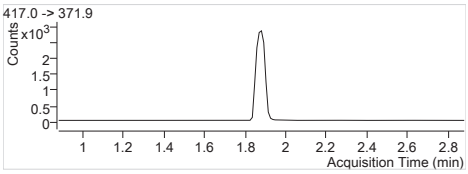

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



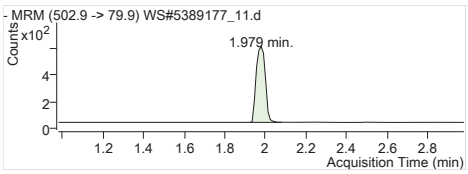



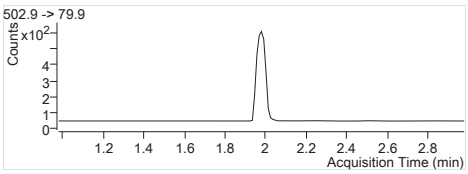

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



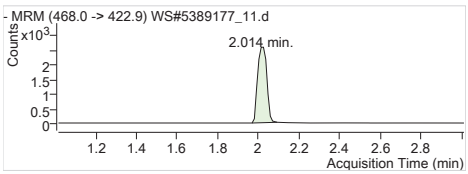



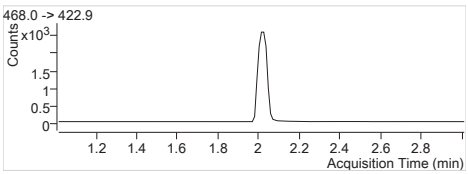

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



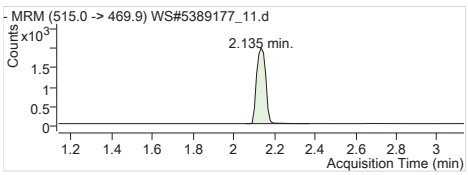



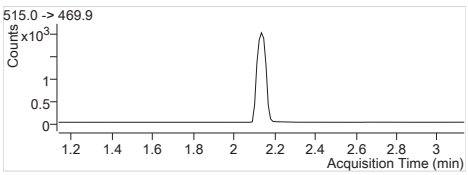

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



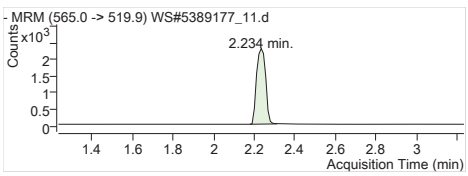



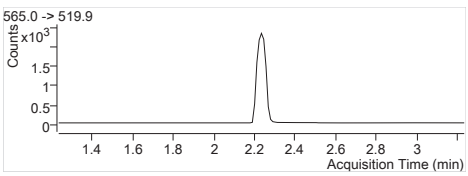

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



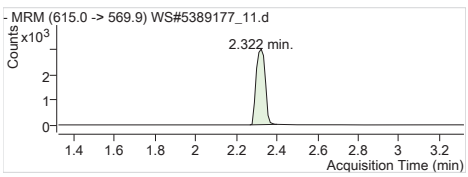



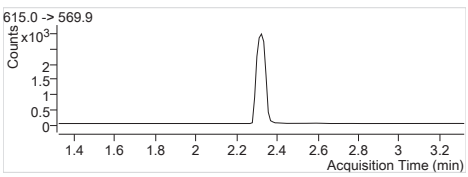

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



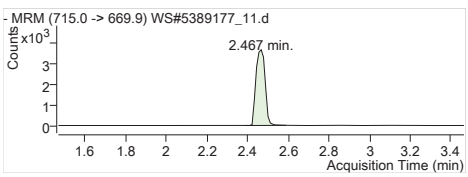



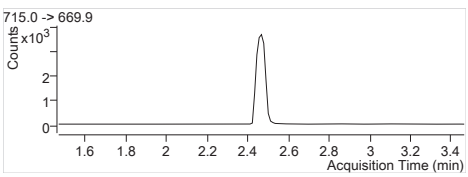

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



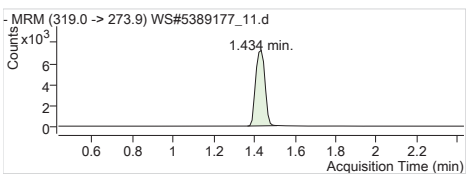



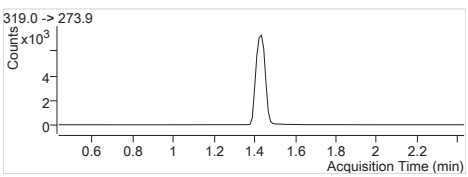

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



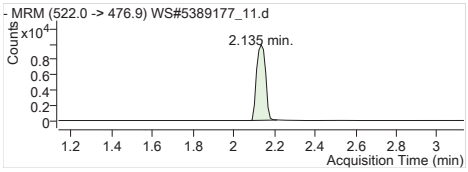



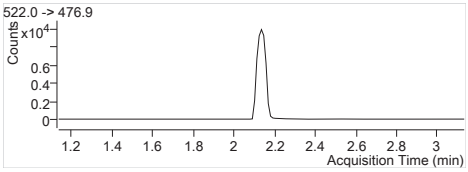

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



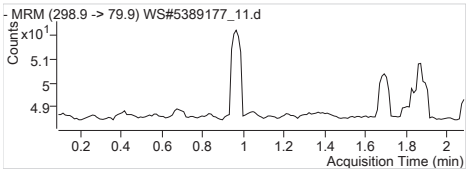



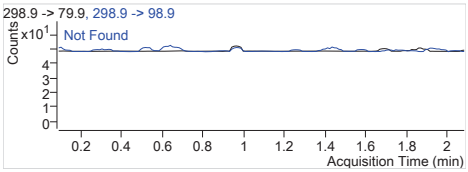

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Sample



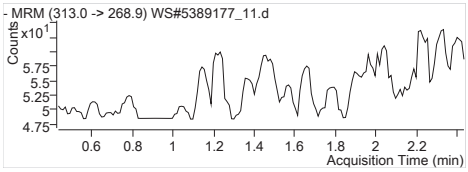



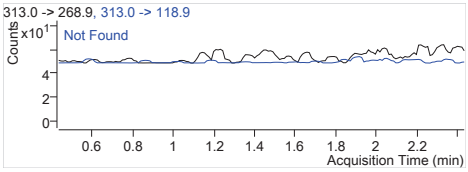

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



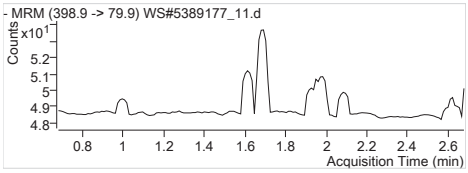



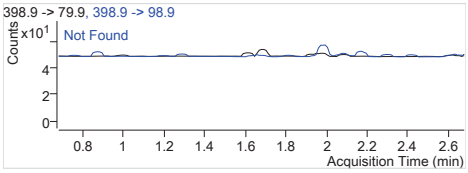

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



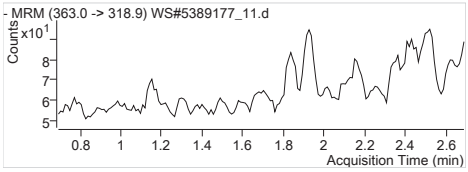



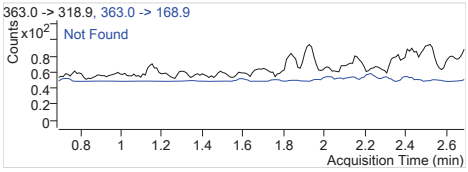

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.434)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



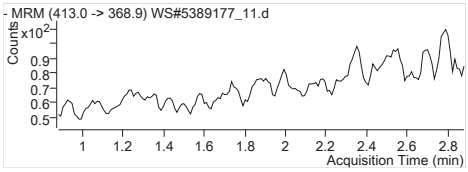



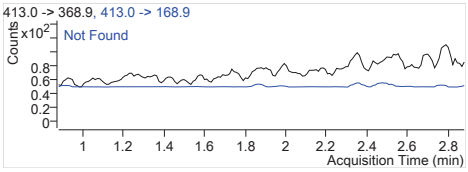

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.679)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



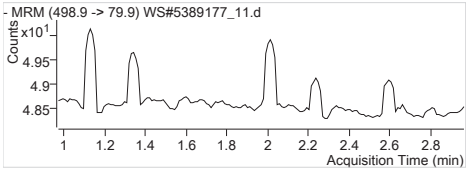



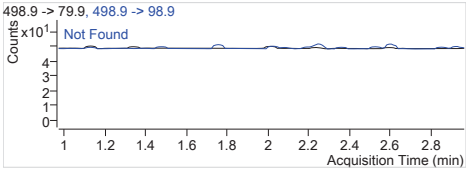

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



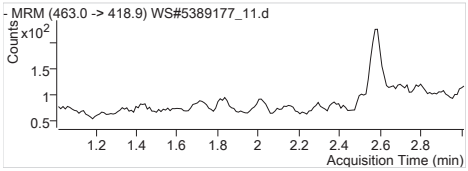



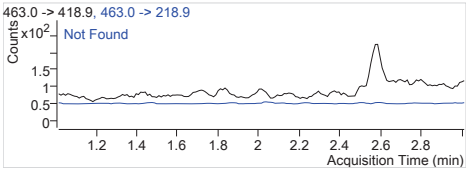

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



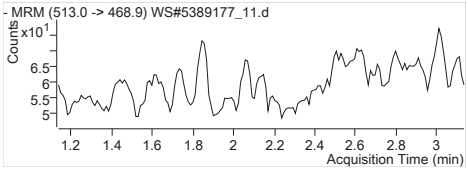



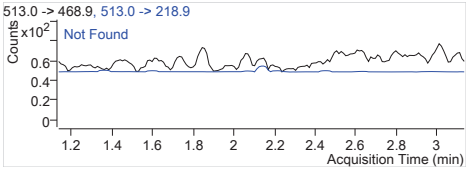

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.968)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



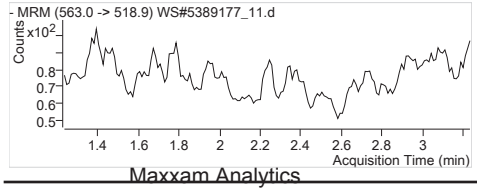



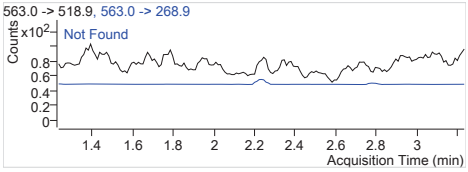

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



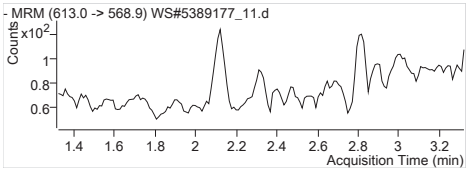



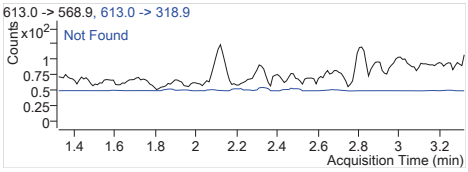

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



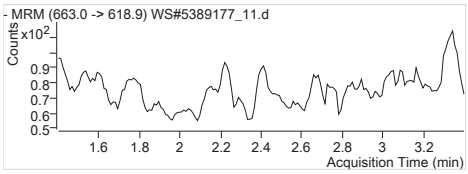



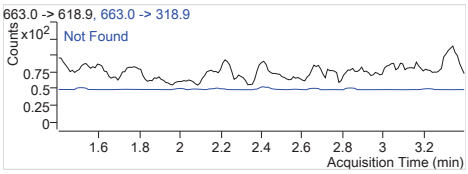

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



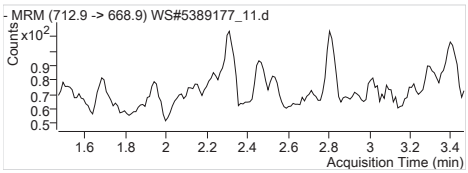



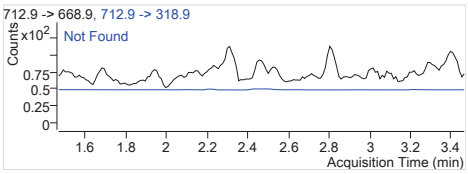

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.323) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



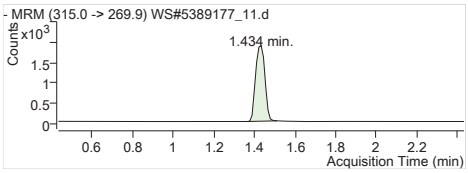



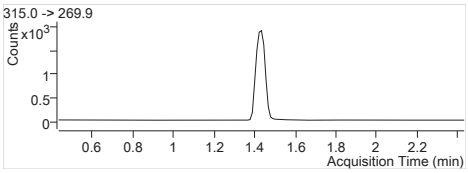

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.400) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



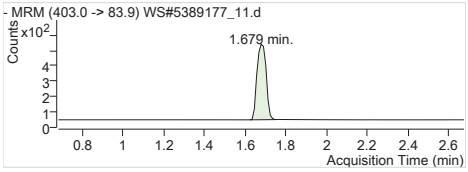



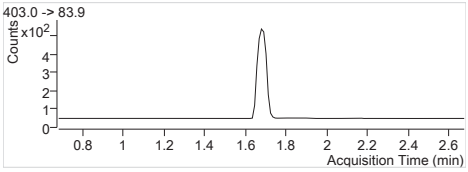

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.467) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



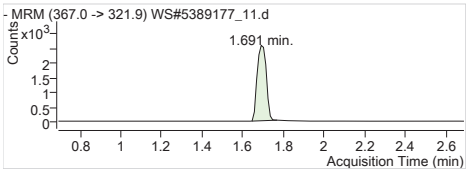



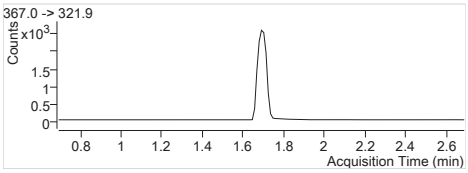

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.434 (1.434) |
| Calc. conc. | 92.19 µg/L |
| Area ratio: | 0.25847 |
| Sample type: | Sample |



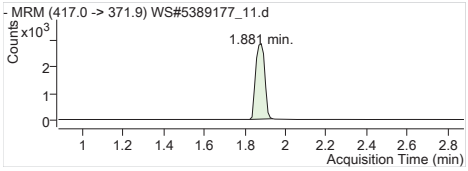



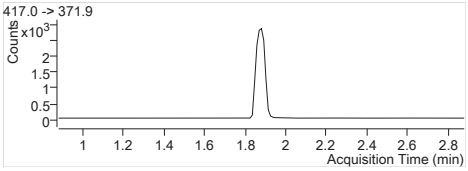

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.679 (1.679) |
| Calc. conc. | 92.89 µg/L |
| Area ratio: | 0.06710 |
| Sample type: | Sample |



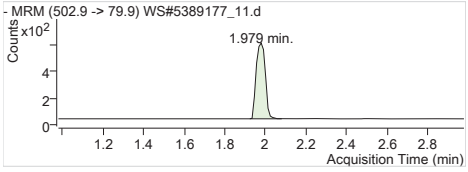



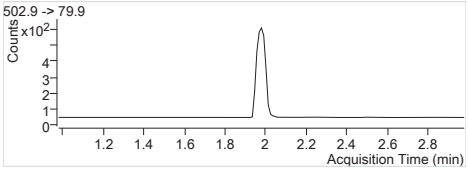

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.691 (1.691) |
| Calc. conc. | 92.67 µg/L |
| Area ratio: | 0.34560 |
| Sample type: | Sample |



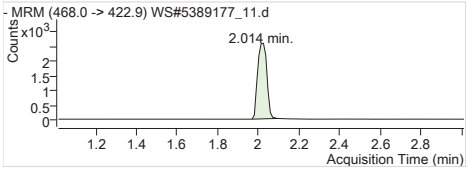



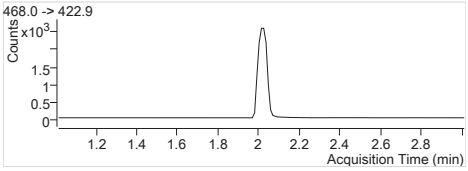

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.881 (1.881) |
| Calc. conc. | 95.70 µg/L |
| Area ratio: | 0.38183 |
| Sample type: | Sample |



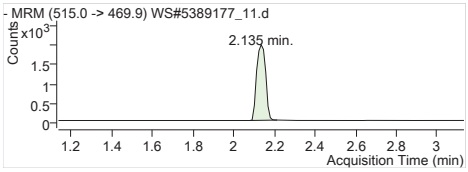



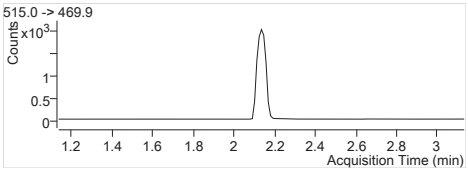

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.979 (1.979) |
| Calc. conc. | 86.28 µg/L |
| Area ratio: | 0.07642 |
| Sample type: | Sample |



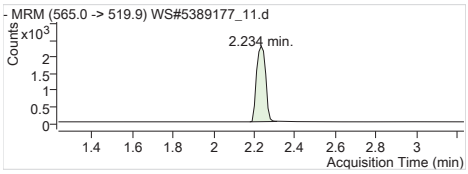



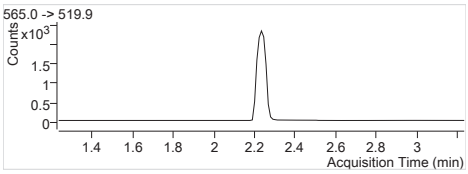

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.014 (2.014) |
| Calc. conc. | 87.24 µg/L |
| Area ratio: | 0.35091 |
| Sample type: | Sample |



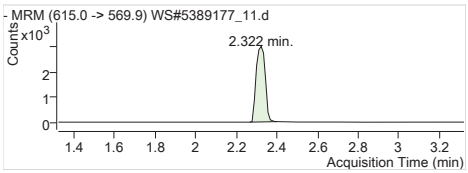



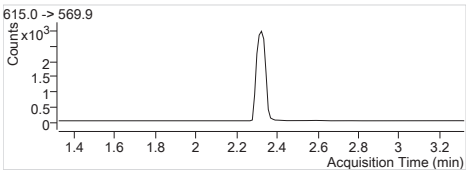

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 79.31 µg/L
Area ratio: 0.19976
Sample type: Sample



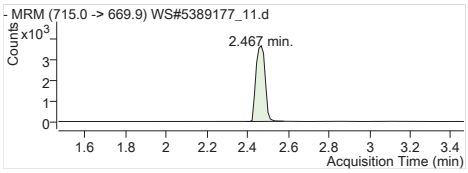



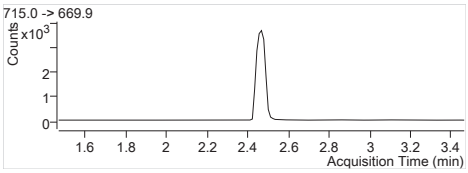

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 77.73 µg/L
Area ratio: 0.23350
Sample type: Sample



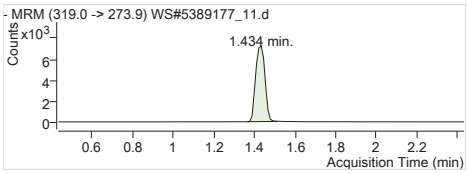



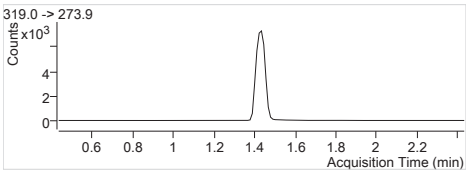

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 75.51 µg/L
Area ratio: 0.29925
Sample type: Sample



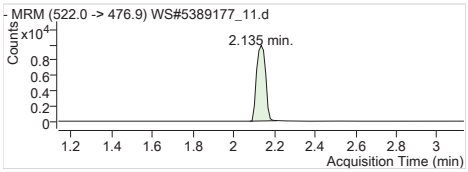



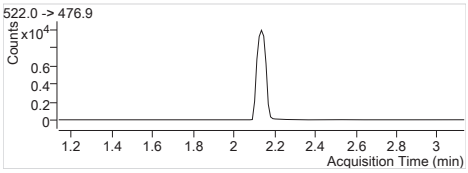

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 79.64 µg/L
Area ratio: 0.37773
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.57 µg/L
Area ratio: 0
Sample type: Sample




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 2.55 µg/L
Area ratio: 0
Sample type: Sample

# Quantitation Results

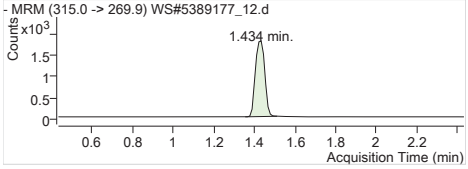
Agilent Technologies

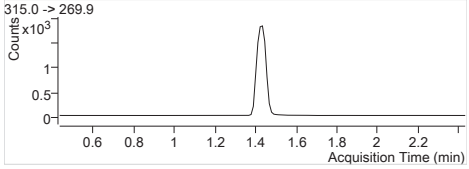
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5389177:SPIKE** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_12.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-B2 |
| **Acq. Date** | 2018/02/09 12:51:41 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

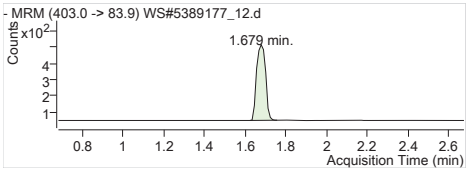
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5779 | 1.43 | 1 µg/L | | |
| MPFHxS | 1441 | 1.68 | 1 µg/L | | |
| MPFHpA | 7742 | 1.69 | 1 µg/L | | |
| MPFOA | 7953 | 1.88 | 1 µg/L | | |
| MPFOS | 1731 | 1.98 | 1 µg/L | | |
| MPFNA | 8244 | 2.01 | 1 µg/L | | |
| MPFDA | 6680 | 2.14 | 1 µg/L | | |
| MPFUnA | 8358 | 2.23 | 1 µg/L | | |
| MPFDoA | 9561 | 2.32 | 1 µg/L | | |
| MPFTeDA | 11178 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 23803 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 30268 | 2.13 | 1 µg/L | | |

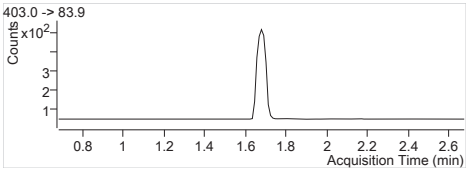
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 14006 | 1.09 | 20.80 | 0.51 µg/L | 101.52 |
| PFHxA 1 | 47571 | 1.43 | 20.80 | 0.48 µg/L | 95.43 |
| PFHxS 1 | 13139 | 1.68 | 20.80 | 0.49 µg/L | 97.70 |
| PFHpA 1 | 62924 | 1.69 | 20.80 | 0.47 µg/L | 94.54 |
| PFOA 1 | 71258 | 1.88 | 20.80 | 0.51 µg/L | 101.22 |
| PFOS 1 | 13138 | 1.97 | 20.80 | 0.48 µg/L | 96.18 |
| PFNA 1 | 62872 | 2.01 | 20.80 | 0.48 µg/L | 96.87 |
| PFDA 1 | 67176 | 2.14 | 20.80 | 0.50 µg/L | 100.43 |
| PFUnA 1 | 75515 | 2.23 | 20.80 | 0.49 µg/L | 98.00 |
| PFDoA 1 | 85464 | 2.32 | 20.80 | 0.49 µg/L | 98.37 |
| PFTrDA 1 | 97362 | 2.40 | 20.80 | 0.52 µg/L | 103.38 |
| PFTeDA 1 | 82345 | 2.47 | 20.80 | 0.50 µg/L | 100.11 |
| 13C2-PFHxA | 5779 | 1.43 | 100.00 | 86.60 µg/L | 86.60 |
| 18O2-PFHxS | 1441 | 1.68 | 100.00 | 83.81 µg/L | 83.81 |
| 13C4-PFHpA | 7742 | 1.69 | 100.00 | 87.22 µg/L | 87.22 |
| 13C4-PFOA | 7953 | 1.88 | 100.00 | 83.74 µg/L | 83.74 |
| 13C4-PFOS | 1731 | 1.98 | 100.00 | 82.11 µg/L | 82.11 |
| 13C5-PFNA | 8245 | 2.01 | 100.00 | 86.11 µg/L | 86.11 |
| 13C2-PFDA | 6561 | 2.14 | 100.00 | 86.06 µg/L | 86.06 |
| 13C2-PFUnA | 8358 | 2.23 | 100.00 | 91.92 µg/L | 91.92 |
| 13C2-PFDoA | 9561 | 2.32 | 100.00 | 79.71 µg/L | 79.71 |
| 13C2-PFTeDA | 11178 | 2.47 | 100.00 | 77.86 µg/L | 77.86 |
| 13C6-PFHxA | 23803 | 1.43 | 100.00 | 2.67 µg/L | 111.18 |
| 13C9-PFDA | 30268 | 2.13 | 100.00 | 2.54 µg/L | 105.91 |



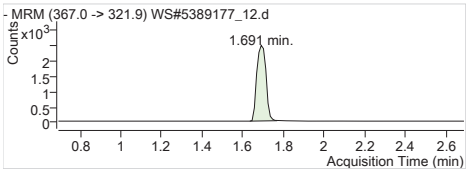



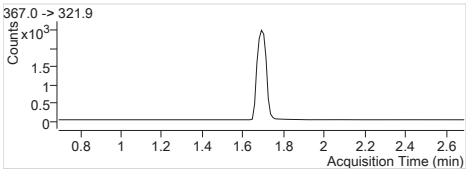

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.434) |
| Concentration: | 1 µg/L |
| Sample type: | QC |



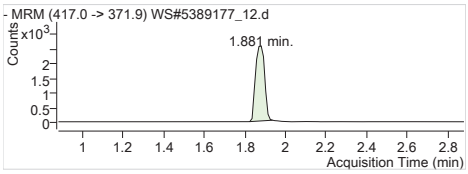



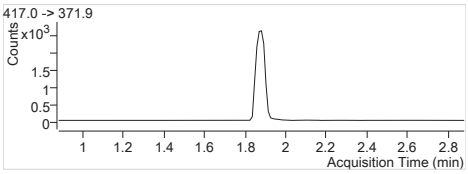

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: QC



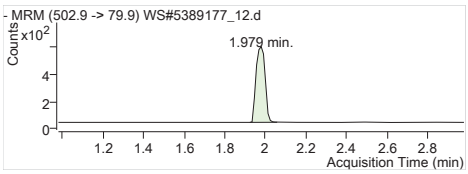



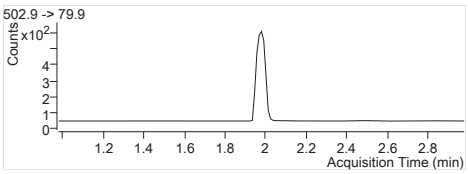

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: QC



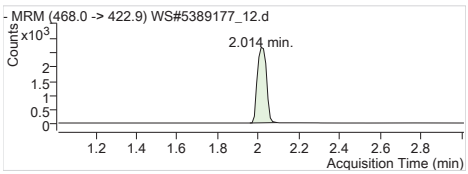



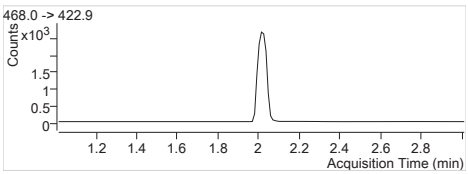

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: QC



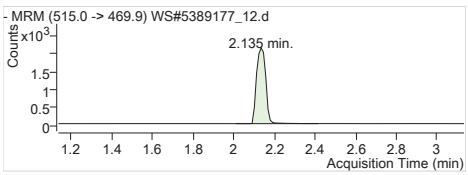



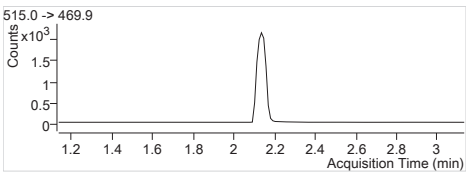

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: QC



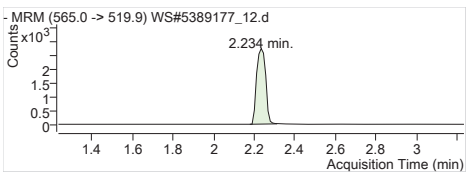



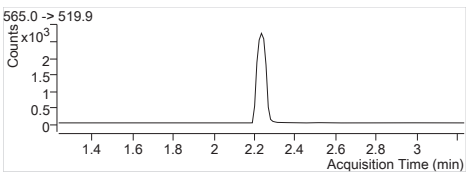

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: QC



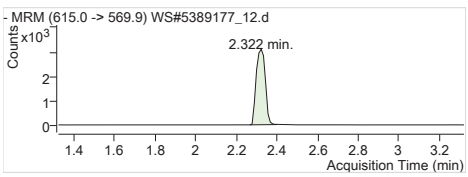



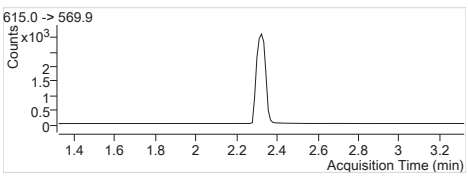

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: QC



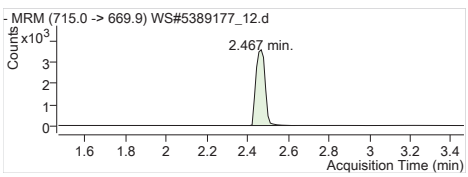



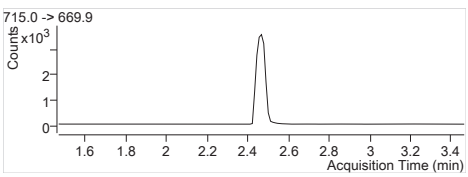

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: QC



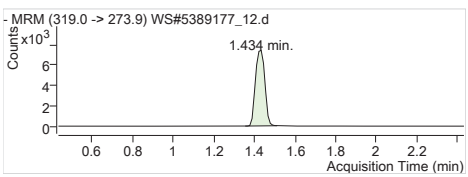



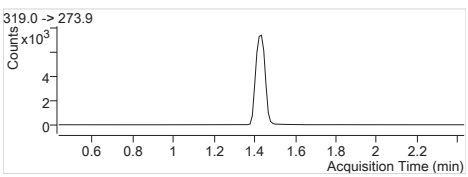

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: QC



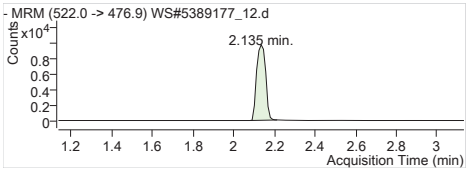



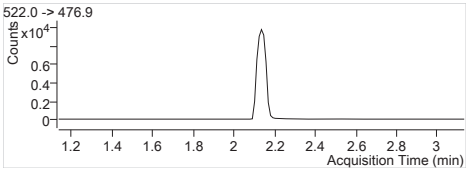

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: QC



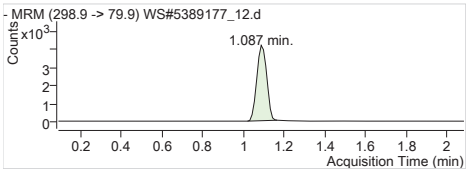



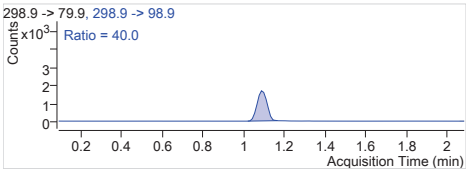

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: QC



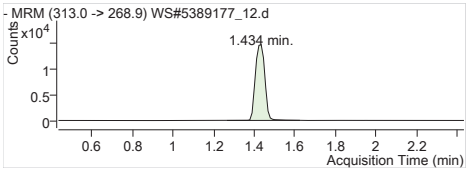



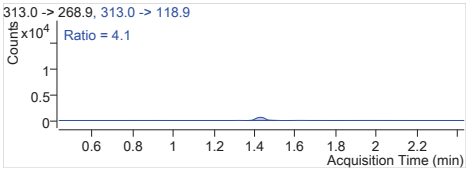

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: QC



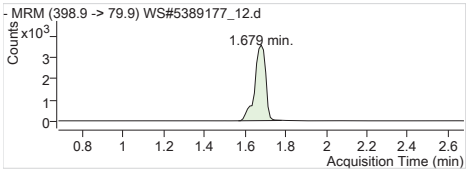



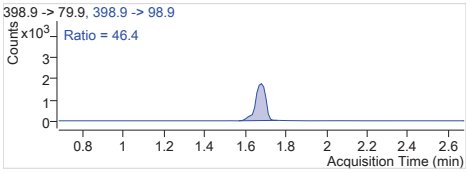

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 0.51 µg/L
Area ratio: 9.71964
Sample type: QC



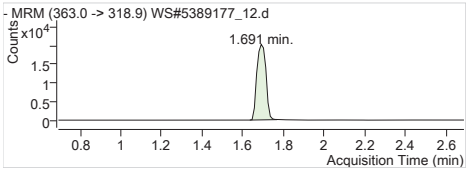



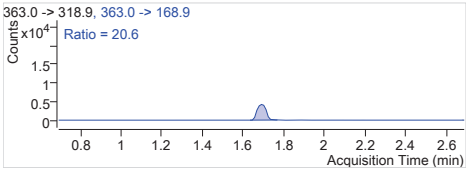

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 0.48 µg/L
Area ratio: 8.23170
Sample type: QC



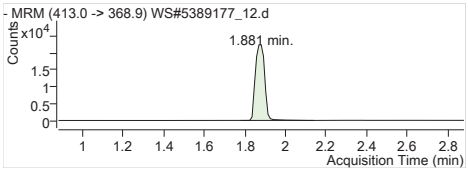



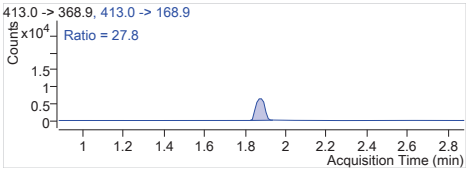

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 0.49 µg/L
Area ratio: 9.11797
Sample type: QC



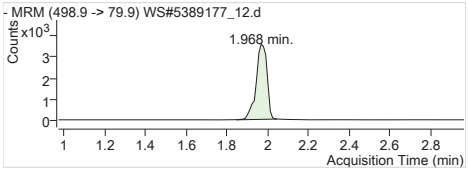



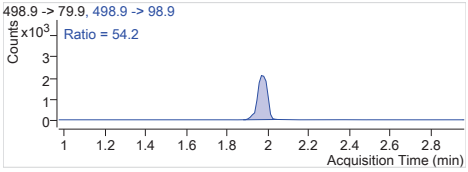

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.47 µg/L
Area ratio: 8.12762
Sample type: QC



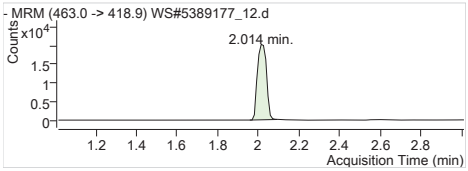



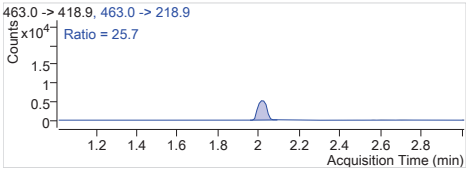

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 0.51 µg/L
Area ratio: 8.95989
Sample type: QC



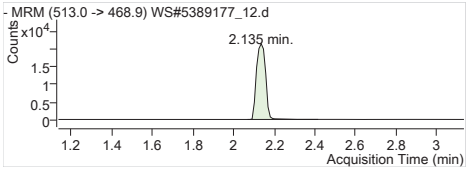



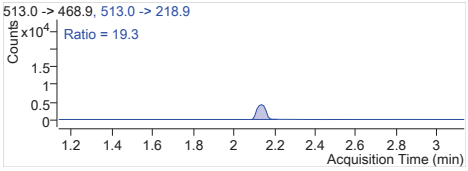

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 0.48 µg/L
Area ratio: 7.58983
Sample type: QC



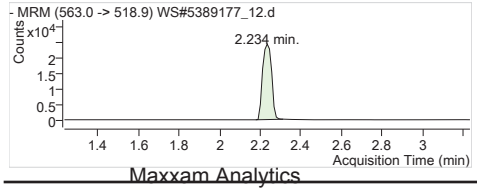



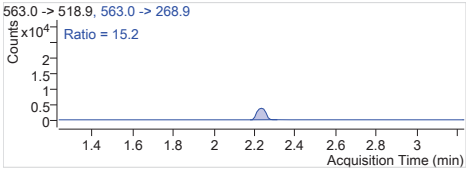

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 0.48 µg/L
Area ratio: 7.62639
Sample type: QC



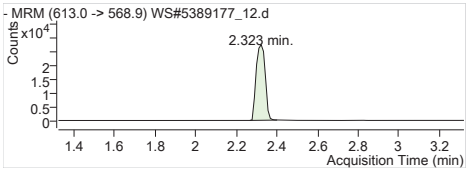



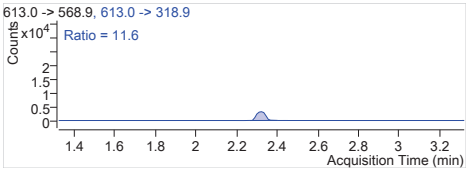

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 0.50 µg/L
Area ratio: 10.05629
Sample type: QC



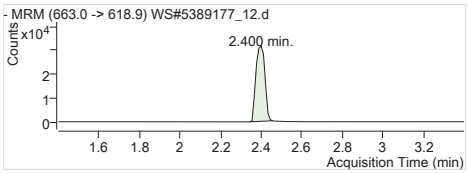



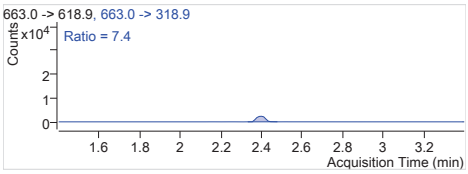

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 0.49 µg/L
Area ratio: 9.03506
Sample type: QC



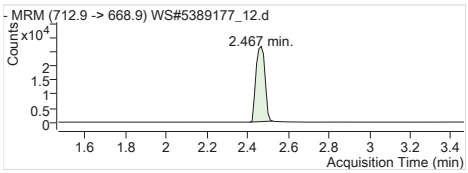



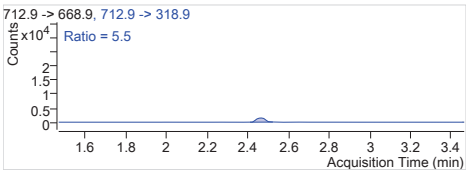

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.49 µg/L
Area ratio: 8.93881
Sample type: QC



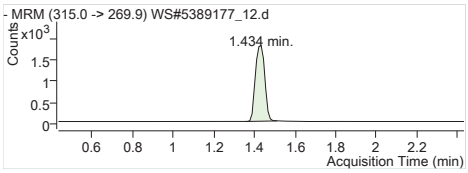



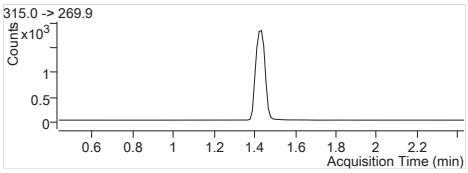

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.52 µg/L
Area ratio: 8.71014
Sample type: QC



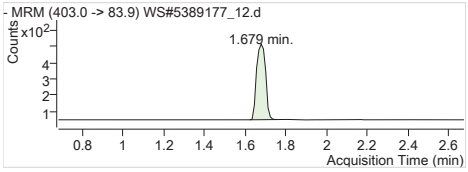



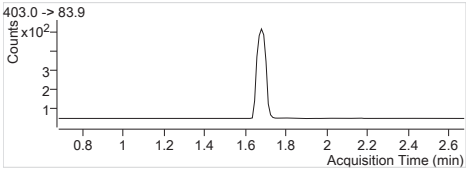

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 0.50 µg/L
Area ratio: 7.36670
Sample type: QC



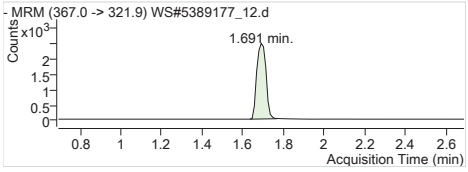



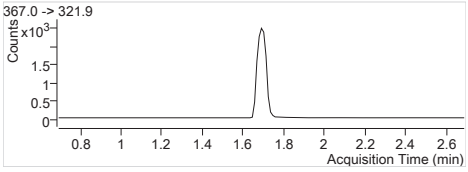

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 86.60 µg/L
Area ratio: 0.24278
Sample type: QC



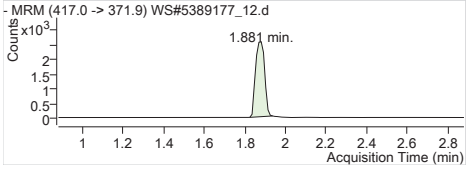



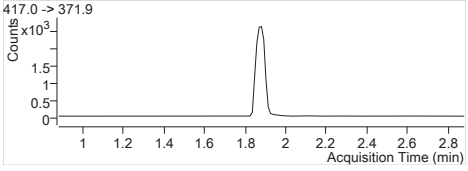

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 83.81 µg/L
Area ratio: 0.06054
Sample type: QC



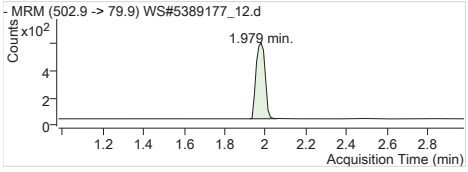



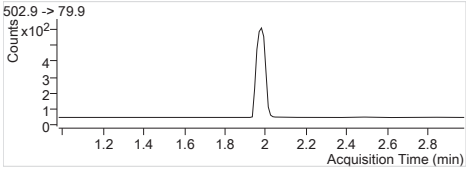

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 87.22 µg/L
Area ratio: 0.32525
Sample type: QC



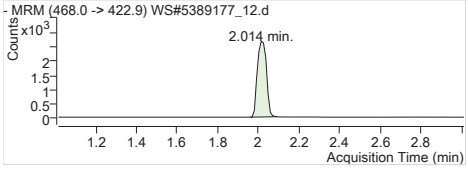



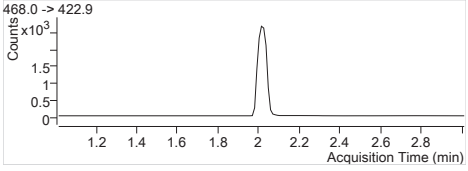

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 83.74 µg/L
Area ratio: 0.33412
Sample type: QC



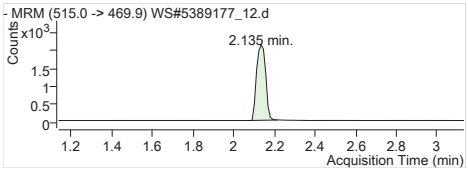



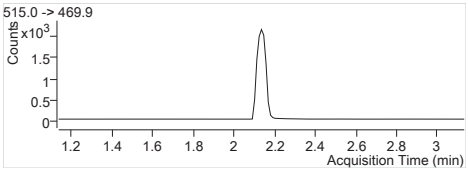

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 82.11 µg/L
Area ratio: 0.07272
Sample type: QC



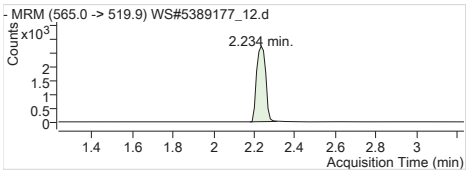



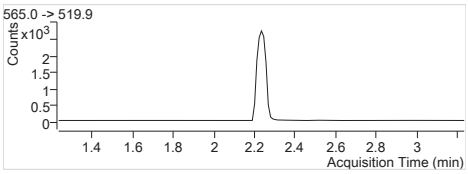

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 86.11 µg/L
Area ratio: 0.34638
Sample type: QC



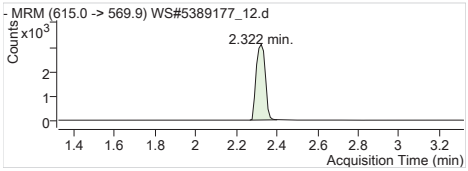



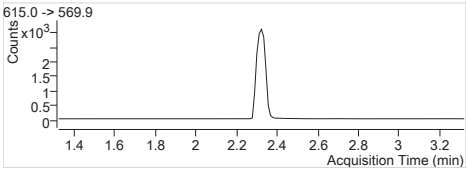

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 86.06 µg/L
Area ratio: 0.21676
Sample type: QC



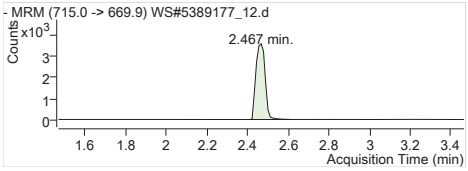



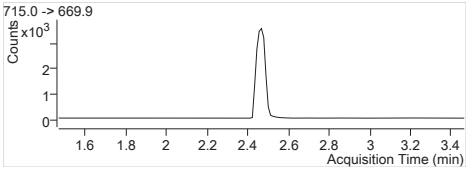

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 91.92 µg/L
Area ratio: 0.27613
Sample type: QC



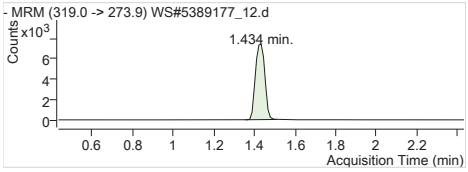



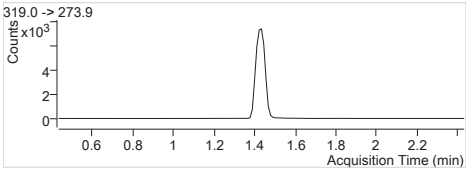

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 79.71 µg/L
Area ratio: 0.31588
Sample type: QC



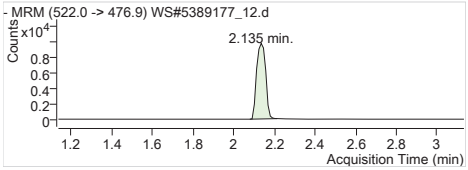



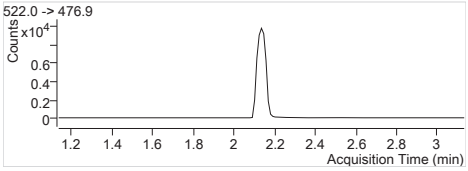

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 77.86 µg/L
Area ratio: 0.36930
Sample type: QC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.67 µg/L
Area ratio: 0
Sample type: QC



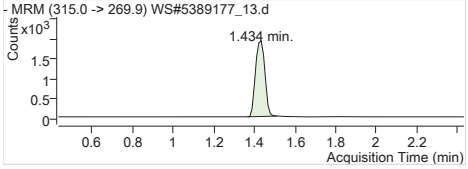

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 2.54 µg/L
Area ratio: 0
Sample type: QC

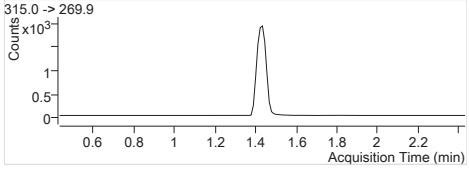
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **5389177:SPIKE:D1** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_13.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-B3 |
| **Acq. Date** | 2018/02/09 12:56:37 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

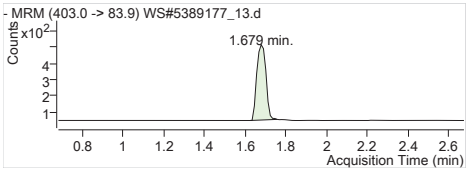
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6109 | 1.43 | 1 µg/L | | |
| MPFHxS | 1460 | 1.68 | 1 µg/L | | |
| MPFHpA | 7762 | 1.69 | 1 µg/L | | |
| MPFOA | 8326 | 1.88 | 1 µg/L | | |
| MPFOS | 1753 | 1.98 | 1 µg/L | | |
| MPFNA | 8027 | 2.01 | 1 µg/L | | |
| MPFDA | 6537 | 2.14 | 1 µg/L | | |
| MPFUnA | 7700 | 2.23 | 1 µg/L | | |
| MPFDoA | 8986 | 2.32 | 1 µg/L | | |
| MPFTeDA | 9964 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 22196 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 28195 | 2.13 | 1 µg/L | | |

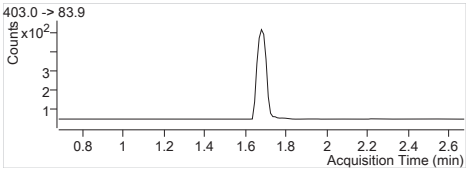
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 14311 | 1.09 | 20.80 | 0.51 µg/L | 102.38 |
| PFHxA 1 | 49375 | 1.43 | 20.80 | 0.47 µg/L | 93.71 |
| PFHxS 1 | 13038 | 1.68 | 20.80 | 0.48 µg/L | 95.70 |
| PFHpA 1 | 63510 | 1.69 | 20.80 | 0.48 µg/L | 95.17 |
| PFOA 1 | 72627 | 1.88 | 20.80 | 0.49 µg/L | 98.54 |
| PFOS 1 | 12939 | 1.97 | 20.80 | 0.47 µg/L | 93.55 |
| PFNA 1 | 64855 | 2.01 | 20.80 | 0.51 µg/L | 102.61 |
| PFDA 1 | 63795 | 2.14 | 20.80 | 0.49 µg/L | 97.48 |
| PFUnA 1 | 70008 | 2.23 | 20.80 | 0.49 µg/L | 98.61 |
| PFDoA 1 | 78762 | 2.32 | 20.80 | 0.48 µg/L | 96.47 |
| PFTrDA 1 | 86147 | 2.40 | 20.80 | 0.51 µg/L | 102.62 |
| PFTeDA 1 | 75377 | 2.47 | 20.80 | 0.51 µg/L | 102.80 |
| 13C2-PFHxA | 6109 | 1.43 | 100.00 | 98.17 µg/L | 98.17 |
| 18O2-PFHxS | 1460 | 1.68 | 100.00 | 91.06 µg/L | 91.06 |
| 13C4-PFHpA | 7762 | 1.69 | 100.00 | 93.78 µg/L | 93.78 |
| 13C4-PFOA | 8326 | 1.88 | 100.00 | 94.01 µg/L | 94.01 |
| 13C4-PFOS | 1753 | 1.98 | 100.00 | 89.17 µg/L | 89.17 |
| 13C5-PFNA | 8027 | 2.01 | 100.00 | 89.90 µg/L | 89.90 |
| 13C2-PFDA | 6439 | 2.14 | 100.00 | 90.67 µg/L | 90.67 |
| 13C2-PFUnA | 7700 | 2.23 | 100.00 | 90.91 µg/L | 90.91 |
| 13C2-PFDoA | 8986 | 2.32 | 100.00 | 80.42 µg/L | 80.42 |
| 13C2-PFTeDA | 10220 | 2.47 | 100.00 | 76.42 µg/L | 76.42 |
| 13C6-PFHxA | 22196 | 1.43 | 100.00 | 2.49 µg/L | 103.68 |
| 13C9-PFDA | 28195 | 2.13 | 100.00 | 2.37 µg/L | 98.66 |



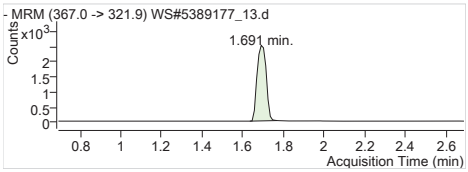



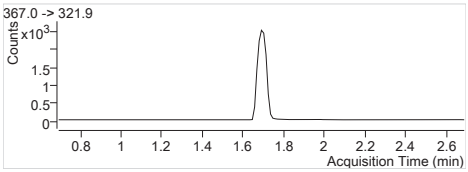

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: QC



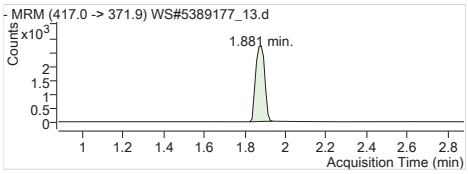



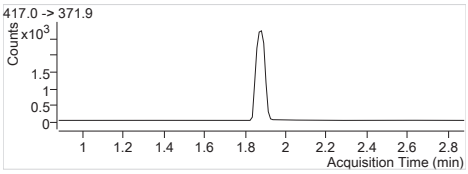

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: QC



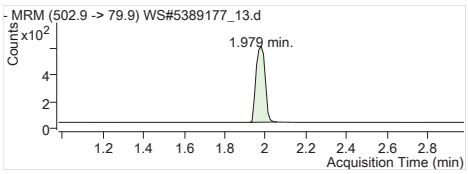



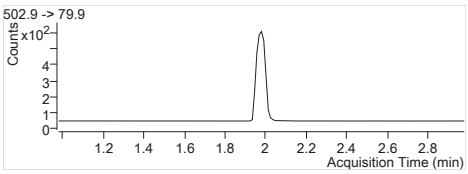

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: QC



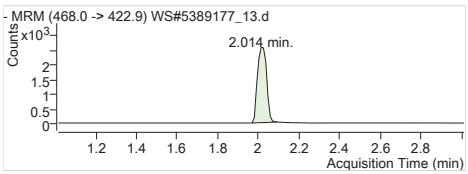



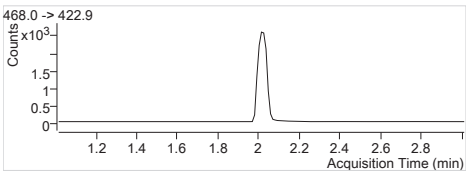

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: QC



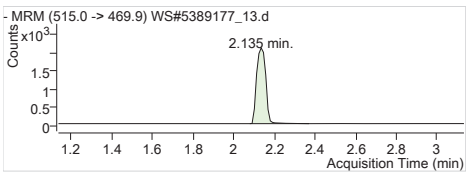



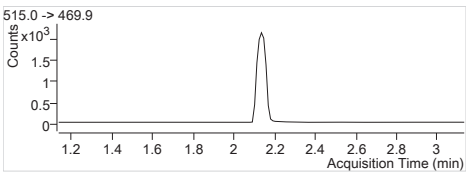

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: QC



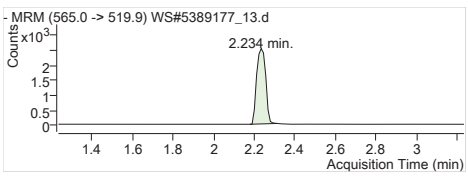



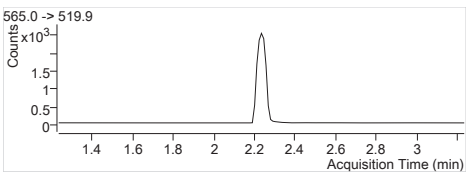

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: QC



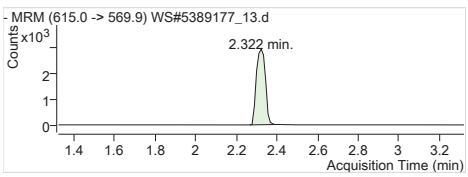



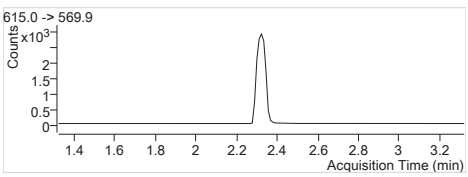

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: QC



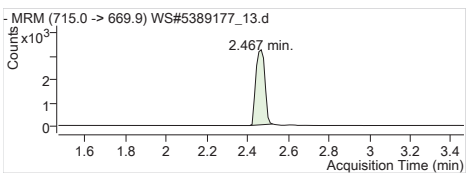



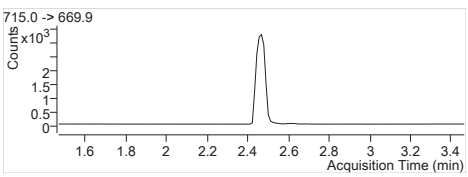

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: QC



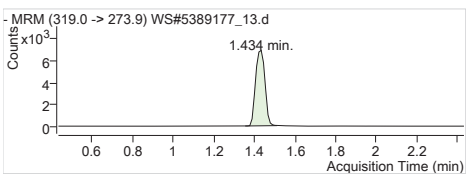



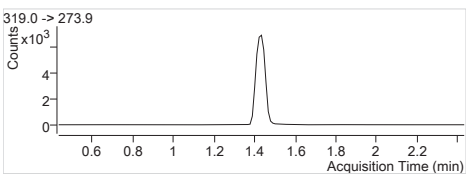

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: QC



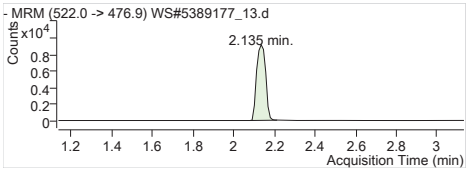



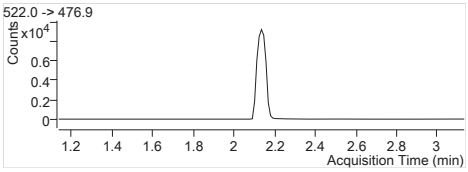

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: QC



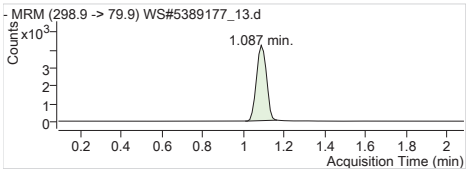



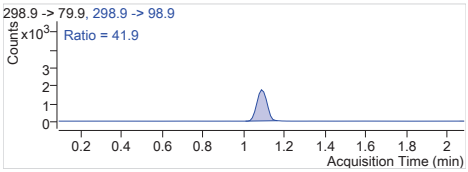

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: QC



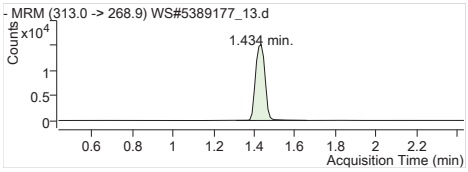



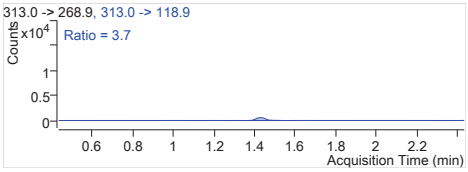

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: QC



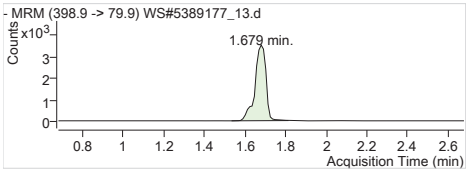



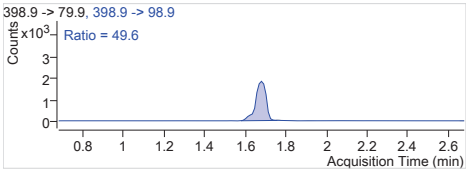

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 0.51 µg/L
Area ratio: 9.80205
Sample type: QC



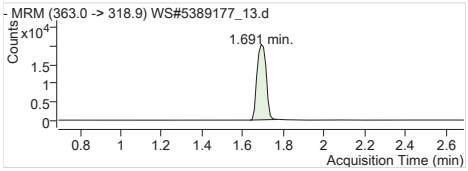



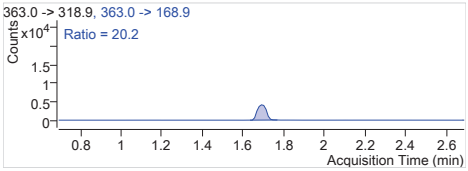

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 0.47 µg/L
Area ratio: 8.08234
Sample type: QC



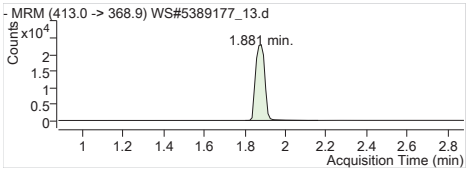



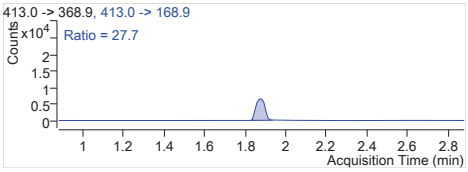

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 0.48 µg/L
Area ratio: 8.93014
Sample type: QC



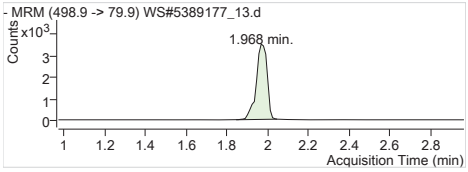



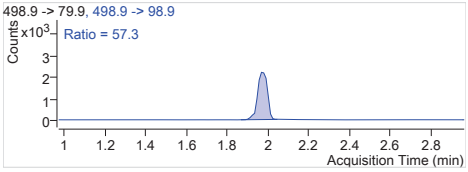

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.48 µg/L
Area ratio: 8.18217
Sample type: QC



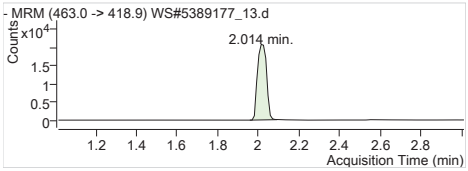



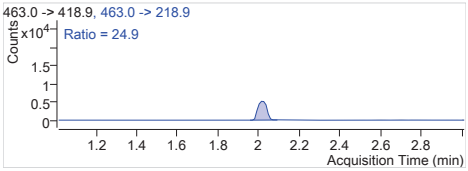

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 0.49 µg/L
Area ratio: 8.72292
Sample type: QC



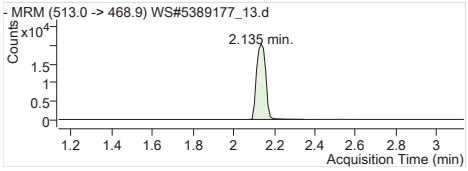



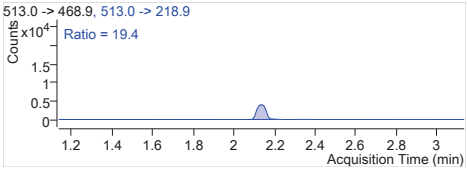

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 0.47 µg/L
Area ratio: 7.38106
Sample type: QC



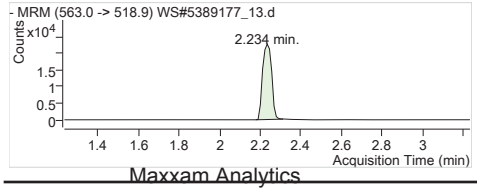



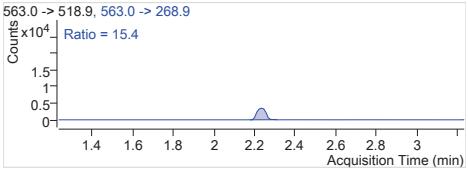

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 0.51 µg/L
Area ratio: 8.07961
Sample type: QC



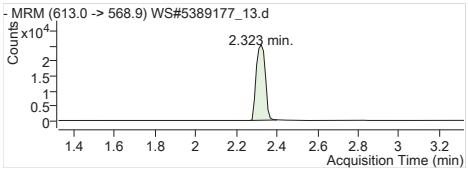



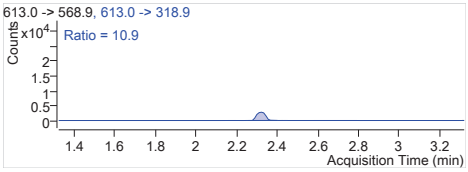

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 0.49 µg/L
Area ratio: 9.75906
Sample type: QC



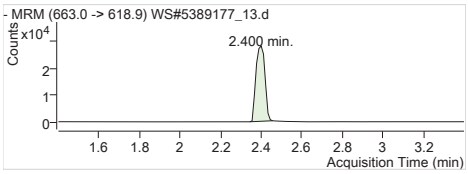



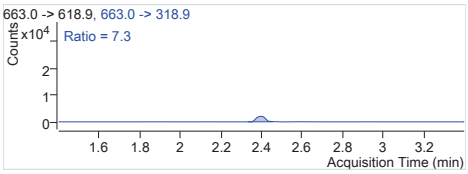

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 0.49 µg/L
Area ratio: 9.09195
Sample type: QC



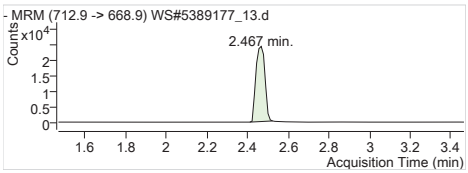



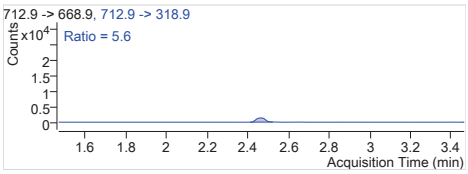

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.48 µg/L
Area ratio: 8.76497
Sample type: QC



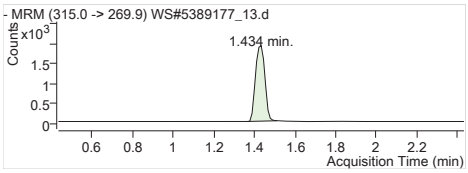



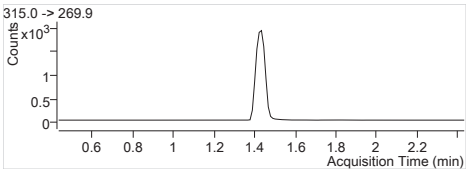

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.51 µg/L
Area ratio: 8.64582
Sample type: QC



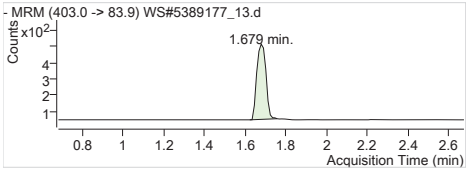



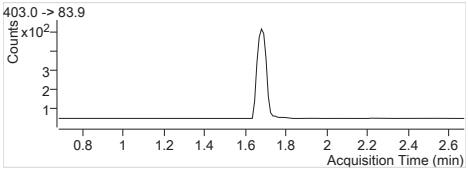

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 0.51 µg/L
Area ratio: 7.56493
Sample type: QC



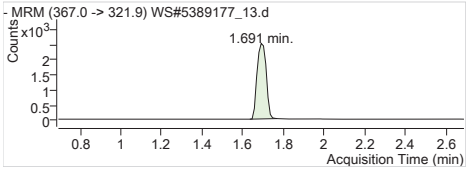



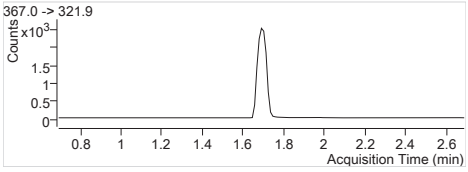

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 98.17 µg/L
Area ratio: 0.27523
Sample type: QC



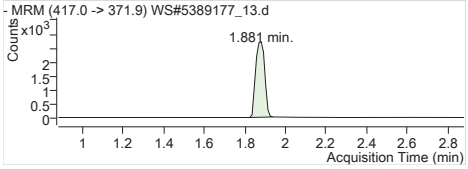



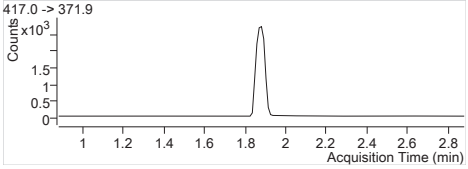

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 91.06 µg/L
Area ratio: 0.06578
Sample type: QC



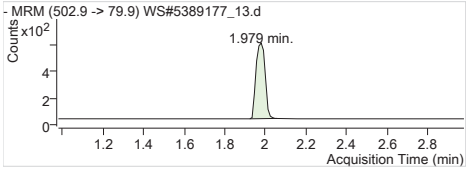



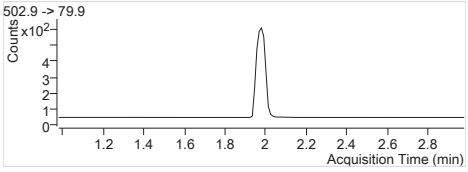

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 93.78 µg/L
Area ratio: 0.34970
Sample type: QC



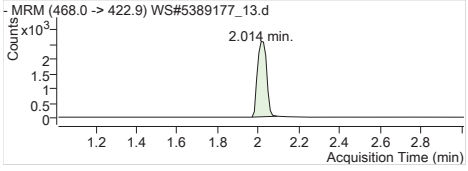



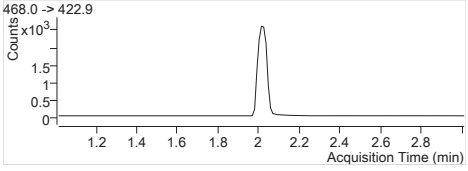

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 94.01 µg/L
Area ratio: 0.37511
Sample type: QC



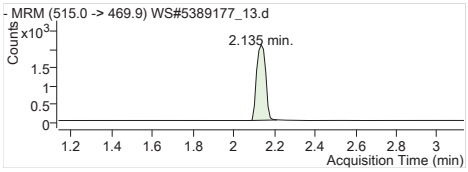



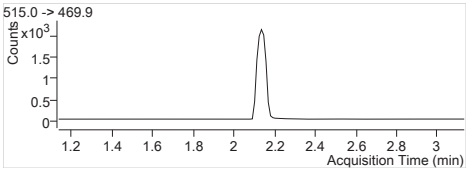

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 89.17 µg/L
Area ratio: 0.07898
Sample type: QC



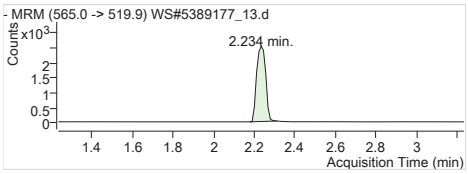



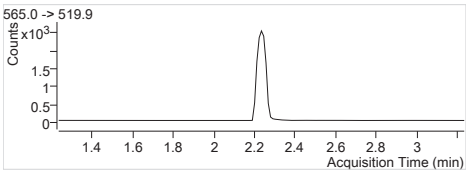

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 89.90 µg/L
Area ratio: 0.36164
Sample type: QC



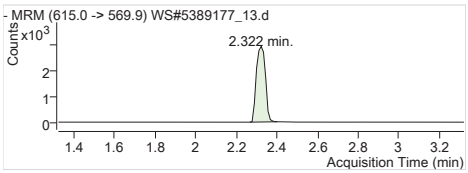



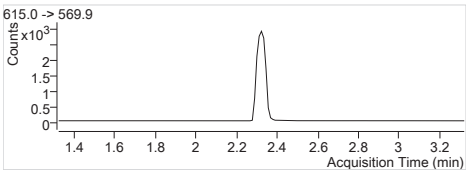

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 90.67 µg/L
Area ratio: 0.22837
Sample type: QC



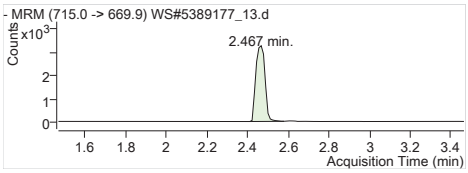



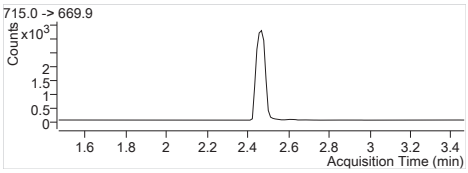

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 90.91 µg/L
Area ratio: 0.27310
Sample type: QC



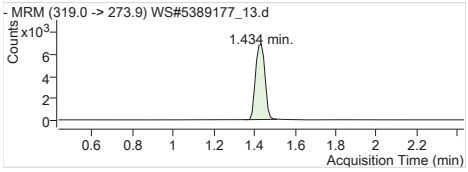



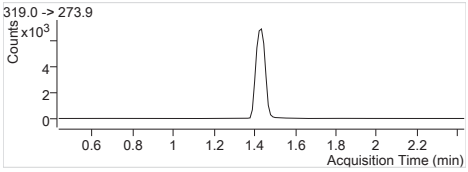

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 80.42 µg/L
Area ratio: 0.31871
Sample type: QC



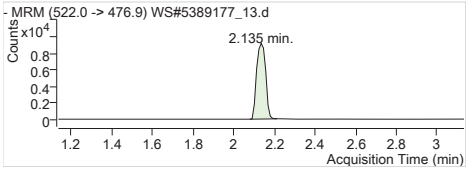



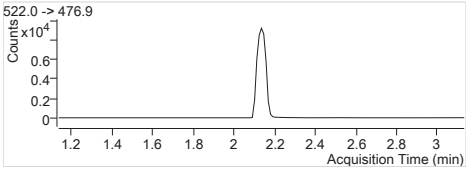

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 76.42 µg/L
Area ratio: 0.36248
Sample type: QC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 2.49 µg/L
Area ratio: 0
Sample type: QC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 2.37 µg/L
Area ratio: 0
Sample type: QC

# Quantitation Results

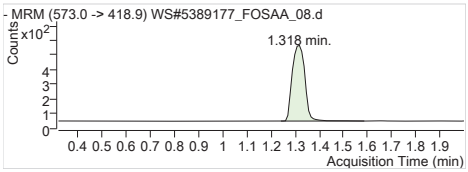
Agilent Technologies

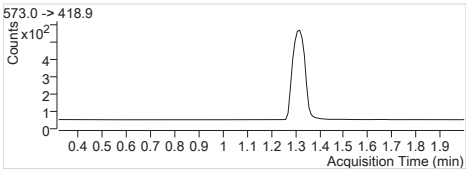
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_08.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A8 |
| **Acq. Date** | 2018/02/08 6:18:26 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

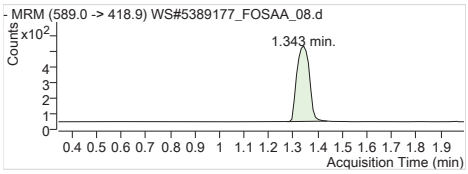
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1880 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1714 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 22354 | 0.91 | 1 µg/L | | |

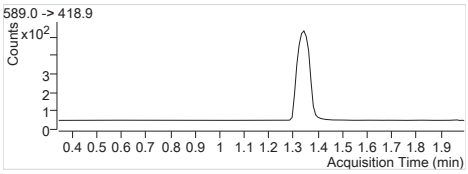
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1860 | 1.32 | - | 99.88 µg/L | - |
| D5-EtFOSAA | 1732 | 1.34 | - | 102.10 µg/L | - |
| 13C9-PFDA | 21589 | 0.91 | - | 2.39 µg/L | - |



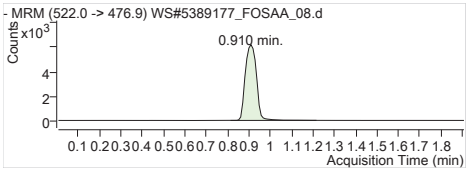



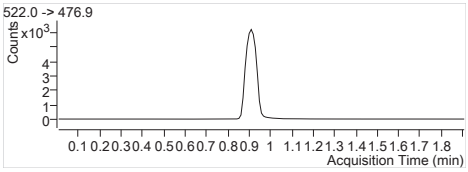

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Sample



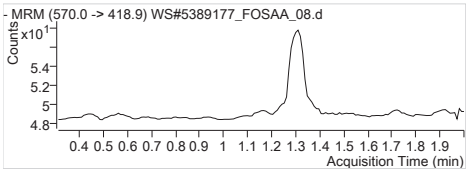



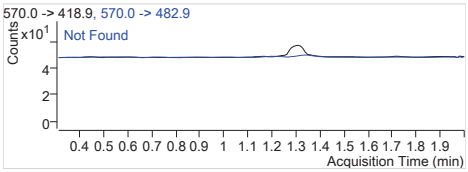

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



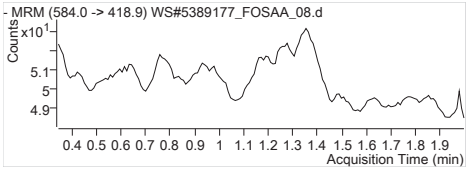



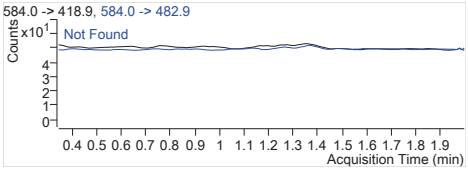

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: Sample



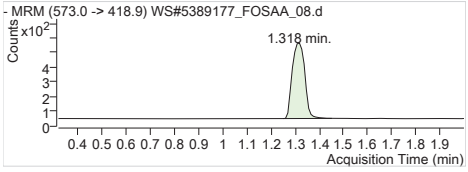



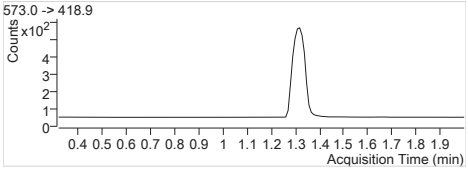

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



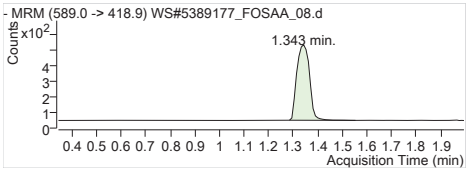



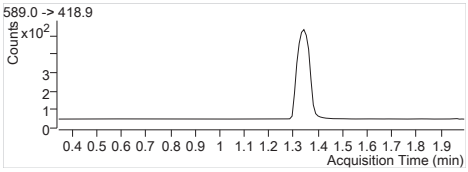

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



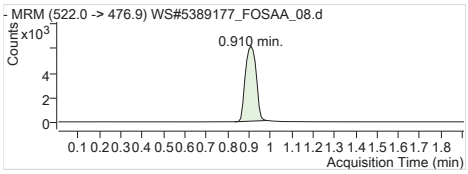



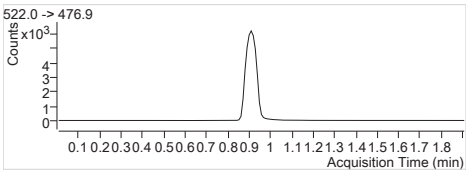

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 99.88 µg/L
Area ratio: 0.08321
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 102.10 µg/L |
| Area ratio: | 0.07748 |
| Sample type: | Sample |



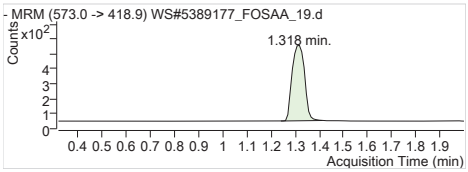

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 2.39 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

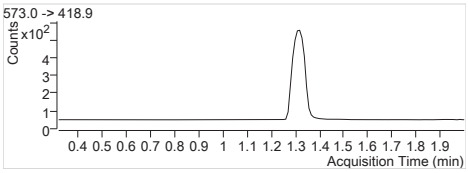
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_19.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A8 |
| **Acq. Date** | 2018/02/08 6:44:54 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

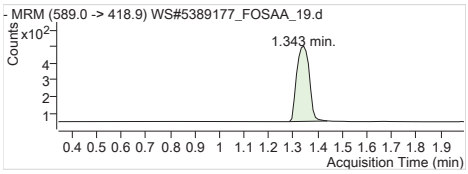
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1824 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1611 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 22275 | 0.91 | 1 µg/L | | |

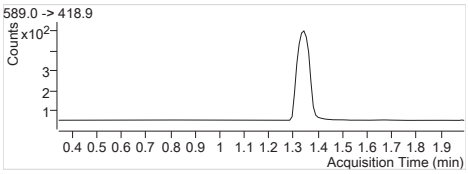
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1835 | 1.32 | - | 98.88 µg/L | - |
| D5-EtFOSAA | 1639 | 1.34 | - | 96.96 µg/L | - |
| 13C9-PFDA | 21575 | 0.91 | - | 2.39 µg/L | - |



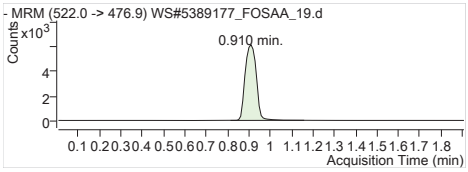



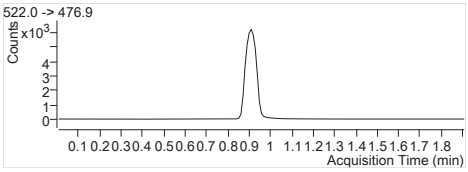

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Sample



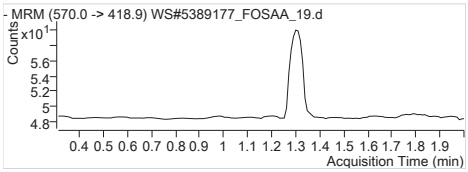



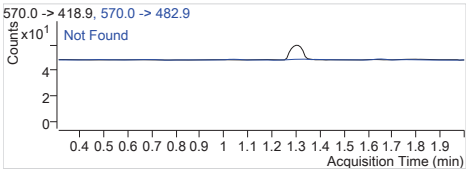

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



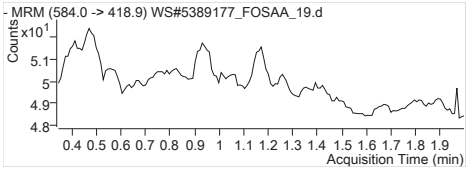



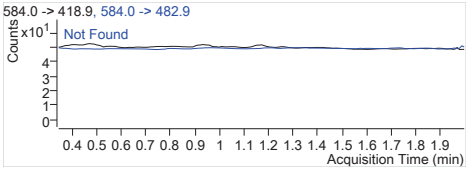

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: Sample



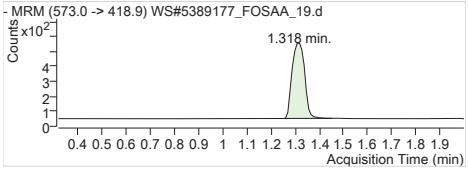



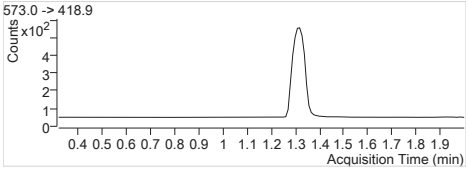

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



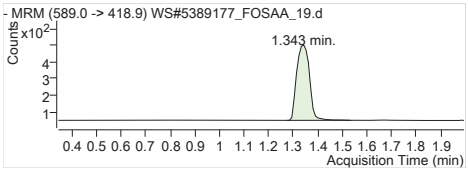



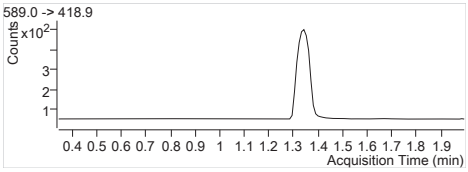

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



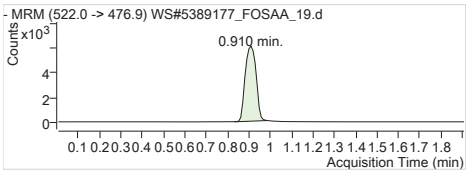



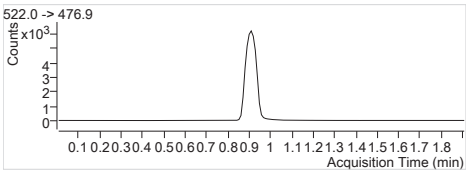

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 98.88 µg/L
Area ratio: 0.08238
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 96.96 µg/L |
| Area ratio: | 0.07358 |
| Sample type: | Sample |



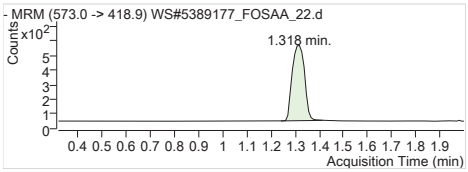

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 2.39 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

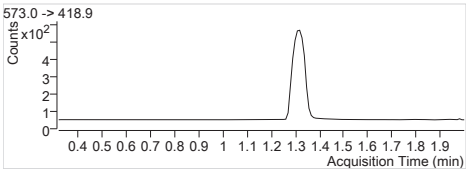
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_22.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A8 |
| **Acq. Date** | 2018/02/08 6:52:07 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

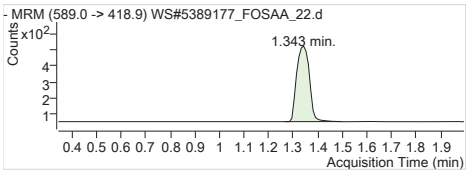
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1847 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1710 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 21982 | 0.91 | 1 µg/L | | |

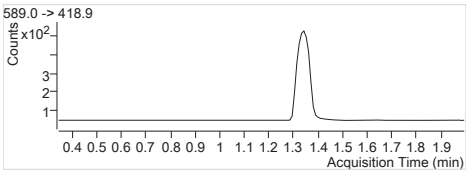
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1852 | 1.32 | - | 101.13 µg/L | - |
| D5-EtFOSAA | 1712 | 1.34 | - | 102.63 µg/L | - |
| 13C9-PFDA | 21384 | 0.91 | - | 2.37 µg/L | - |



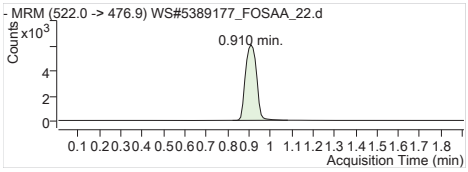



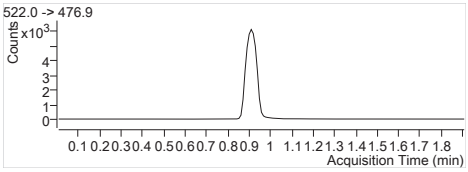

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Sample



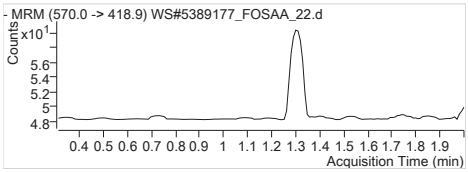



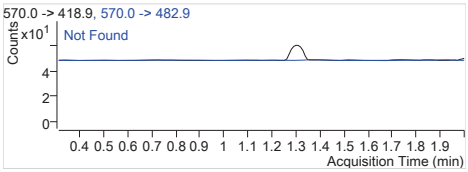

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



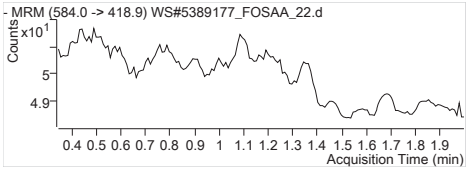



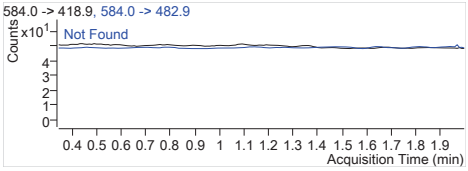

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: Sample



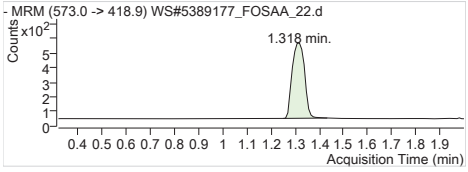



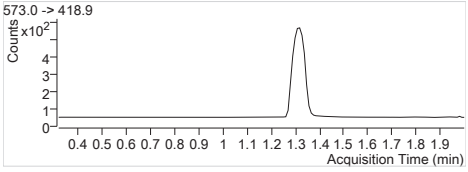

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



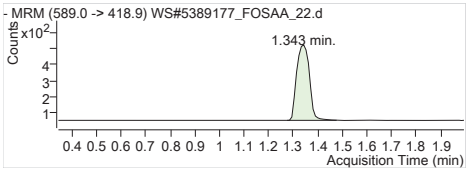



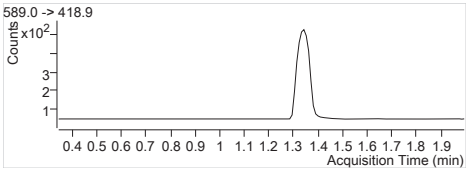

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



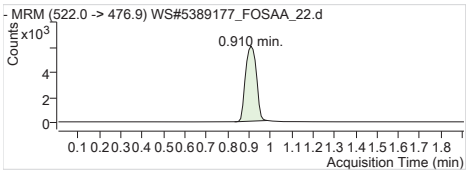



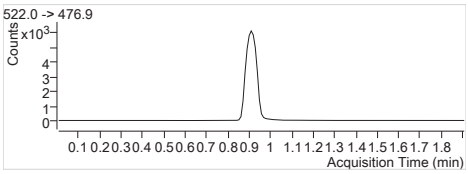

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 101.13 µg/L
Area ratio: 0.08425
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 102.63 µg/L |
| Area ratio: | 0.07788 |
| Sample type: | Sample |



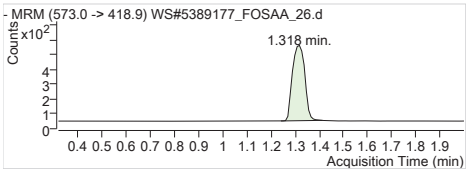

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 2.37 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

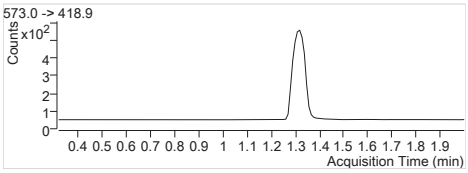
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_26.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A8 |
| **Acq. Date** | 2018/02/08 7:01:44 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

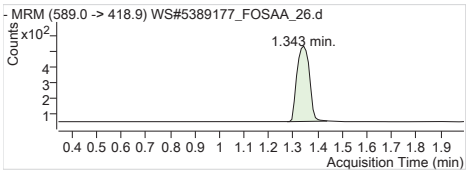
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1817 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1701 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 22490 | 0.91 | 1 µg/L | | |

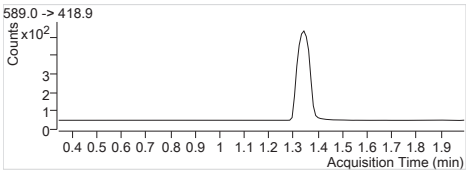
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1840 | 1.32 | - | 98.20 µg/L | - |
| D5-EtFOSAA | 1723 | 1.34 | - | 100.95 µg/L | - |
| 13C9-PFDA | 21763 | 0.91 | - | 2.41 µg/L | - |



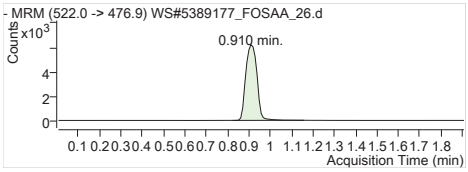



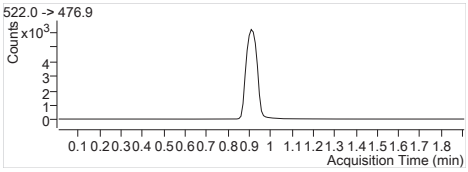

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Sample



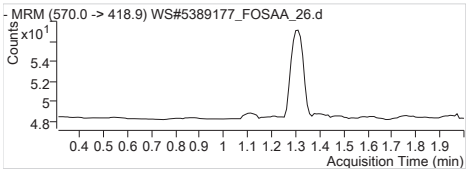



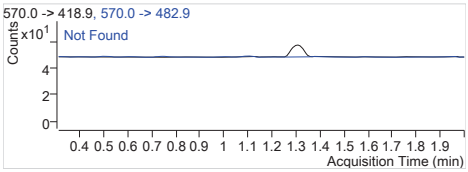

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



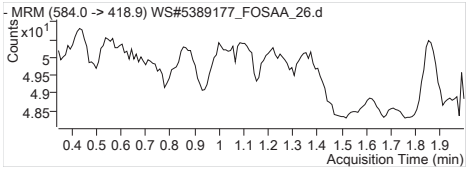



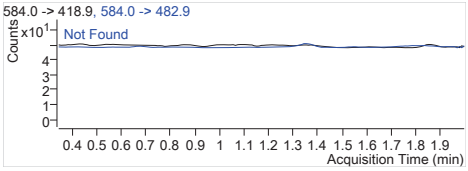

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: Sample



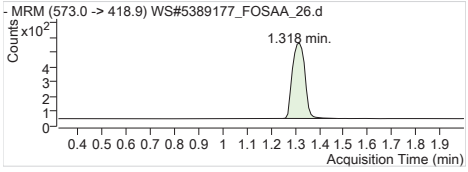



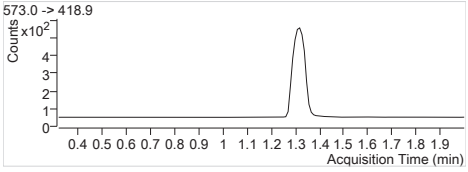

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



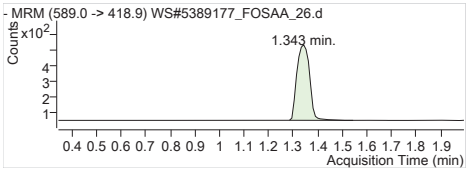



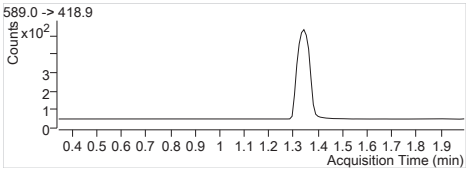

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



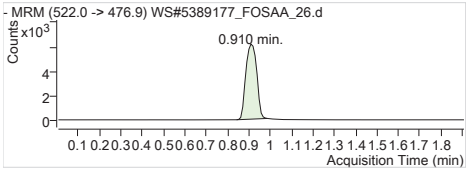



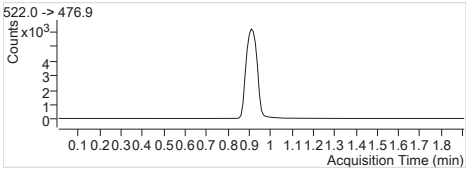

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 98.20 µg/L
Area ratio: 0.08181
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 100.95 µg/L |
| Area ratio: | 0.07661 |
| Sample type: | Sample |



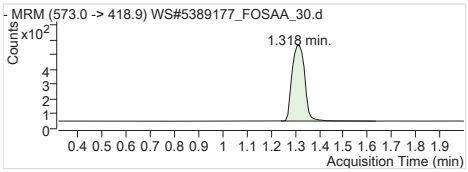

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 2.41 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

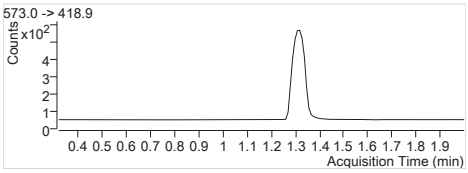
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_30.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A8 |
| **Acq. Date** | 2018/02/08 7:11:22 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

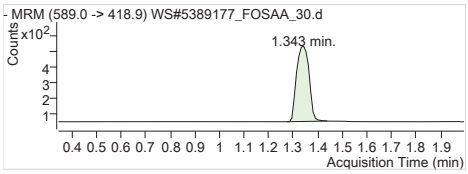
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1891 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1697 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 22057 | 0.91 | 1 µg/L | | |

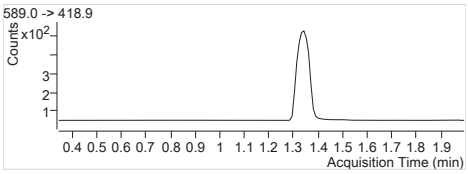
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1867 | 1.32 | - | 101.60 µg/L | - |
| D5-EtFOSAA | 1701 | 1.34 | - | 101.62 µg/L | - |
| 13C9-PFDA | 21273 | 0.91 | - | 2.36 µg/L | - |



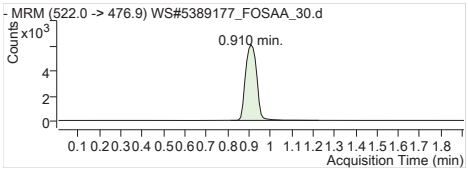



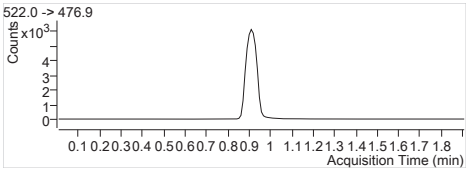

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Sample



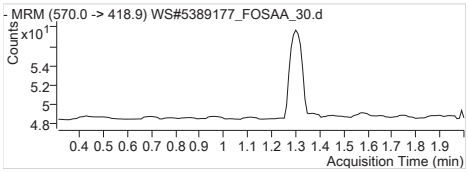



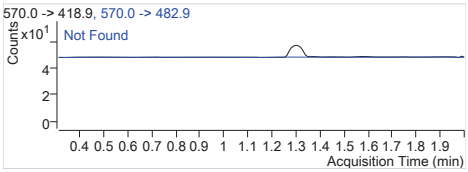

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



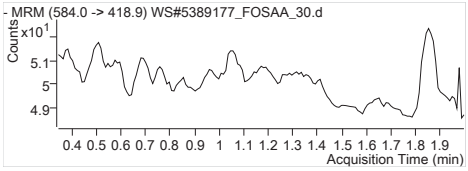



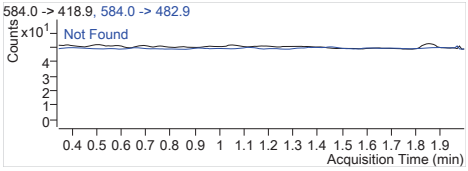

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: Sample



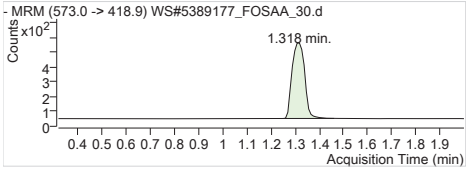



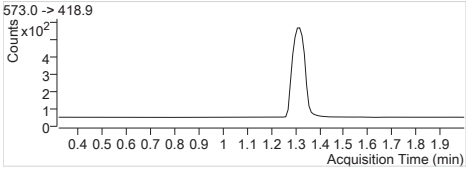

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



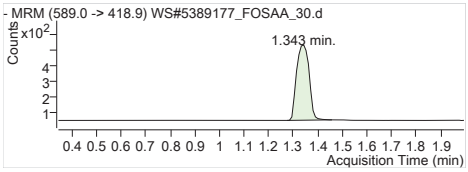



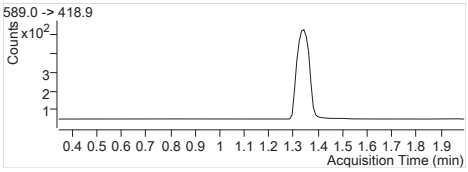

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



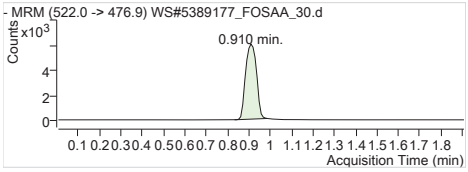



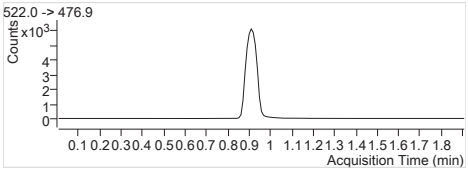

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 101.60 µg/L
Area ratio: 0.08464
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 101.62 µg/L |
| Area ratio: | 0.07712 |
| Sample type: | Sample |



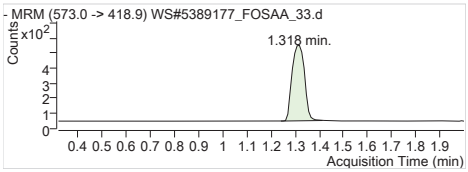

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 2.36 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

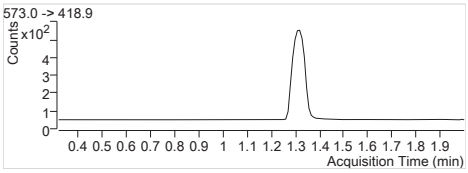
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_33.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A8 |
| **Acq. Date** | 2018/02/08 7:18:37 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

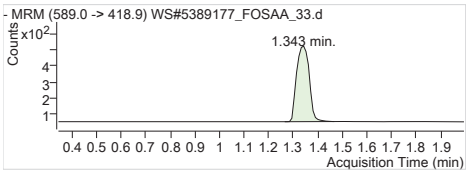
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1804 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1704 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 22271 | 0.91 | 1 µg/L | | |

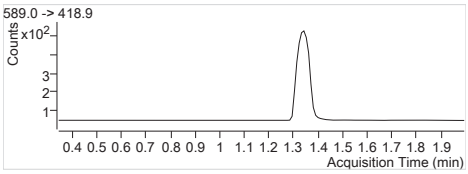
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1815 | 1.32 | - | 97.82 µg/L | - |
| D5-EtFOSAA | 1703 | 1.34 | - | 100.76 µg/L | - |
| 13C9-PFDA | 21494 | 0.91 | - | 2.38 µg/L | - |



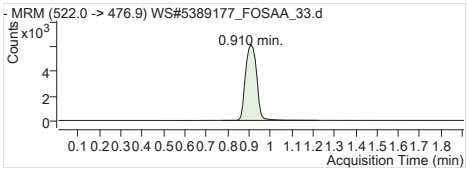



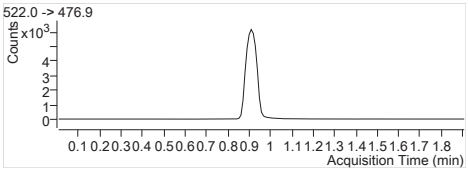

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Sample



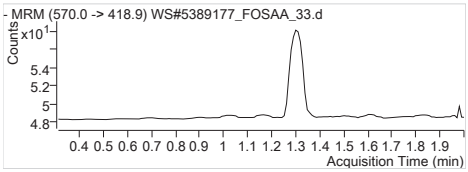



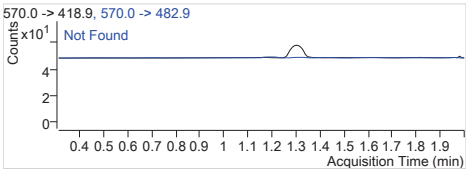

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



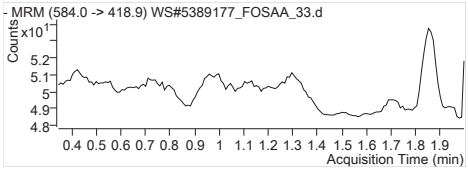



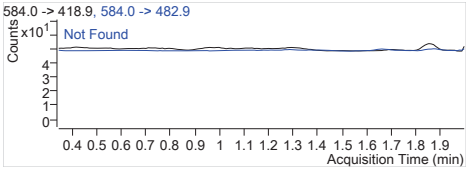

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: Sample



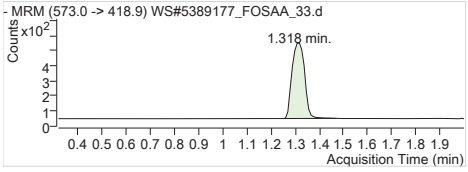



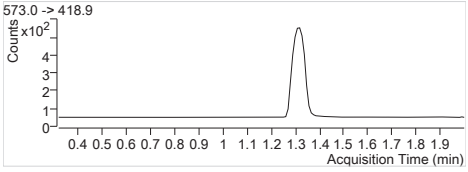

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



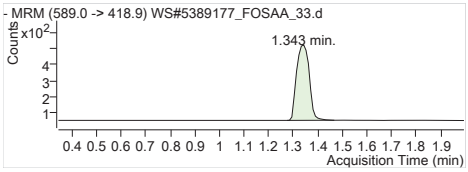



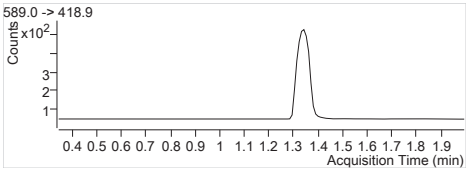

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



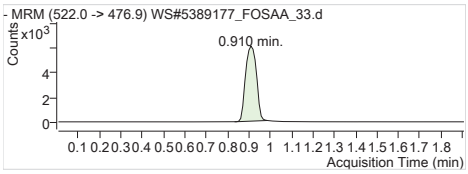



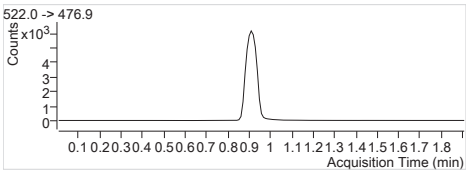

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 97.82 µg/L
Area ratio: 0.08150
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 100.76 µg/L |
| Area ratio: | 0.07647 |
| Sample type: | Sample |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 2.38 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

# Quantitation Results

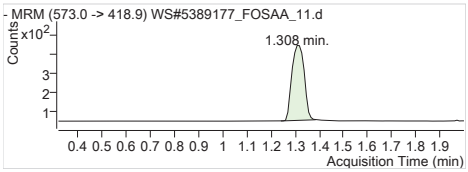
Agilent Technologies

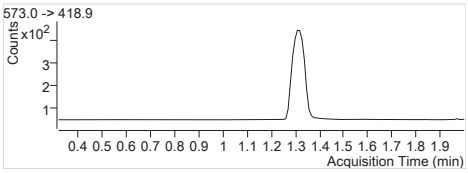
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5389177:BLANK** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_11.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-B1 |
| **Acq. Date** | 2018/02/08 6:25:40 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

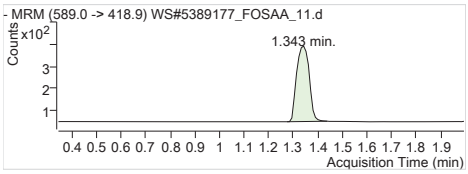
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1400 | 1.31 | 1 µg/L | | |
| D5-EtFOSAA IS | 1219 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 22583 | 0.89 | 1 µg/L | | |

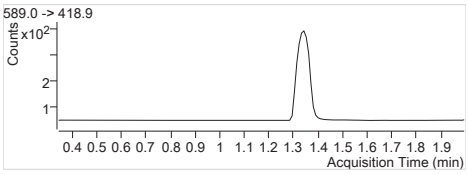
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1429 | 1.31 | - | 75.95 µg/L | - |
| D5-EtFOSAA | 1227 | 1.34 | - | 71.59 µg/L | - |
| 13C9-PFDA | 22081 | 0.89 | - | 2.45 µg/L | - |



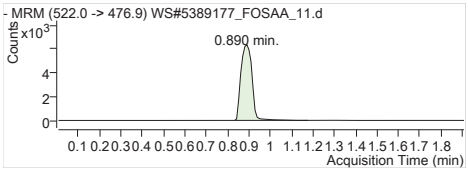



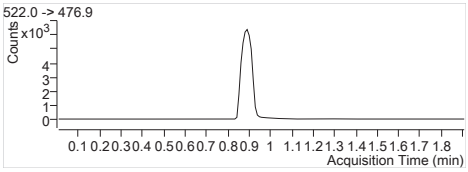

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.308 (1.318)
Concentration: 1 µg/L
Sample type: Sample



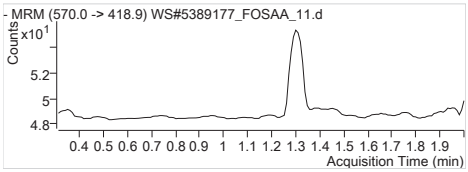



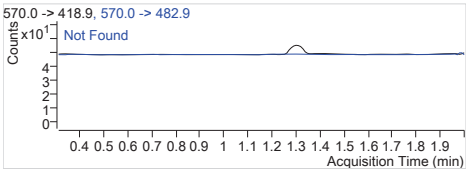

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Sample



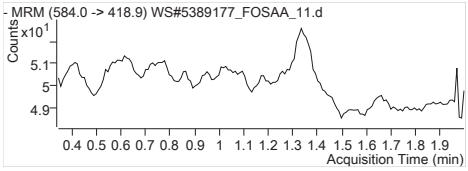



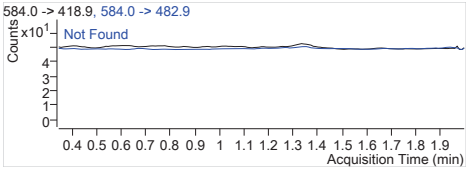

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.890 (0.910)
Concentration: 1 µg/L
Sample type: Sample



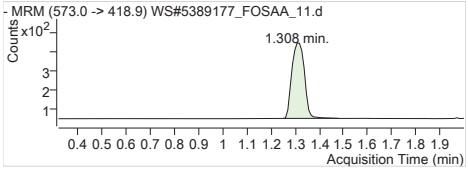



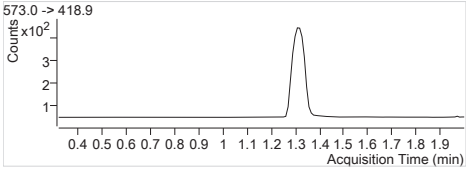

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



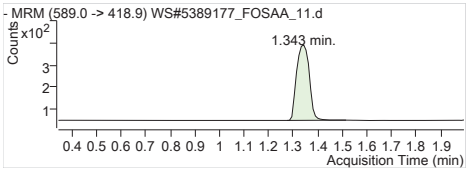



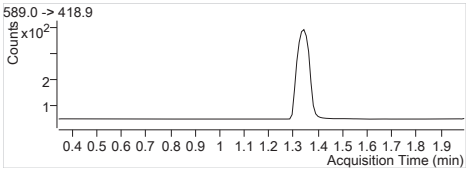

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.344)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



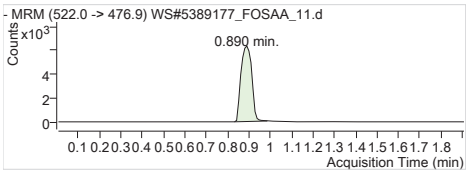



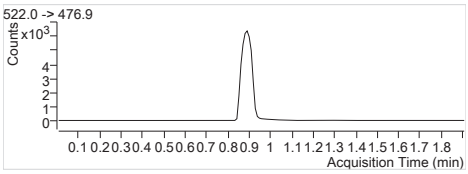

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.318)
Calc. conc. 75.95 µg/L
Area ratio: 0.06328
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 71.59 µg/L |
| Area ratio: | 0.05433 |
| Sample type: | Sample |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.890 (0.910) |
| Calc. conc. | 2.45 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

# Quantitation Results

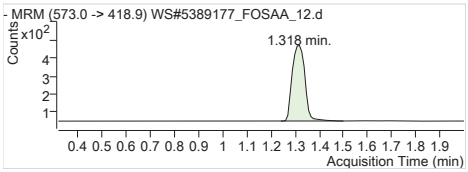
Agilent Technologies

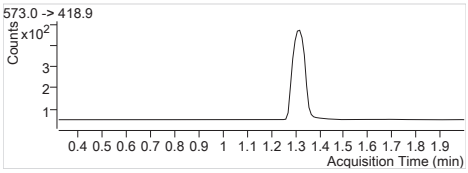
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5389177:SPIKE** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_12.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-B2 |
| **Acq. Date** | 2018/02/08 6:28:03 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

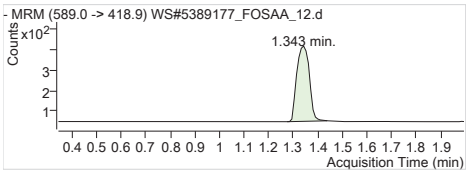
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1537 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1299 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 22763 | 0.89 | 1 µg/L | | |

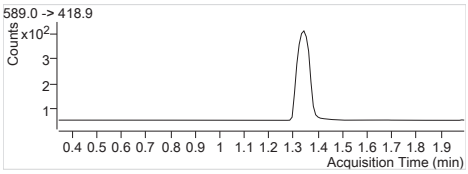
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 10740 | 1.31 | 20.80 | 0.46 µg/L | 92.15 |
| EtFOSAA 1 | 11404 | 1.34 | 20.80 | 0.50 µg/L | 99.99 |
| D3-MeFOSAA | 1536 | 1.32 | 100.00 | 81.00 µg/L | 81.00 |
| D5-EtFOSAA | 1319 | 1.34 | 100.00 | 76.35 µg/L | 76.35 |
| 13C9-PFDA | 22146 | 0.89 | 100.00 | 2.45 µg/L | 102.28 |



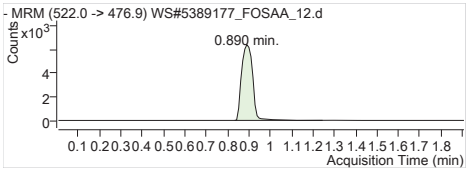


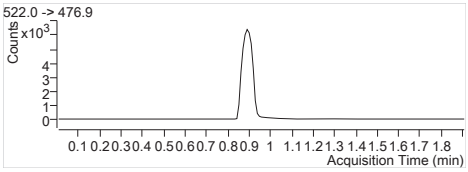

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: QC



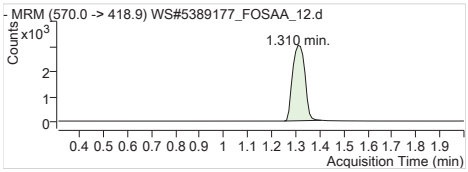


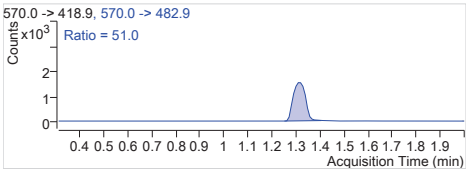

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: QC



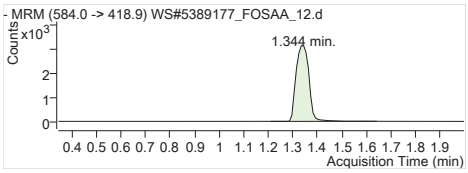


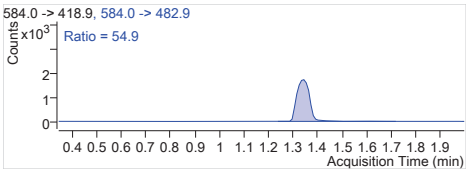

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.890 (0.910)
Concentration: 1 µg/L
Sample type: QC



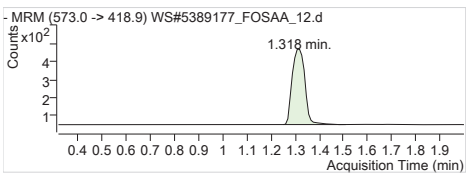


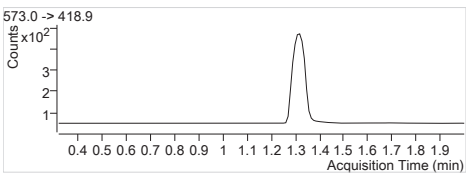

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 0.46 µg/L
Area ratio: 6.98764
Sample type: QC



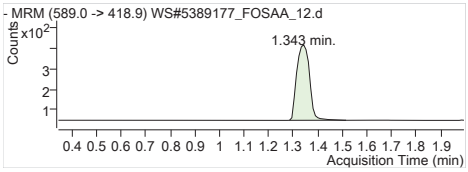


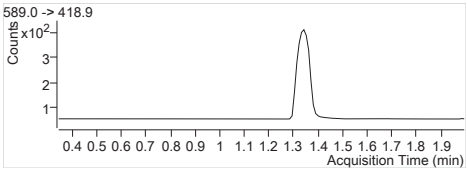

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 0.50 µg/L
Area ratio: 8.77906
Sample type: QC



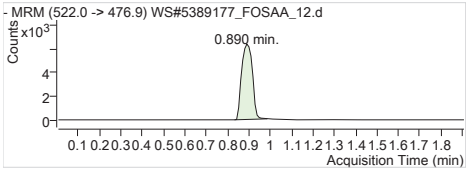


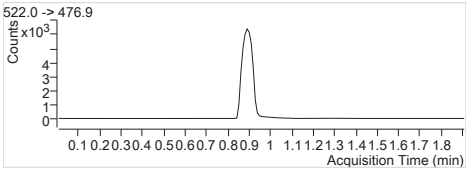

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 81.00 µg/L
Area ratio: 0.06748
Sample type: QC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 76.35 µg/L |
| Area ratio: | 0.05794 |
| Sample type: | QC |



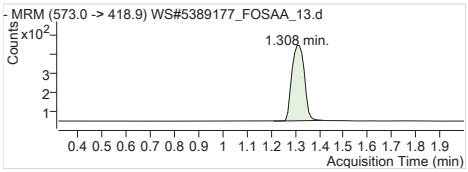

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.890 (0.910) |
| Calc. conc. | 2.45 µg/L |
| Area ratio: | 0 |
| Sample type: | QC |

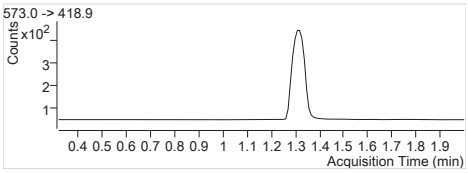
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5389177:SPIKE:D1** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_13.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-B3 |
| **Acq. Date** | 2018/02/08 6:30:26 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

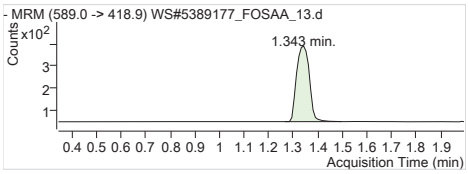
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1439 | 1.31 | 1 µg/L | | |
| D5-EtFOSAA IS | 1231 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 21014 | 0.88 | 1 µg/L | | |

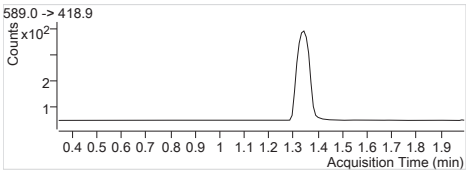
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 9898 | 1.31 | 20.80 | 0.45 µg/L | 90.71 |
| EtFOSAA 1 | 10978 | 1.33 | 20.80 | 0.51 µg/L | 101.57 |
| D3-MeFOSAA | 1442 | 1.31 | 100.00 | 82.37 µg/L | 82.37 |
| D5-EtFOSAA | 1231 | 1.34 | 100.00 | 77.19 µg/L | 77.19 |
| 13C9-PFDA | 20282 | 0.88 | 100.00 | 2.25 µg/L | 93.67 |



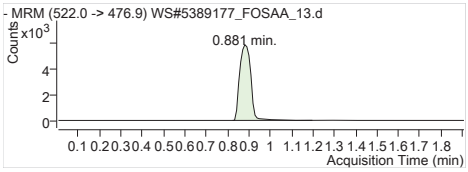



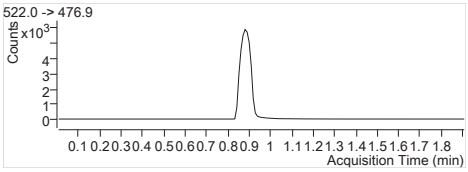

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.308 (1.318)
Concentration: 1 µg/L
Sample type: QC



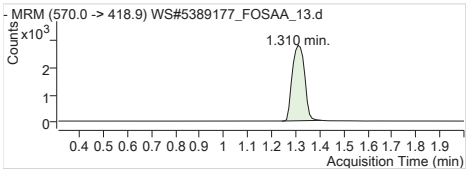



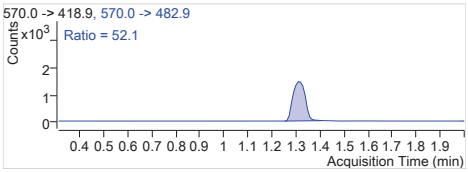

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: QC



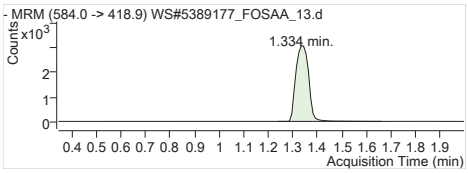



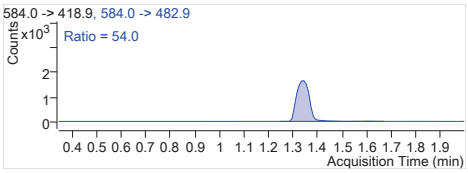

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.881 (0.910)
Concentration: 1 µg/L
Sample type: QC



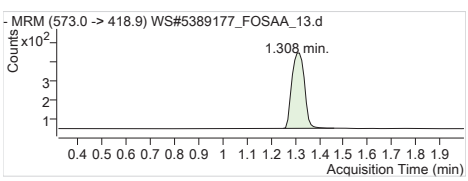



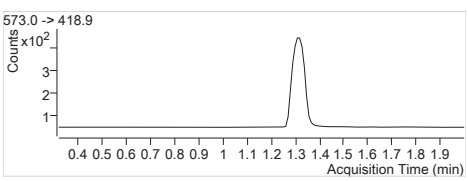

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 0.45 µg/L
Area ratio: 6.87839
Sample type: QC



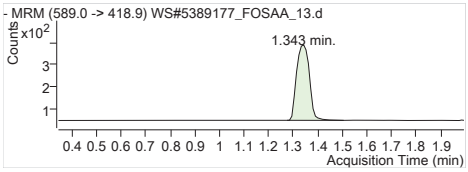



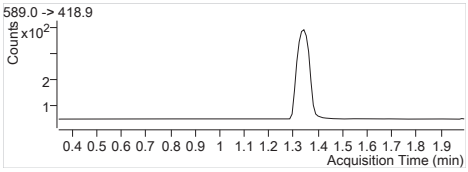

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.344)
Calc. conc. 0.51 µg/L
Area ratio: 8.91795
Sample type: QC



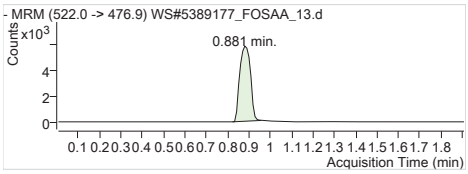



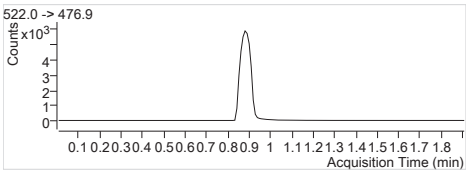

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.318)
Calc. conc. 82.37 µg/L
Area ratio: 0.06862
Sample type: QC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 77.19 µg/L |
| Area ratio: | 0.05858 |
| Sample type: | QC |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.881 (0.910) |
| Calc. conc. | 2.25 µg/L |
| Area ratio: | 0 |
| Sample type: | QC |

# Quantitation Results

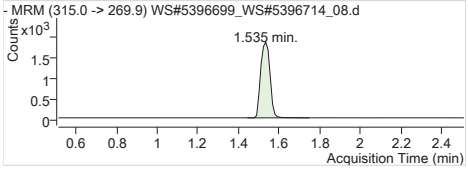
Agilent Technologies

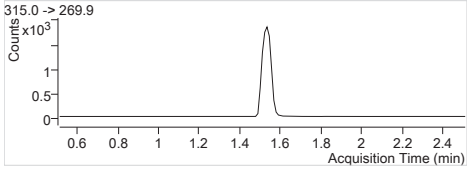
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **IB** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_08.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A8 |
| **Acq. Date** | 2018/02/15 4:45:27 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

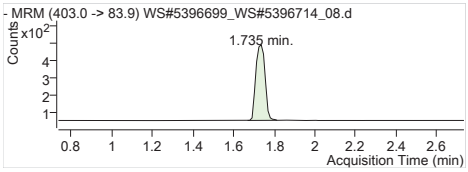
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5791 | 1.53 | 1 µg/L | | |
| MPFHxS | 1403 | 1.74 | 1 µg/L | | |
| MPFHpA | 6968 | 1.78 | 1 µg/L | | |
| MPFOA | 6754 | 1.95 | 1 µg/L | | |
| MPFOS | 1535 | 2.01 | 1 µg/L | | |
| MPFNA | 5981 | 2.09 | 1 µg/L | | |
| MPFDA | 4622 | 2.20 | 1 µg/L | | |
| MPFUnA | 5551 | 2.30 | 1 µg/L | | |
| MPFDoA | 7501 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6966 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 25225 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 26065 | 2.20 | 1 µg/L | | |

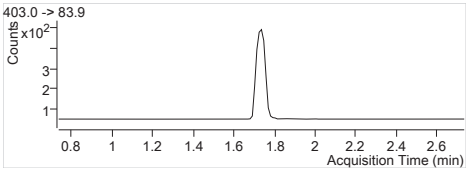
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 5729 | 1.53 | - | 96.43 µg/L | - |
| 18O2-PFHxS | 1403 | 1.74 | - | 101.30 µg/L | - |
| 13C4-PFHpA | 6968 | 1.78 | - | 98.30 µg/L | - |
| 13C4-PFOA | 6754 | 1.95 | - | 100.37 µg/L | - |
| 13C4-PFOS | 1535 | 2.01 | - | 98.69 µg/L | - |
| 13C5-PFNA | 5982 | 2.09 | - | 95.28 µg/L | - |
| 13C2-PFDA | 4583 | 2.20 | - | 96.83 µg/L | - |
| 13C2-PFUnA | 5551 | 2.30 | - | 90.58 µg/L | - |
| 13C2-PFDoA | 7501 | 2.38 | - | 94.04 µg/L | - |
| 13C2-PFTeDA | 6999 | 2.51 | - | 99.26 µg/L | - |
| 13C6-PFHxA | 25225 | 1.53 | - | 2.47 µg/L | - |
| 13C9-PFDA | 26065 | 2.20 | - | 2.57 µg/L | - |



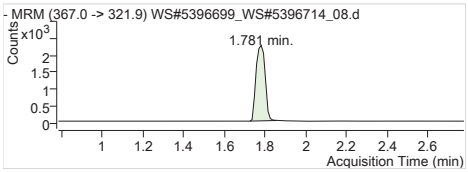



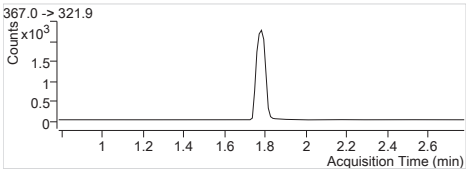

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



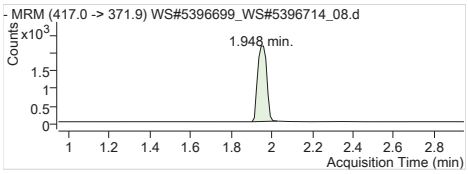



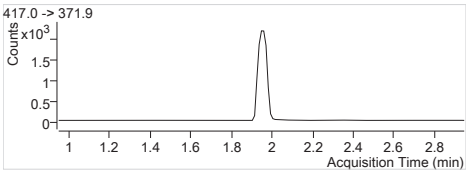

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: Sample



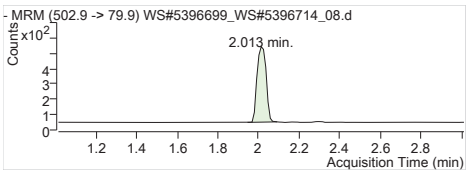



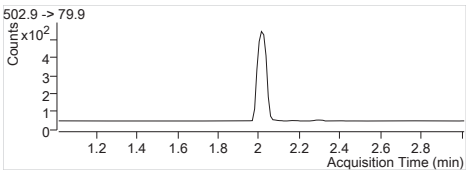

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Sample



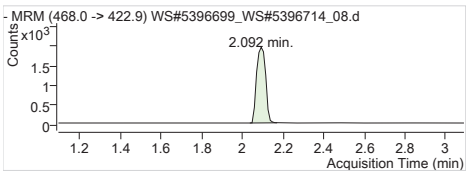



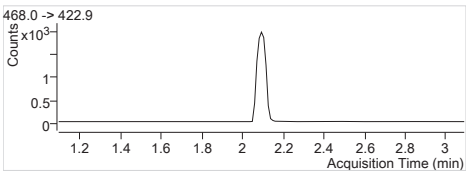

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: Sample



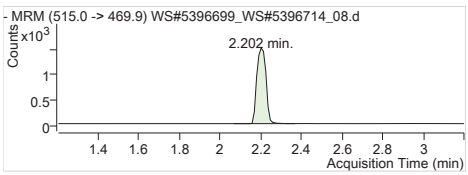



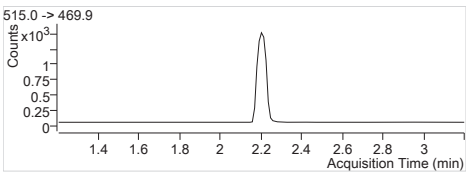

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Sample



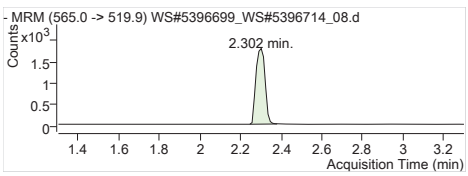



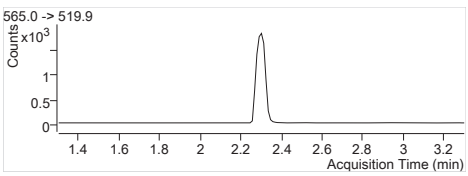

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Sample



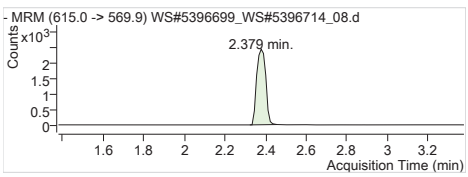



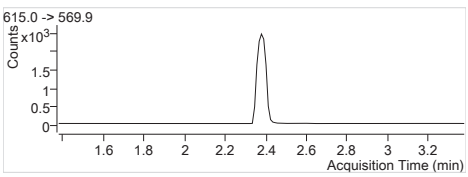

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



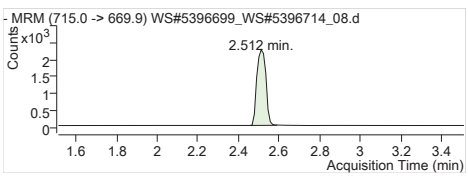



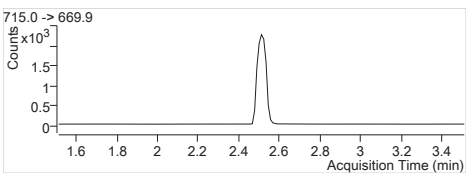

**MPFUnA** Internal Standard
RT (Exp. RT): 2.302 (2.302)
Concentration: 1 µg/L
Sample type: Sample



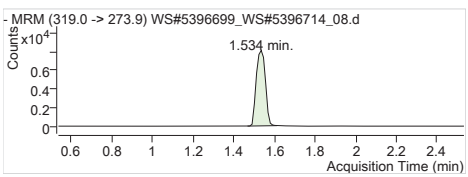



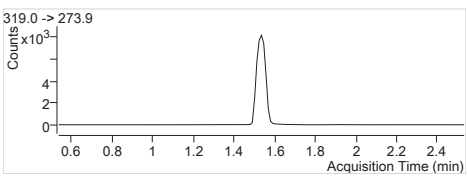

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Sample



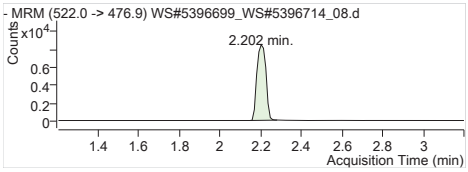



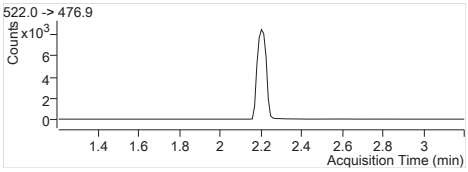

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Sample



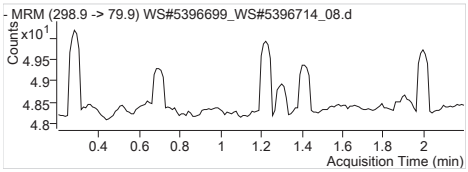



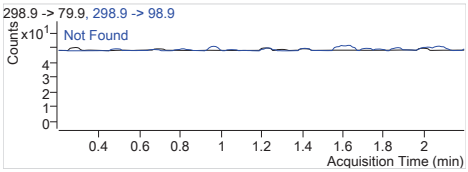

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Sample



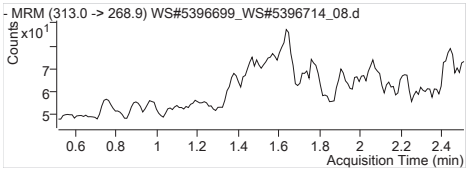



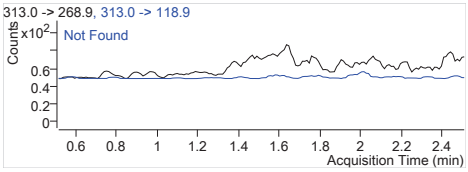

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



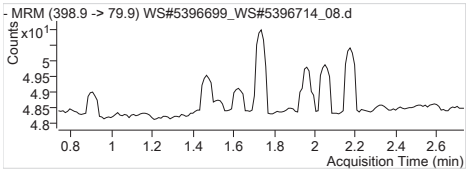



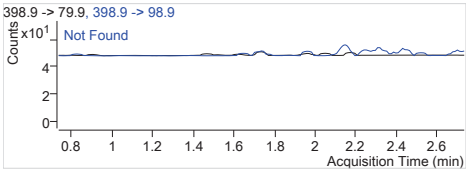

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.199)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



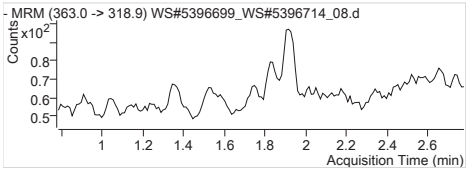



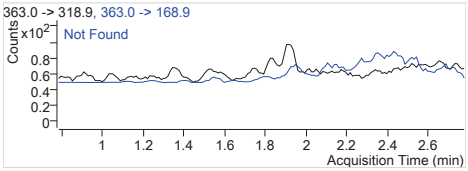

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.512)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



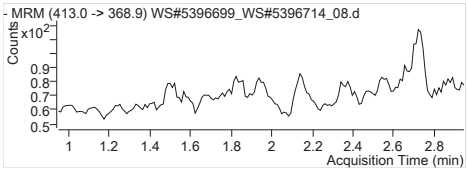



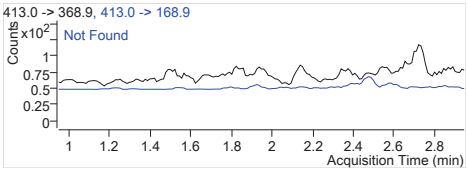

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.735)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



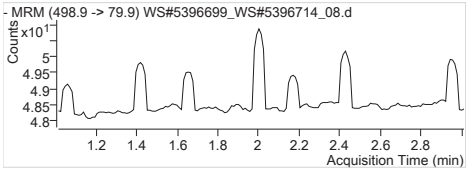



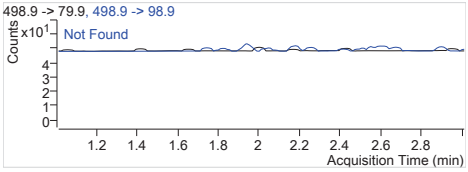

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.781)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



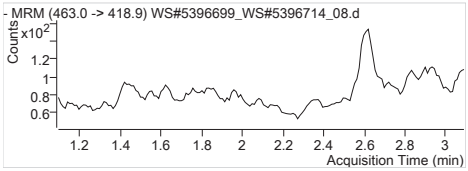



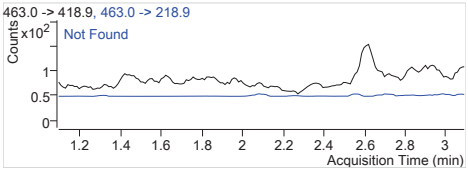

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.948)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



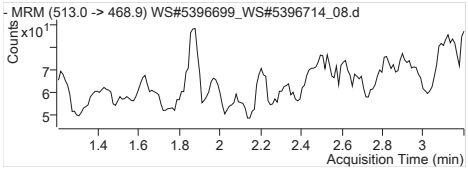



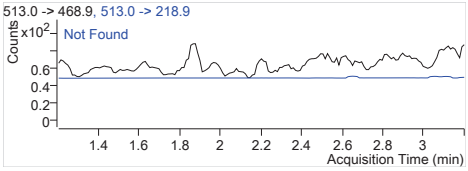

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (2.013)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



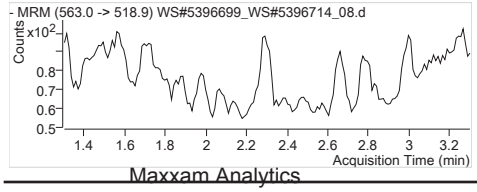



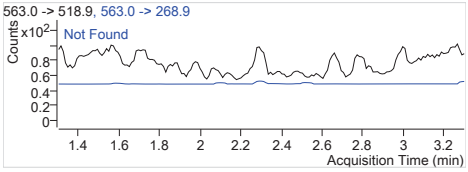

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.092)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



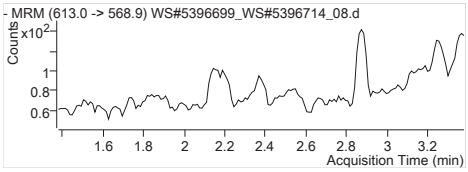



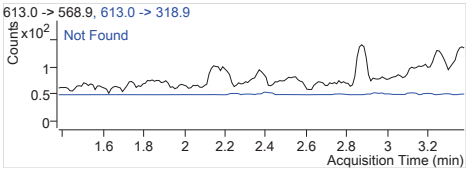

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.203)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



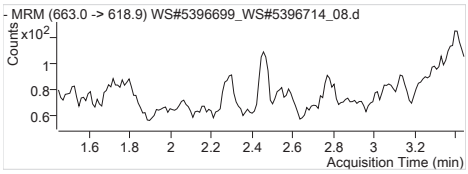



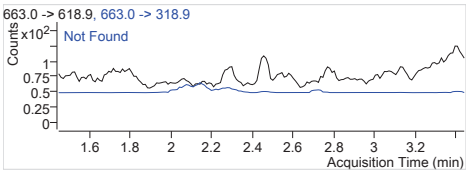

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.302)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



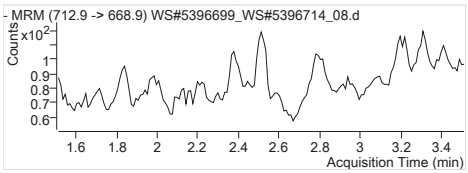



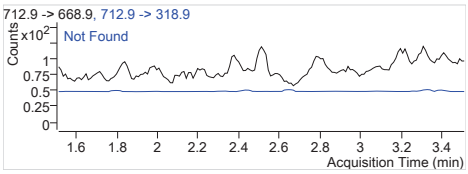

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.379) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



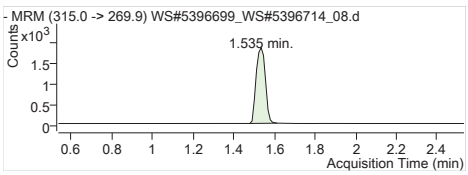



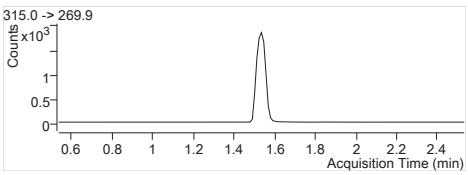

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.445) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



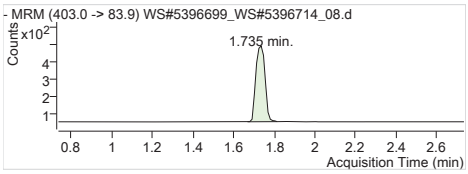



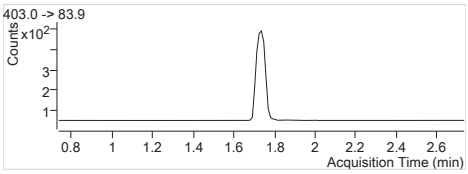

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.512) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



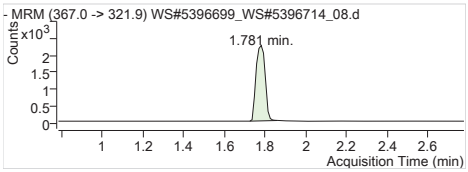



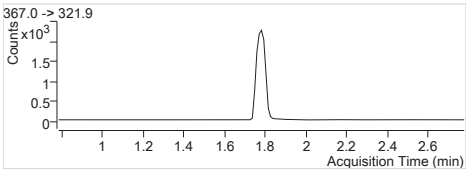

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 96.43 µg/L |
| Area ratio: | 0.22712 |
| Sample type: | Sample |



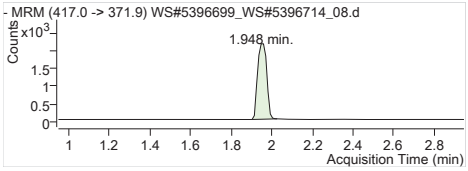



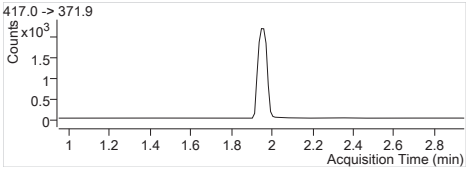

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 101.30 µg/L |
| Area ratio: | 0.05562 |
| Sample type: | Sample |



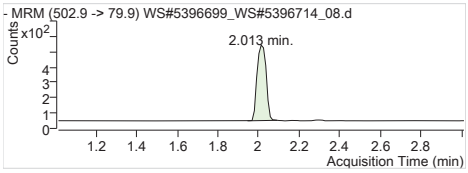



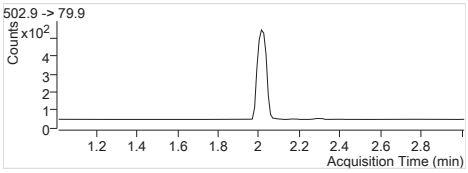

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 98.30 µg/L |
| Area ratio: | 0.27623 |
| Sample type: | Sample |



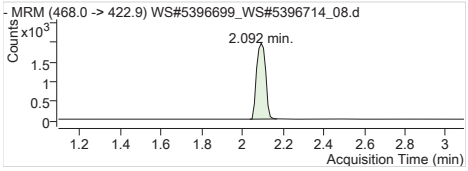



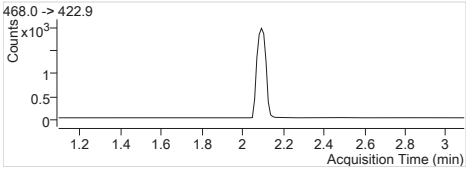

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.948 (1.948) |
| Calc. conc. | 100.37 µg/L |
| Area ratio: | 0.26775 |
| Sample type: | Sample |



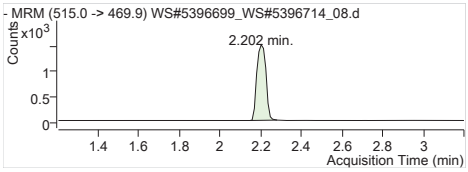



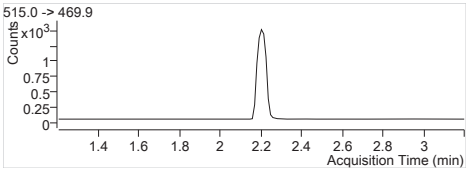

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 98.69 µg/L |
| Area ratio: | 0.06085 |
| Sample type: | Sample |



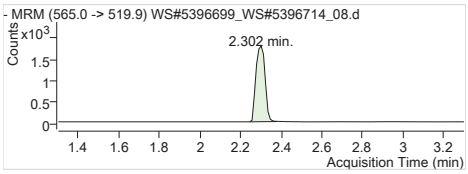



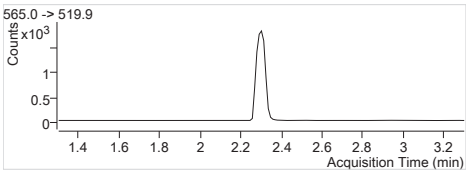

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 95.28 µg/L |
| Area ratio: | 0.23715 |
| Sample type: | Sample |



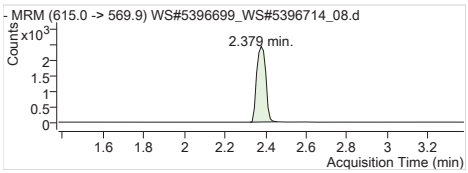



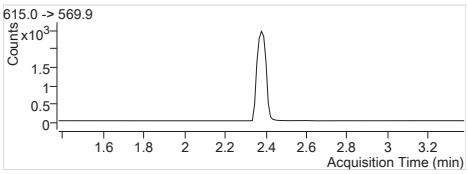

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 96.83 µg/L
Area ratio: 0.17583
Sample type: Sample



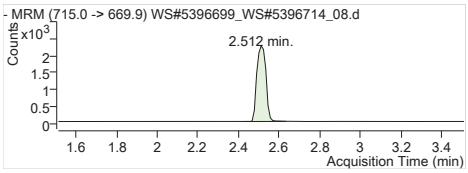



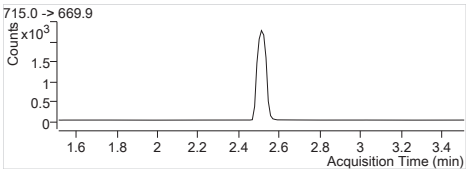

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 90.58 µg/L
Area ratio: 0.21297
Sample type: Sample



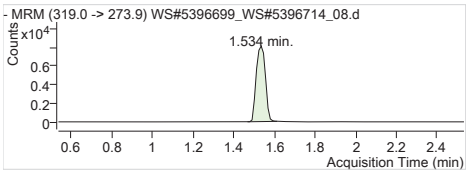



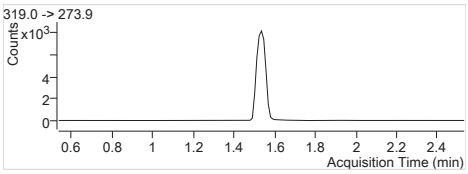

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 94.04 µg/L
Area ratio: 0.28778
Sample type: Sample



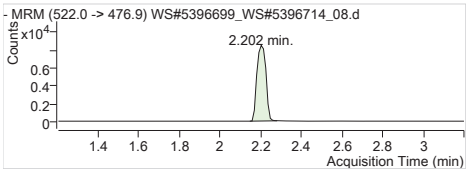



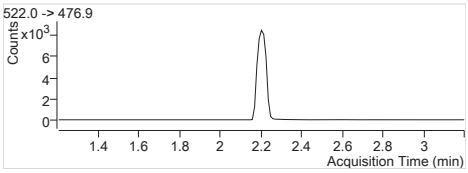

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 99.26 µg/L
Area ratio: 0.26852
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 2.47 µg/L
Area ratio: 0
Sample type: Sample




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 2.57 µg/L
Area ratio: 0
Sample type: Sample

# Quantitation Results

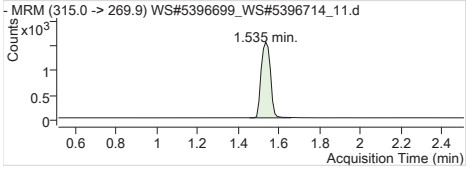
Agilent Technologies

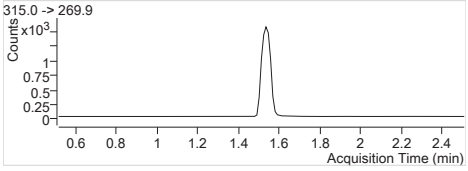
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5396699:BLANK** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_11.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B1 |
| **Acq. Date** | 2018/02/15 5:00:14 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

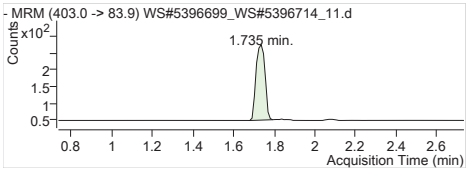
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 4858 | 1.53 | 1 µg/L | | |
| MPFHxS | 697 | 1.74 | 1 µg/L | | |
| MPFHpA | 7008 | 1.78 | 1 µg/L | | |
| MPFOA | 7182 | 1.96 | 1 µg/L | | |
| MPFOS | 1133 | 2.01 | 1 µg/L | | |
| MPFNA | 6090 | 2.09 | 1 µg/L | | |
| MPFDA | 4128 | 2.20 | 1 µg/L | | |
| MPFUnA | 4484 | 2.30 | 1 µg/L | | |
| MPFDoA | 5134 | 2.38 | 1 µg/L | | |
| MPFTeDA | 4753 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 23672 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 24303 | 2.20 | 1 µg/L | | |

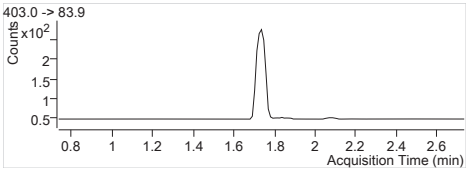
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | | | - | ND | - |
| PFHxA 1 | | | - | ND | - |
| PFHxS 1 | | | - | ND | - |
| PFHpA 1 | | | - | ND | - |
| PFOA 1 | | | - | ND | - |
| PFOS 1 | | | - | ND | - |
| PFNA 1 | | | - | ND | - |
| PFDA 1 | | | - | ND | - |
| PFUnA 1 | | | - | ND | - |
| PFDoA 1 | | | - | ND | - |
| PFTrDA 1 | | | - | ND | - |
| PFTeDA 1 | | | - | ND | - |
| 13C2-PFHxA | 4788 | 1.53 | - | 85.88 µg/L | - |
| 18O2-PFHxS | 697 | 1.74 | - | 53.63 µg/L | - |
| 13C4-PFHpA | 7008 | 1.78 | - | 105.35 µg/L | - |
| 13C4-PFOA | 7182 | 1.96 | - | 113.73 µg/L | - |
| 13C4-PFOS | 1133 | 2.01 | - | 77.63 µg/L | - |
| 13C5-PFNA | 6090 | 2.09 | - | 103.36 µg/L | - |
| 13C2-PFDA | 4128 | 2.20 | - | 93.54 µg/L | - |
| 13C2-PFUnA | 4484 | 2.30 | - | 78.48 µg/L | - |
| 13C2-PFDoA | 5134 | 2.38 | - | 69.03 µg/L | - |
| 13C2-PFTeDA | 4775 | 2.51 | - | 72.63 µg/L | - |
| 13C6-PFHxA | 23672 | 1.53 | - | 2.32 µg/L | - |
| 13C9-PFDA | 24303 | 2.20 | - | 2.40 µg/L | - |



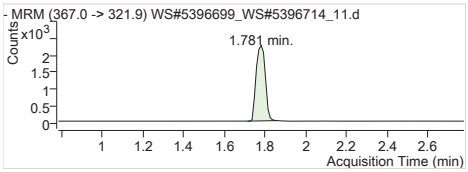



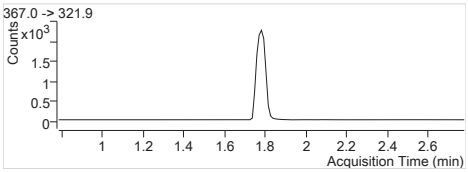

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Sample |



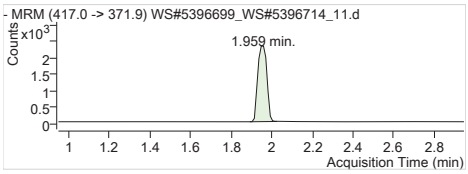



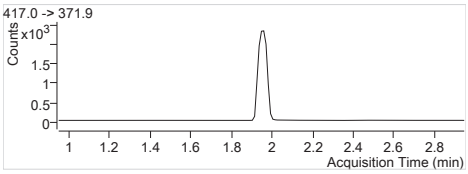

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: Sample



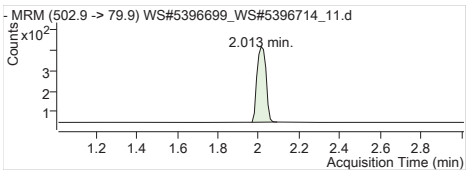



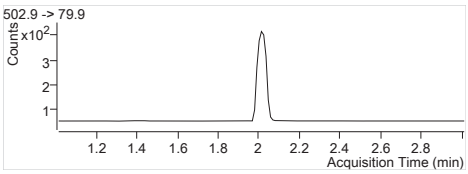

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Sample



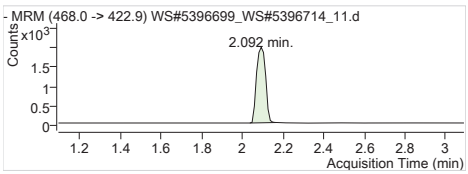



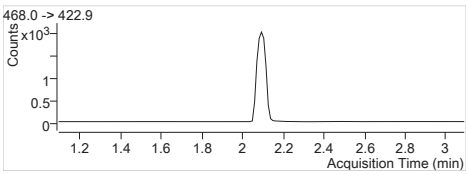

**MPFOA** Internal Standard
RT (Exp. RT): 1.959 (1.948)
Concentration: 1 µg/L
Sample type: Sample



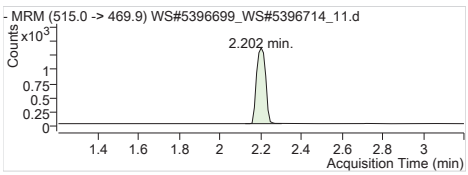



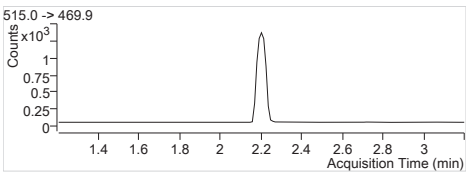

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Sample



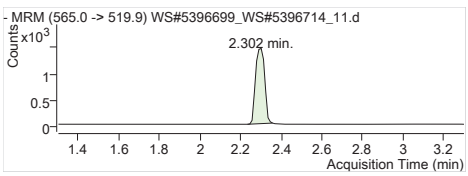



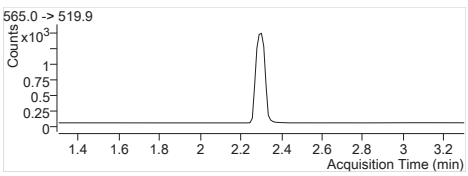

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Sample



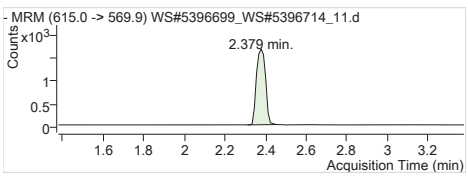



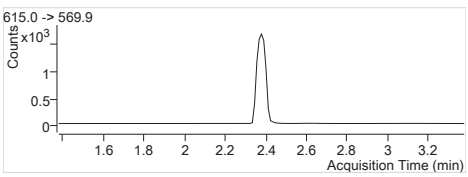

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



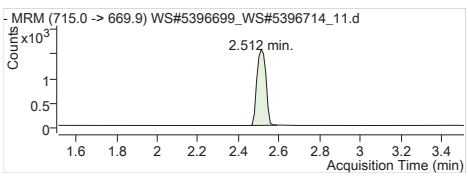



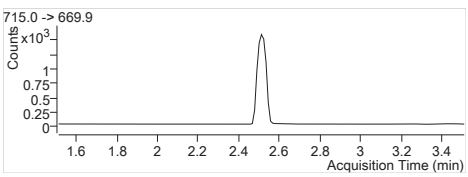

**MPFUnA** Internal Standard
RT (Exp. RT): 2.302 (2.302)
Concentration: 1 µg/L
Sample type: Sample



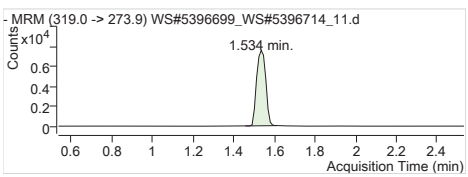



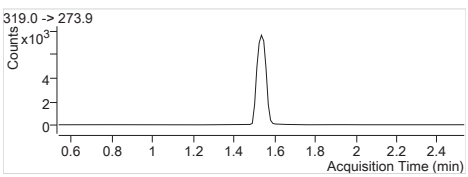

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Sample



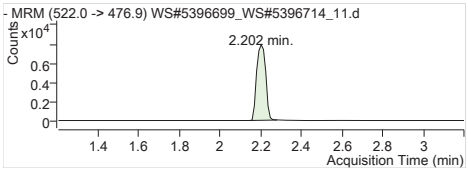



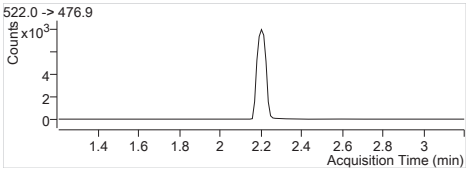

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Sample



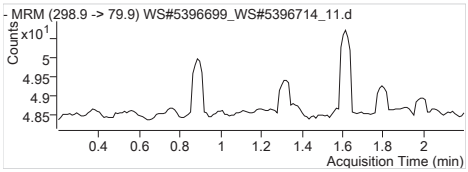



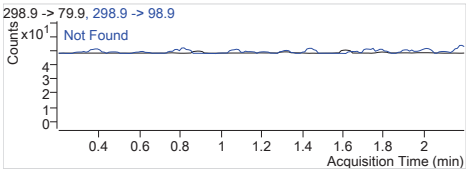

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Sample



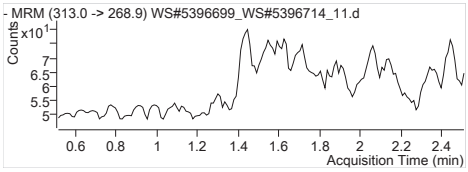



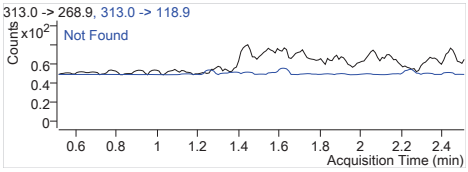

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Sample



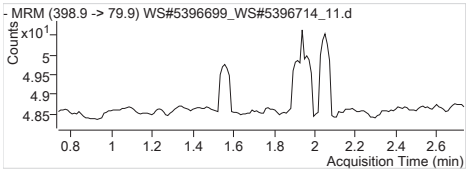



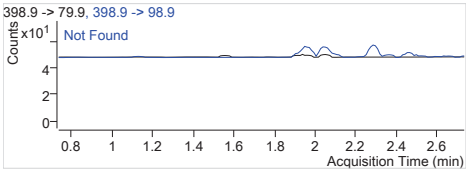

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.199)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



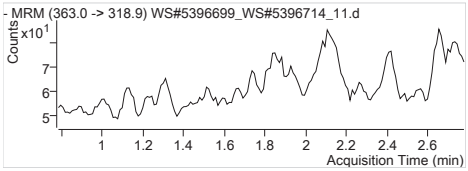



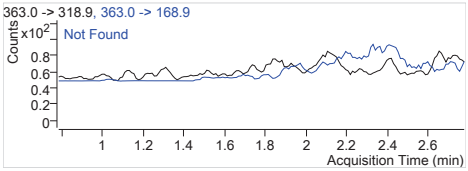

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.512)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



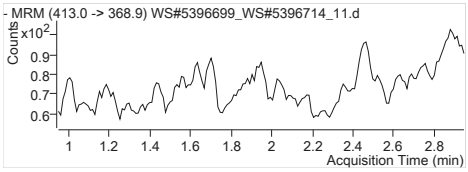



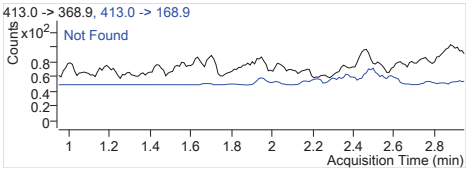

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.735)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



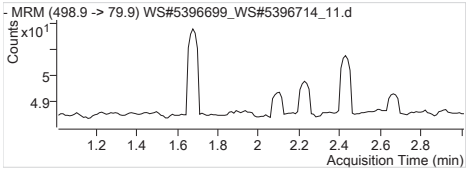



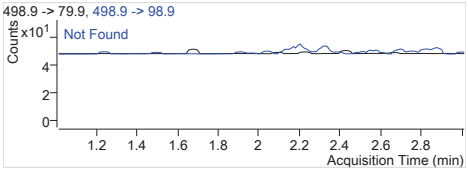

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.781)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



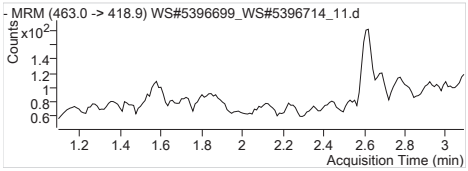



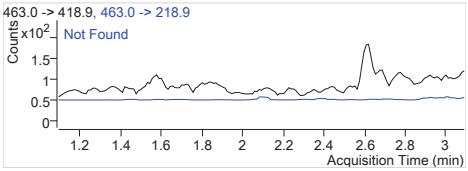

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.948)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



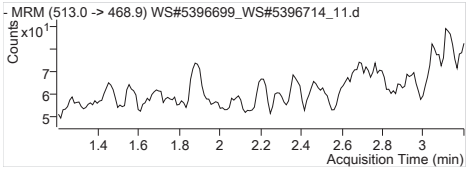



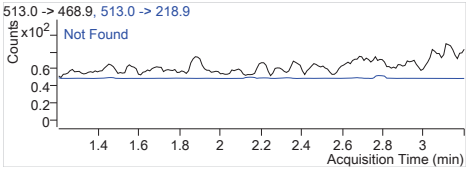

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 0.000 (2.013)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



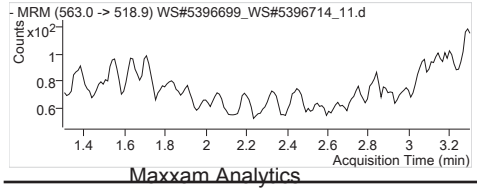



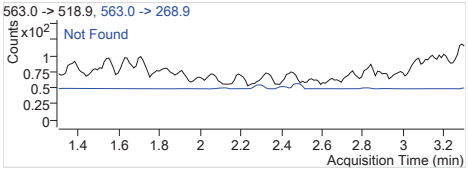

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.092)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



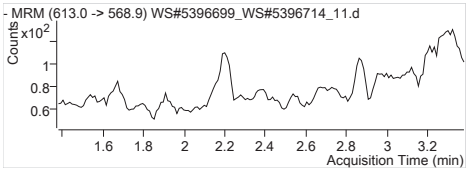



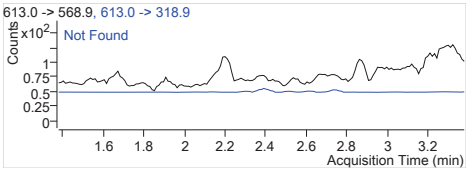

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.203)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



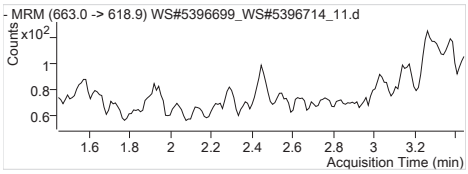



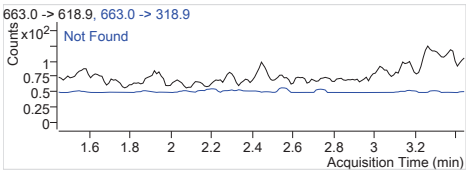

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.302)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



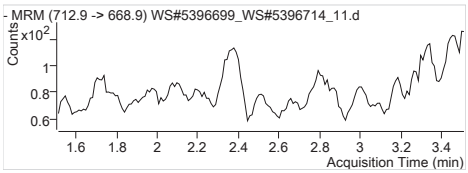



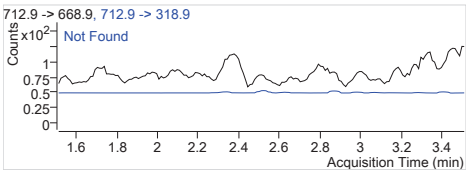

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 0.000 (2.379) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



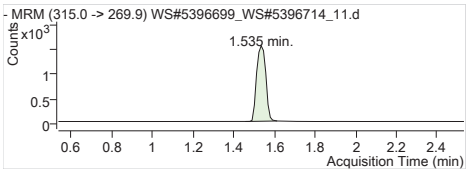



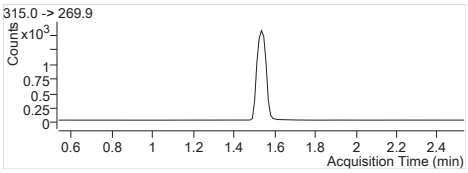

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 0.000 (2.445) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



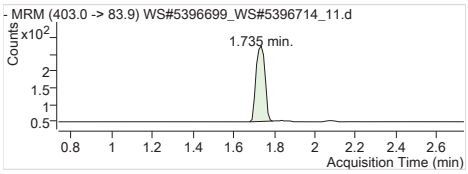



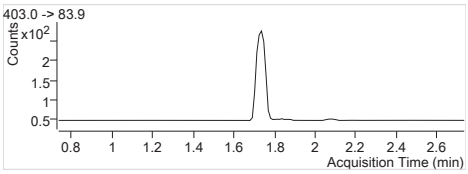

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 0.000 (2.512) |
| Calc. conc. | N.D. |
| Area ratio: | 0 |
| Sample type: | Sample |



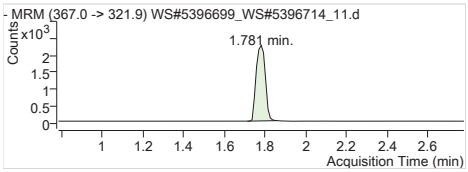



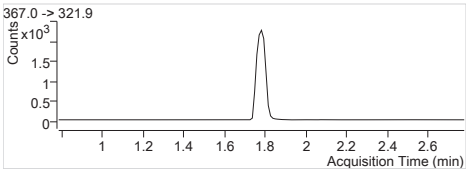

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 85.88 µg/L |
| Area ratio: | 0.20226 |
| Sample type: | Sample |



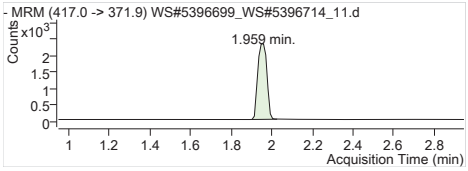



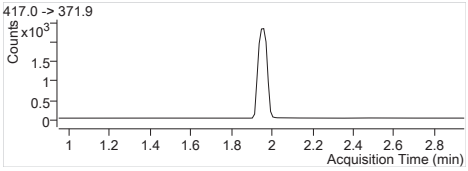

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 53.63 µg/L |
| Area ratio: | 0.02944 |
| Sample type: | Sample |



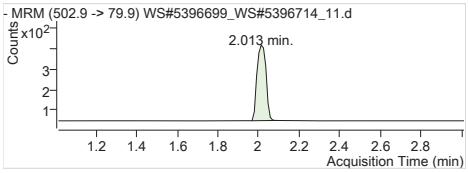



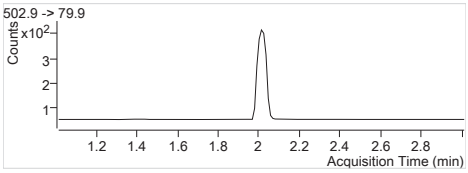

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 105.35 µg/L |
| Area ratio: | 0.29605 |
| Sample type: | Sample |



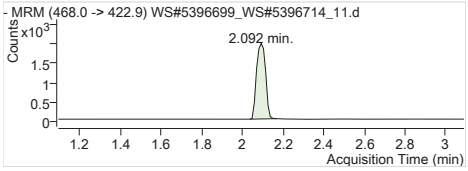



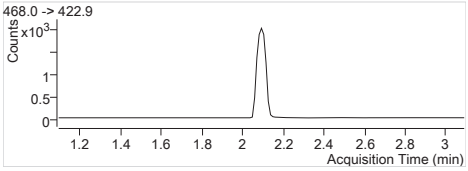

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.959 (1.948) |
| Calc. conc. | 113.73 µg/L |
| Area ratio: | 0.30340 |
| Sample type: | Sample |



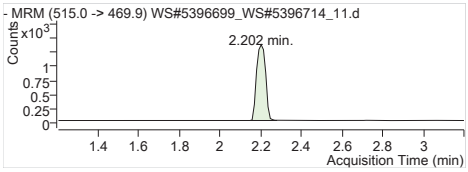



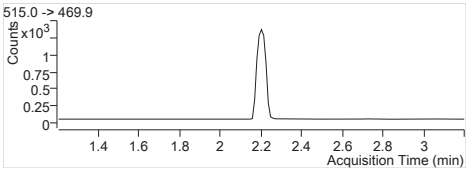

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 77.63 µg/L |
| Area ratio: | 0.04786 |
| Sample type: | Sample |



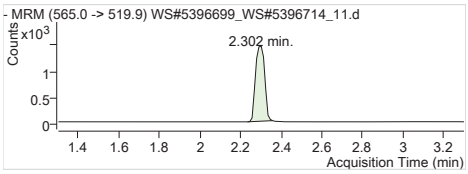



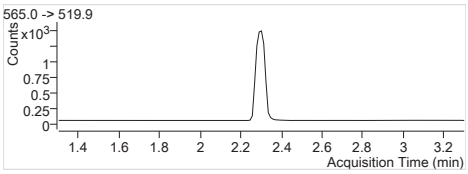

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 103.36 µg/L |
| Area ratio: | 0.25727 |
| Sample type: | Sample |



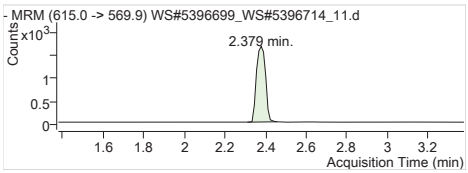



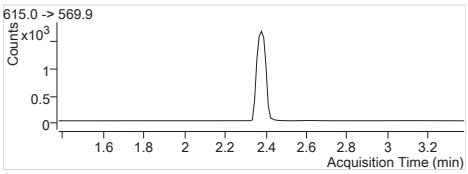

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 93.54 µg/L
Area ratio: 0.16986
Sample type: Sample



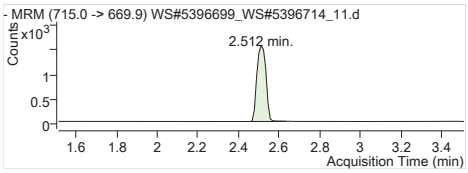



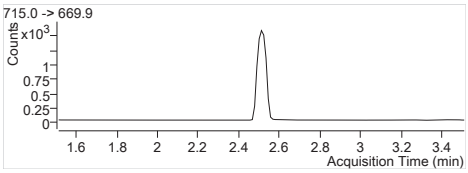

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 78.48 µg/L
Area ratio: 0.18450
Sample type: Sample



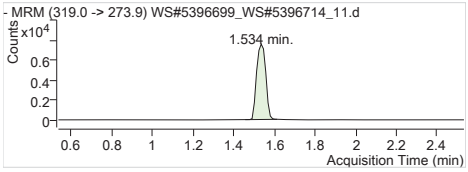



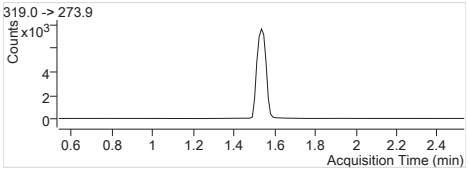

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 69.03 µg/L
Area ratio: 0.21125
Sample type: Sample



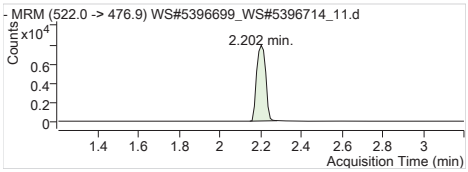



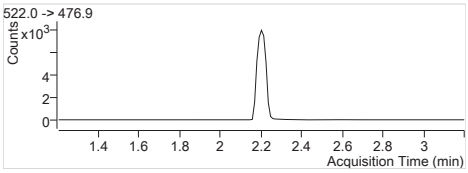

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 72.63 µg/L
Area ratio: 0.19648
Sample type: Sample




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 2.32 µg/L
Area ratio: 0
Sample type: Sample




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 2.40 µg/L
Area ratio: 0
Sample type: Sample

# Quantitation Results

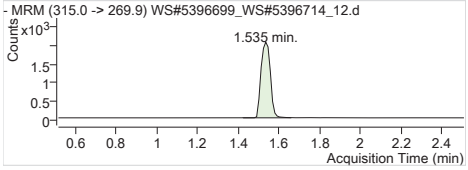
Agilent Technologies

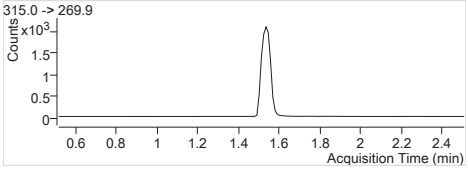
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5396699:SPIKE** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_12.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B2 |
| **Acq. Date** | 2018/02/15 5:05:10 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

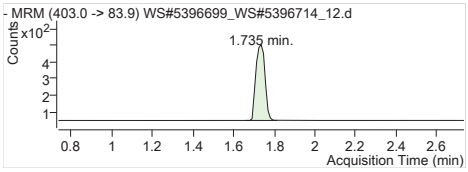
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6544 | 1.53 | 1 µg/L | | |
| MPFHxS | 1424 | 1.74 | 1 µg/L | | |
| MPFHpA | 8210 | 1.78 | 1 µg/L | | |
| MPFOA | 7010 | 1.95 | 1 µg/L | | |
| MPFOS | 1604 | 2.01 | 1 µg/L | | |
| MPFNA | 6737 | 2.09 | 1 µg/L | | |
| MPFDA | 4891 | 2.20 | 1 µg/L | | |
| MPFUnA | 6150 | 2.29 | 1 µg/L | | |
| MPFDoA | 7234 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6642 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 24933 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 24971 | 2.20 | 1 µg/L | | |

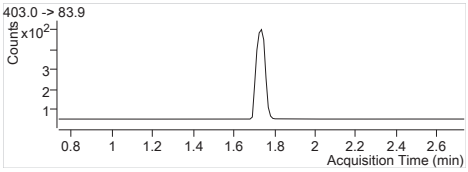
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 16152 | 1.20 | 20.80 | 0.39 µg/L | 78.85 |
| PFHxA 1 | 60497 | 1.53 | 20.80 | 0.41 µg/L | 82.19 |
| PFHxS 1 | 16757 | 1.74 | 20.80 | 0.42 µg/L | 83.96 |
| PFHpA 1 | 77265 | 1.78 | 20.80 | 0.39 µg/L | 78.16 |
| PFOA 1 | 82898 | 1.96 | 20.80 | 0.46 µg/L | 91.78 |
| PFOS 1 | 16042 | 2.01 | 20.80 | 0.44 µg/L | 88.48 |
| PFNA 1 | 65984 | 2.09 | 20.80 | 0.42 µg/L | 84.22 |
| PFDA 1 | 64092 | 2.20 | 20.80 | 0.43 µg/L | 86.20 |
| PFUnA 1 | 66925 | 2.30 | 20.80 | 0.44 µg/L | 87.79 |
| PFDoA 1 | 76989 | 2.38 | 20.80 | 0.44 µg/L | 89.12 |
| PFTrDA 1 | 79813 | 2.44 | 20.80 | 0.43 µg/L | 86.30 |
| PFTeDA 1 | 55465 | 2.51 | 20.80 | 0.38 µg/L | 75.59 |
| 13C2-PFHxA | 6456 | 1.53 | 100.00 | 109.94 µg/L | 109.94 |
| 18O2-PFHxS | 1424 | 1.74 | 100.00 | 104.03 µg/L | 104.03 |
| 13C4-PFHpA | 8210 | 1.78 | 100.00 | 117.17 µg/L | 117.17 |
| 13C4-PFOA | 7010 | 1.95 | 100.00 | 105.39 µg/L | 105.39 |
| 13C4-PFOS | 1604 | 2.01 | 100.00 | 104.34 µg/L | 104.34 |
| 13C5-PFNA | 6737 | 2.09 | 100.00 | 108.56 µg/L | 108.56 |
| 13C2-PFDA | 4888 | 2.20 | 100.00 | 107.80 µg/L | 107.80 |
| 13C2-PFUnA | 6150 | 2.29 | 100.00 | 104.76 µg/L | 104.76 |
| 13C2-PFDoA | 7234 | 2.38 | 100.00 | 94.66 µg/L | 94.66 |
| 13C2-PFTeDA | 6726 | 2.51 | 100.00 | 99.57 µg/L | 99.57 |
| 13C6-PFHxA | 24933 | 1.53 | 100.00 | 2.44 µg/L | 101.68 |
| 13C9-PFDA | 24971 | 2.20 | 100.00 | 2.46 µg/L | 102.57 |



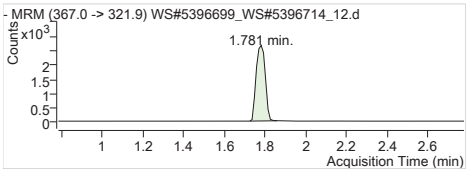



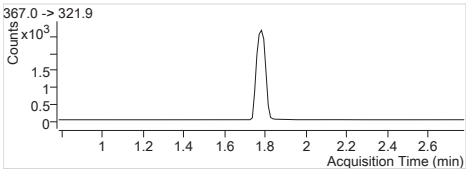

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | QC |



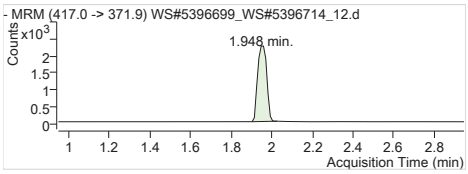



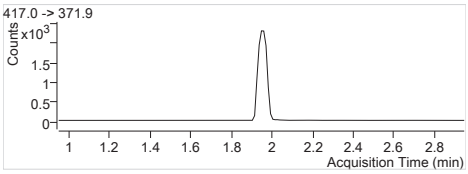

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: QC



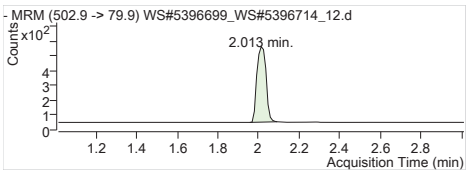



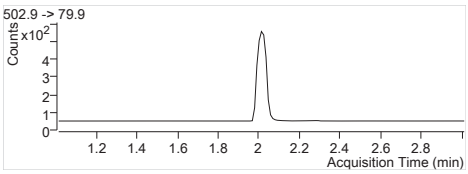

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: QC



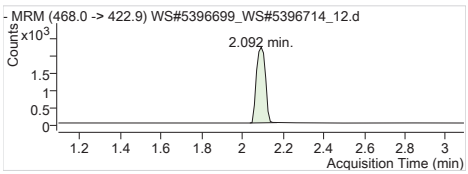



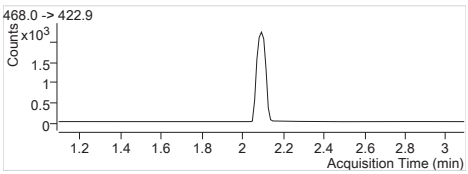

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: QC



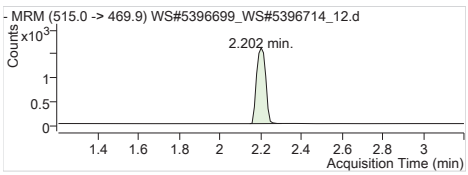



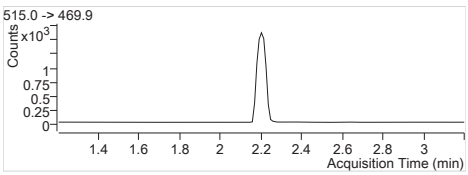

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: QC



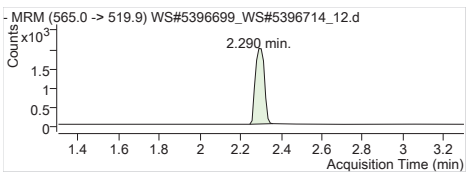



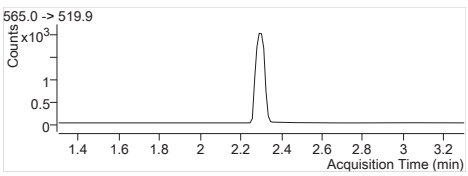

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: QC



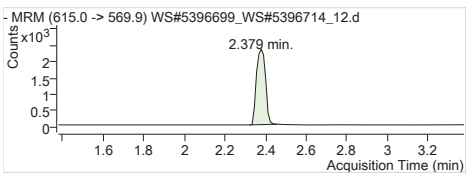



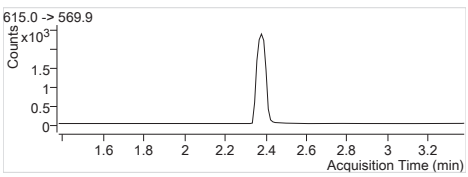

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: QC



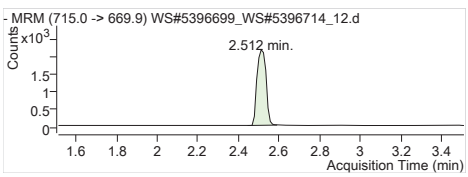



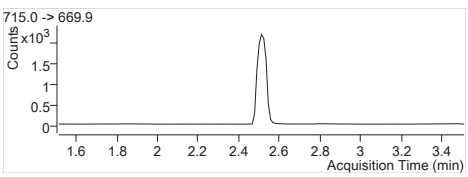

**MPFUnA** Internal Standard
RT (Exp. RT): 2.290 (2.302)
Concentration: 1 µg/L
Sample type: QC



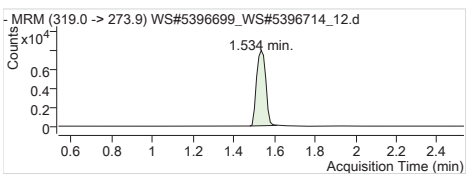



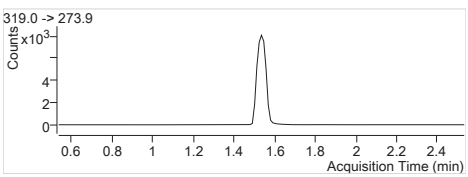

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: QC



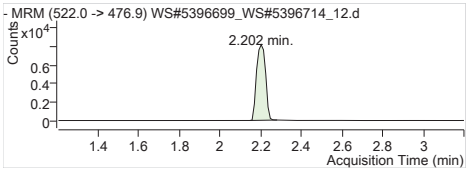



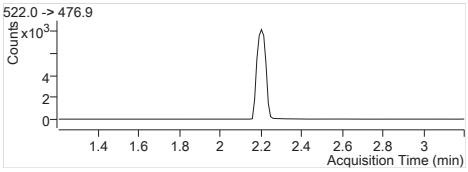

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: QC



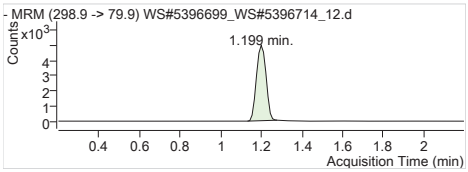



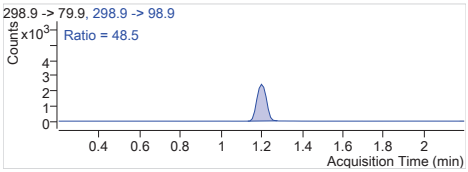

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: QC



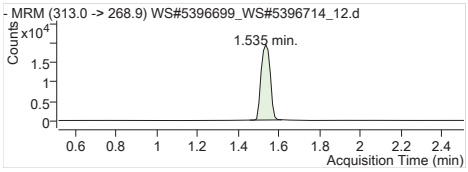



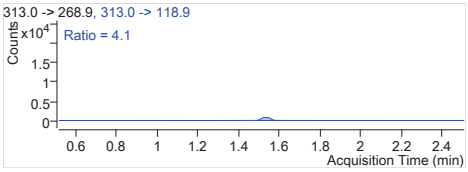

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: QC



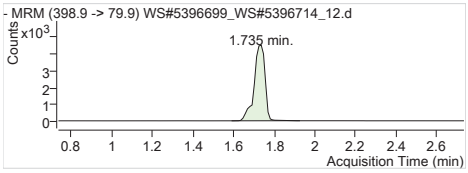



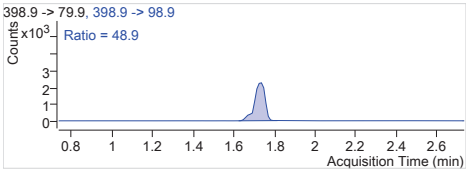

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.199 (1.199)
Calc. conc. 0.39 µg/L
Area ratio: 11.34270
Sample type: QC



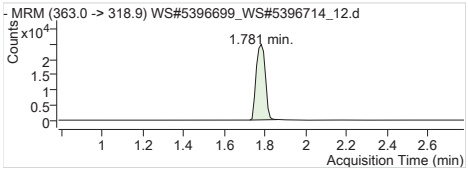



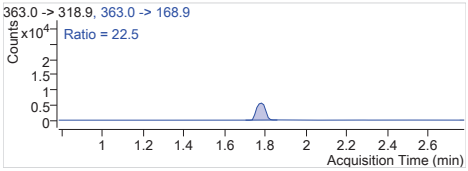

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 0.41 µg/L
Area ratio: 9.24465
Sample type: QC



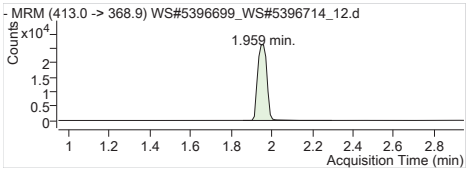



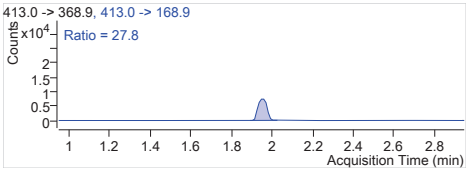

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.735 (1.735)
Calc. conc. 0.42 µg/L
Area ratio: 11.76756
Sample type: QC



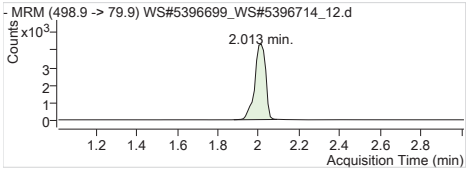



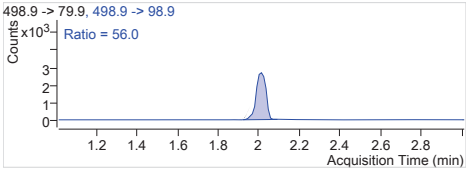

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 0.39 µg/L
Area ratio: 9.41108
Sample type: QC



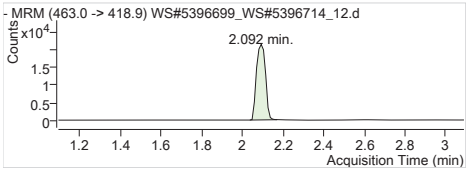



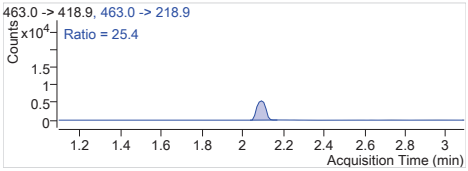

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.959 (1.948)
Calc. conc. 0.46 µg/L
Area ratio: 11.82568
Sample type: QC



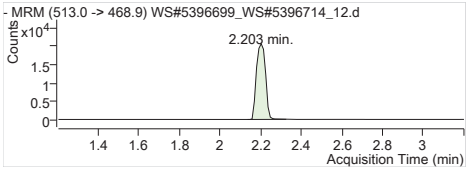



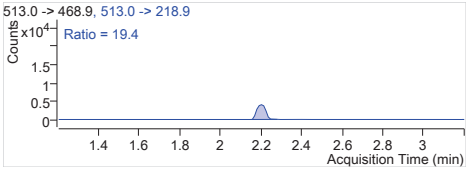

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 0.44 µg/L
Area ratio: 10.00125
Sample type: QC



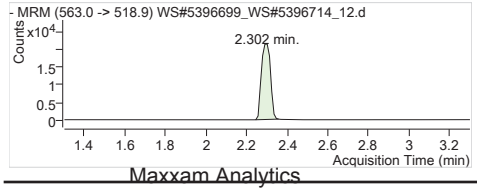



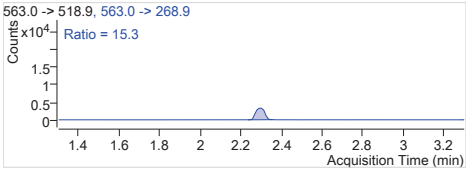

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 0.42 µg/L
Area ratio: 9.79427
Sample type: QC



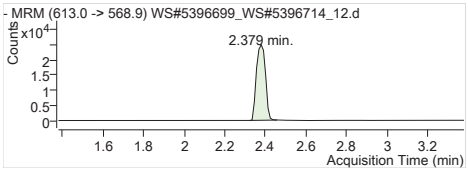



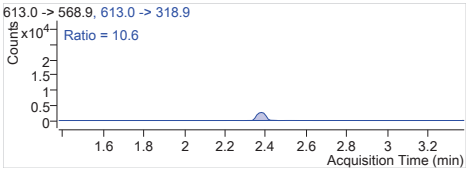

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 0.43 µg/L
Area ratio: 13.10407
Sample type: QC



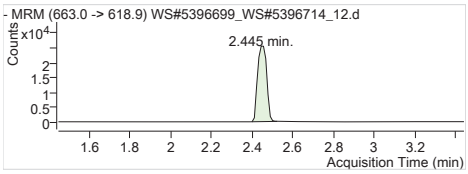



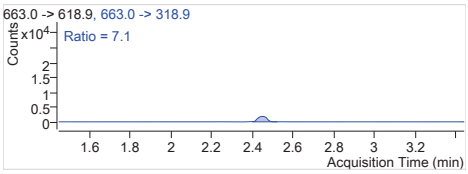

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 0.44 µg/L
Area ratio: 10.88211
Sample type: QC



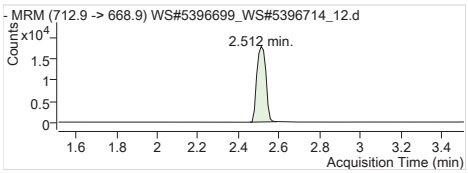



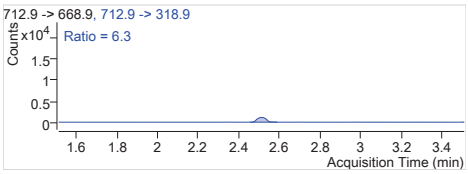

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.379 (2.379) |
| Calc. conc. | 0.44 µg/L |
| Area ratio: | 10.64266 |
| Sample type: | QC |



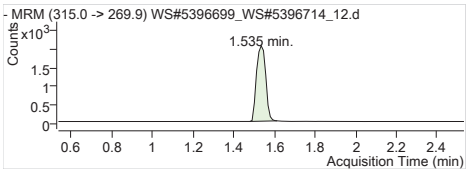



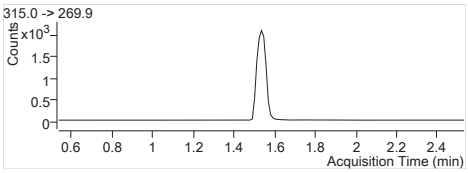

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.445 (2.445) |
| Calc. conc. | 0.43 µg/L |
| Area ratio: | 12.01641 |
| Sample type: | QC |



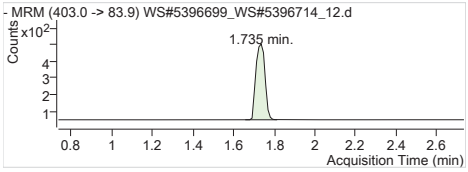



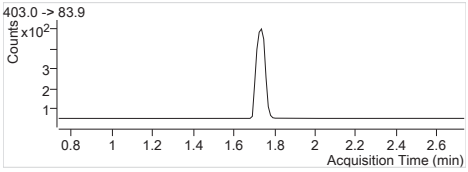

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.512 (2.512) |
| Calc. conc. | 0.38 µg/L |
| Area ratio: | 8.35065 |
| Sample type: | QC |



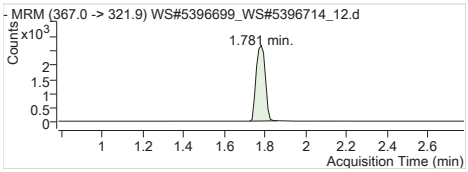



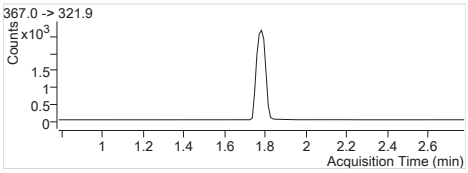

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 109.94 µg/L |
| Area ratio: | 0.25893 |
| Sample type: | QC |



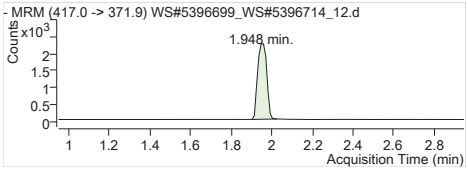



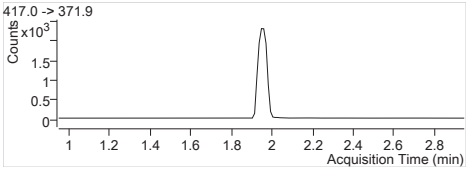

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 104.03 µg/L |
| Area ratio: | 0.05711 |
| Sample type: | QC |



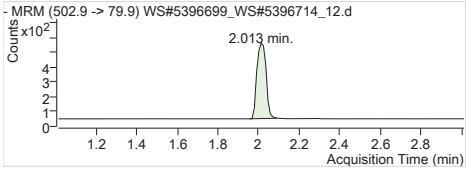



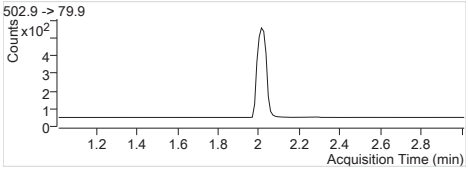

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 117.17 µg/L |
| Area ratio: | 0.32928 |
| Sample type: | QC |



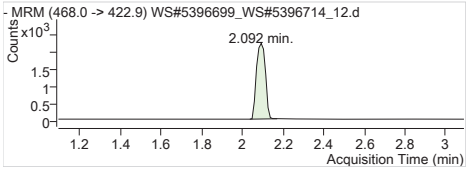



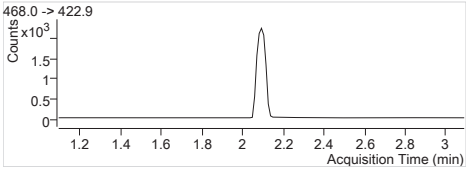

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.948 (1.948) |
| Calc. conc. | 105.39 µg/L |
| Area ratio: | 0.28115 |
| Sample type: | QC |



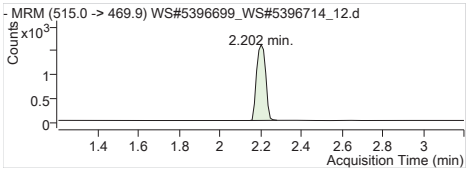



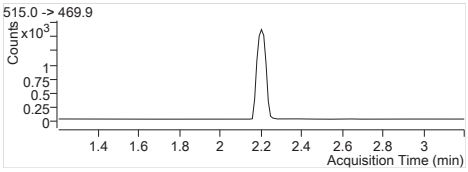

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 104.34 µg/L |
| Area ratio: | 0.06433 |
| Sample type: | QC |



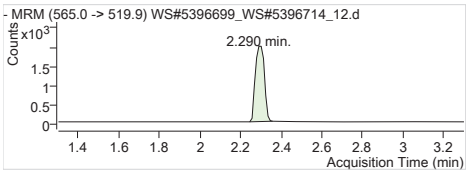



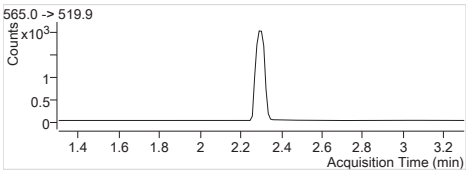

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 108.56 µg/L |
| Area ratio: | 0.27020 |
| Sample type: | QC |



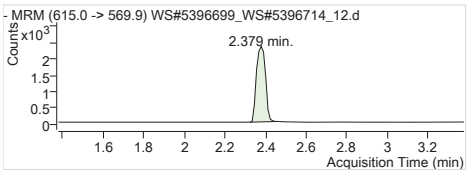



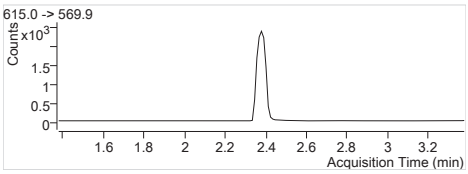

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 107.80 µg/L
Area ratio: 0.19575
Sample type: QC



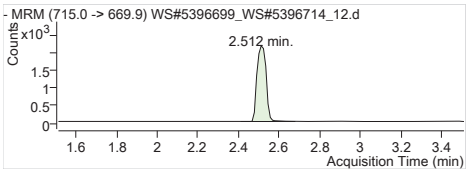



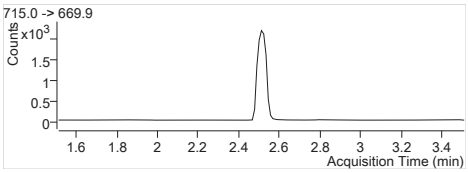

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.290 (2.302)
Calc. conc. 104.76 µg/L
Area ratio: 0.24629
Sample type: QC



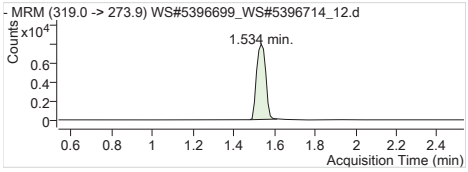



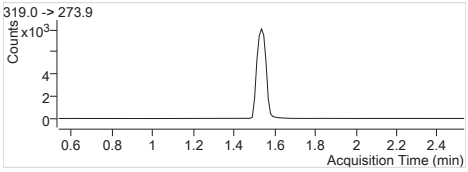

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 94.66 µg/L
Area ratio: 0.28970
Sample type: QC



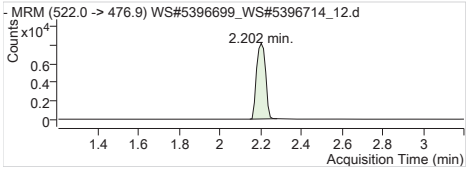



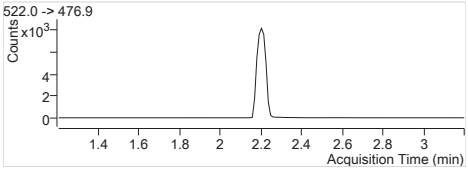

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 99.57 µg/L
Area ratio: 0.26935
Sample type: QC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 2.44 µg/L
Area ratio: 0
Sample type: QC



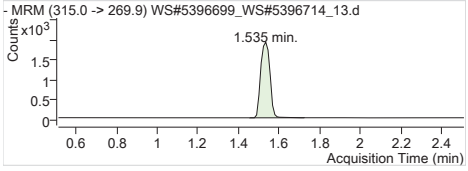

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 2.46 µg/L
Area ratio: 0
Sample type: QC

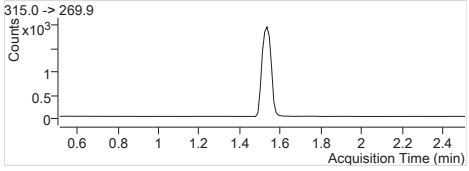
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5396699:MTRX SPK** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_13.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B3 |
| **Acq. Date** | 2018/02/15 5:10:06 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | FZA786 | | |

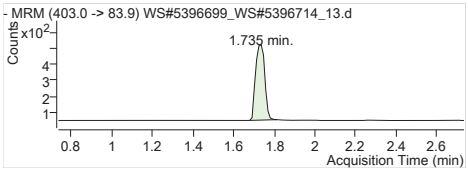
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6034 | 1.53 | 1 µg/L | | |
| MPFHxS | 1490 | 1.74 | 1 µg/L | | |
| MPFHpA | 7656 | 1.78 | 1 µg/L | | |
| MPFOA | 7451 | 1.95 | 1 µg/L | | |
| MPFOS | 1701 | 2.01 | 1 µg/L | | |
| MPFNA | 6718 | 2.09 | 1 µg/L | | |
| MPFDA | 5049 | 2.20 | 1 µg/L | | |
| MPFUnA | 6554 | 2.30 | 1 µg/L | | |
| MPFDoA | 7772 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6442 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 21172 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 23199 | 2.20 | 1 µg/L | | |

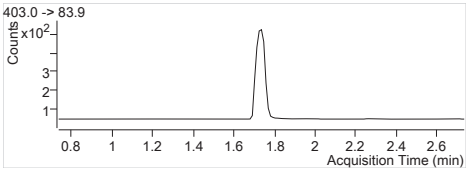
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 17418 | 1.20 | 20.80 | 0.41 µg/L | 81.21 |
| PFHxA 1 | 59695 | 1.53 | 20.80 | 0.44 µg/L | 87.82 |
| PFHxS 1 | 17086 | 1.72 | 20.80 | 0.41 µg/L | 81.87 |
| PFHpA 1 | 77089 | 1.78 | 20.80 | 0.42 µg/L | 83.54 |
| PFOA 1 | 95015 | 1.95 | 20.80 | 0.49 µg/L | 98.87 |
| PFOS 1 | 17882 | 2.00 | 20.80 | 0.46 µg/L | 92.93 |
| PFNA 1 | 63174 | 2.09 | 20.80 | 0.40 µg/L | 80.94 |
| PFDA 1 | 66050 | 2.20 | 20.80 | 0.43 µg/L | 86.05 |
| PFUnA 1 | 65750 | 2.30 | 20.80 | 0.40 µg/L | 81.03 |
| PFDoA 1 | 81702 | 2.38 | 20.80 | 0.44 µg/L | 88.04 |
| PFTrDA 1 | 83840 | 2.44 | 20.80 | 0.47 µg/L | 93.37 |
| PFTeDA 1 | 61482 | 2.51 | 20.80 | 0.43 µg/L | 86.23 |
| 13C2-PFHxA | 5981 | 1.53 | 100.00 | 119.94 µg/L | 119.94 |
| 18O2-PFHxS | 1490 | 1.74 | 100.00 | 128.18 µg/L | 128.18 |
| 13C4-PFHpA | 7656 | 1.78 | 100.00 | 128.68 µg/L | 128.68 |
| 13C4-PFOA | 7451 | 1.95 | 100.00 | 131.92 µg/L | 131.92 |
| 13C4-PFOS | 1701 | 2.01 | 100.00 | 130.30 µg/L | 130.30 |
| 13C5-PFNA | 6719 | 2.09 | 100.00 | 127.51 µg/L | 127.51 |
| 13C2-PFDA | 4981 | 2.20 | 100.00 | 118.24 µg/L | 118.24 |
| 13C2-PFUnA | 6554 | 2.30 | 100.00 | 120.17 µg/L | 120.17 |
| 13C2-PFDoA | 7772 | 2.38 | 100.00 | 109.47 µg/L | 109.47 |
| 13C2-PFTeDA | 6467 | 2.51 | 100.00 | 103.05 µg/L | 103.05 |
| 13C6-PFHxA | 21172 | 1.53 | 100.00 | 2.07 µg/L | 86.34 |
| 13C9-PFDA | 23199 | 2.20 | 100.00 | 2.29 µg/L | 95.29 |



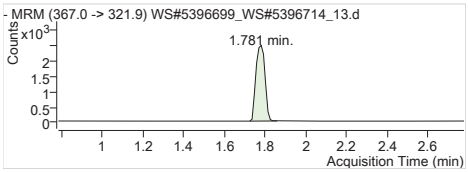



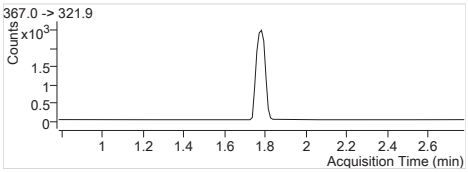

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | QC |



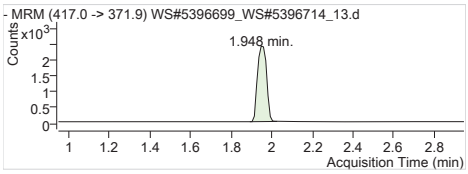



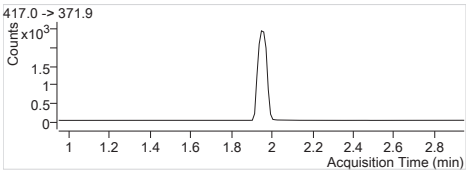

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: QC



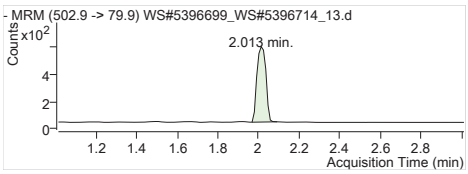



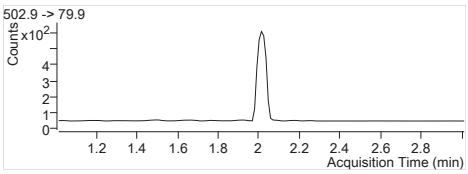

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: QC



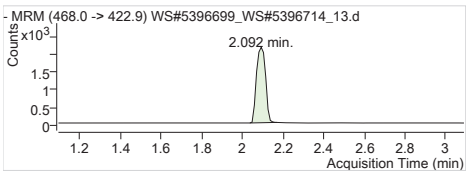



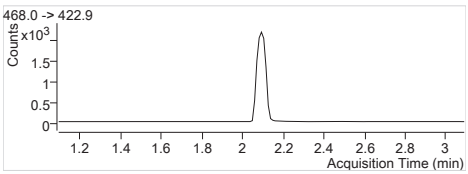

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: QC



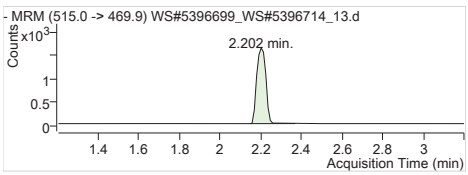



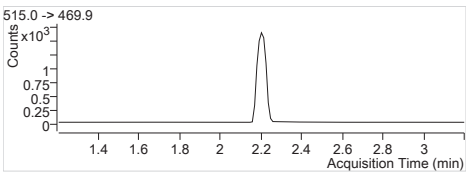

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: QC



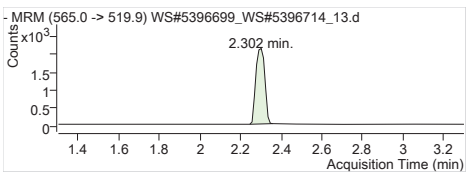



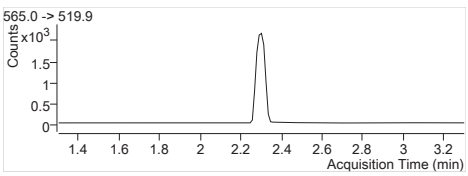

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: QC



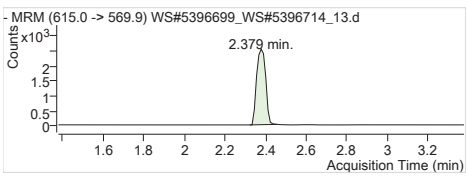



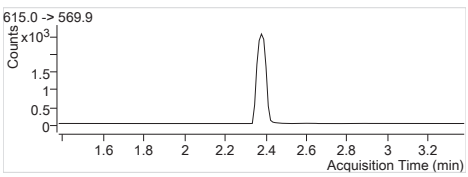

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: QC



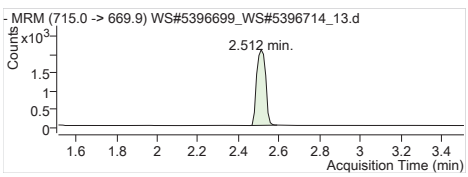



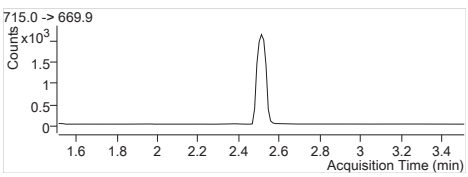

**MPFUnA** Internal Standard
RT (Exp. RT): 2.302 (2.302)
Concentration: 1 µg/L
Sample type: QC



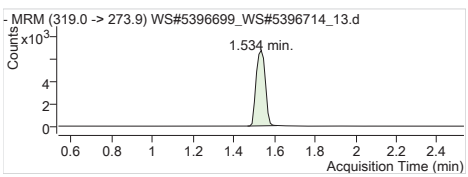



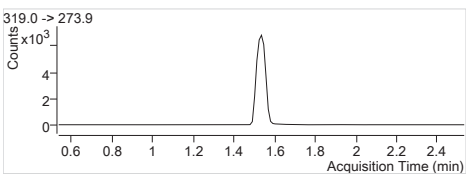

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: QC



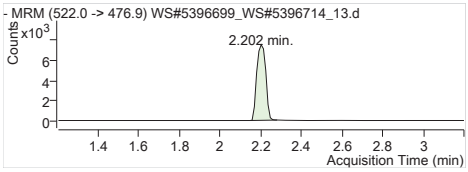



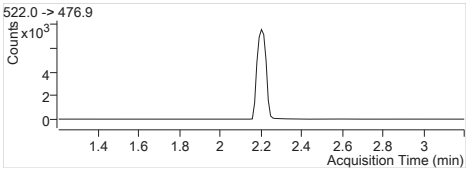

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: QC



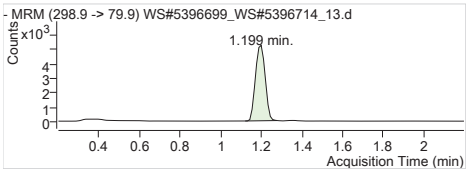



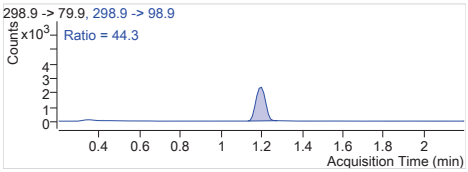

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: QC



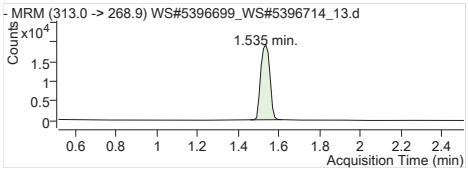



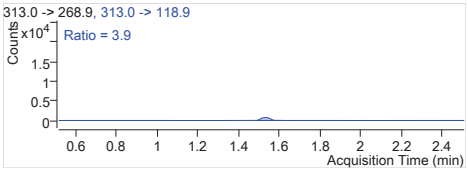

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: QC



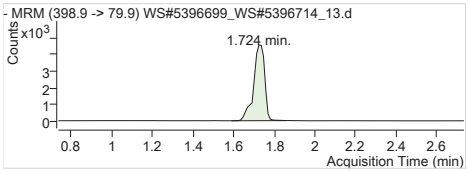



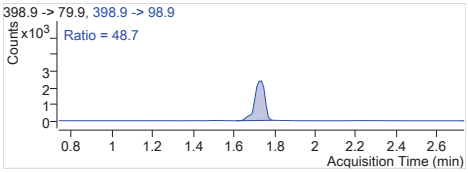

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.199 (1.199)
Calc. conc. 0.41 µg/L
Area ratio: 11.68993
Sample type: QC



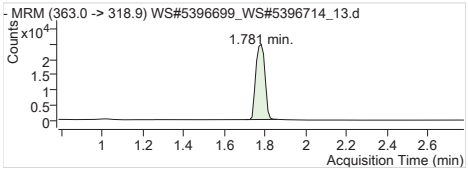



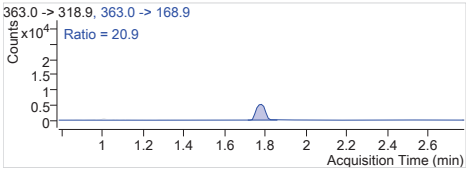

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 0.44 µg/L
Area ratio: 9.89311
Sample type: QC



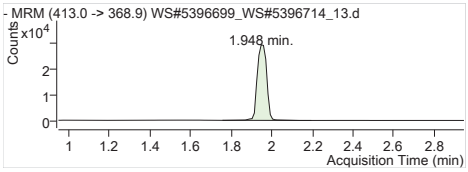



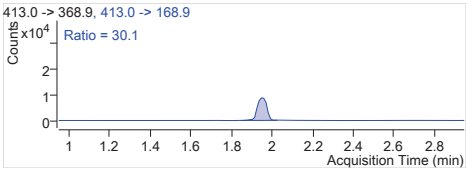

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.724 (1.735)
Calc. conc. 0.41 µg/L
Area ratio: 11.46711
Sample type: QC



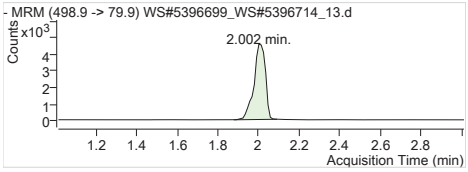



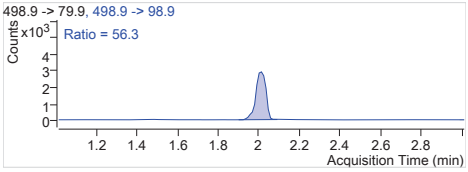

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 0.42 µg/L
Area ratio: 10.06910
Sample type: QC



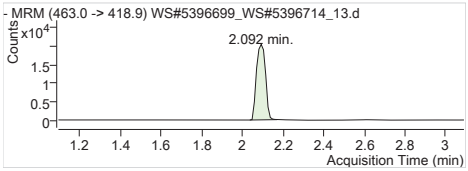



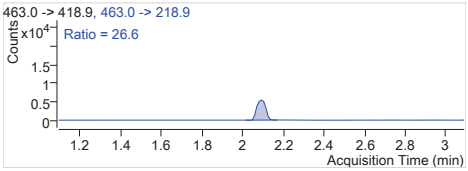

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.948 (1.948)
Calc. conc. 0.49 µg/L
Area ratio: 12.75198
Sample type: QC



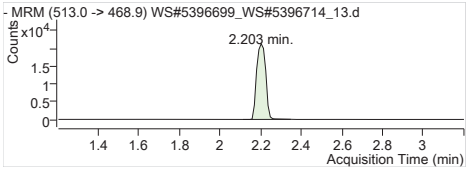



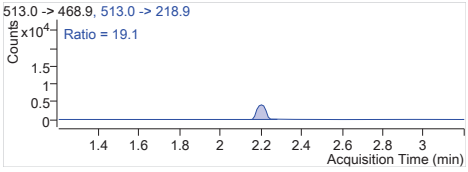

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.002 (2.013)
Calc. conc. 0.46 µg/L
Area ratio: 10.51264
Sample type: QC



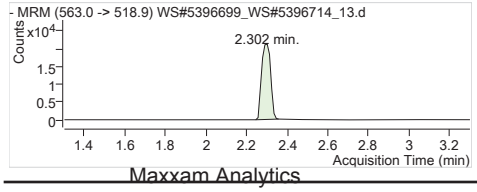



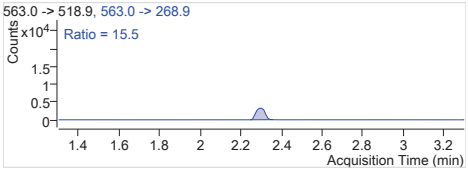

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 0.40 µg/L
Area ratio: 9.40369
Sample type: QC



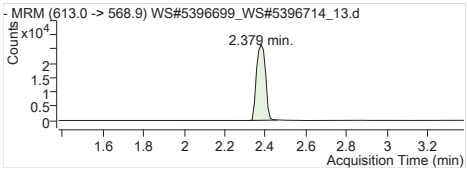



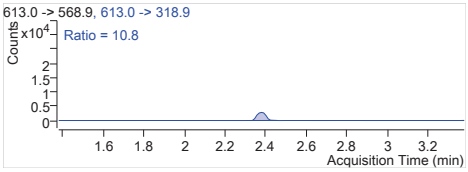

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 0.43 µg/L
Area ratio: 13.08180
Sample type: QC



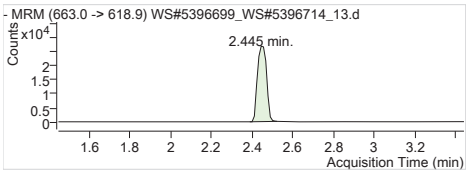



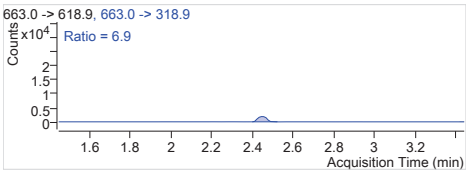

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 0.40 µg/L
Area ratio: 10.03204
Sample type: QC



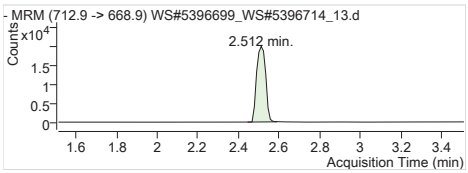



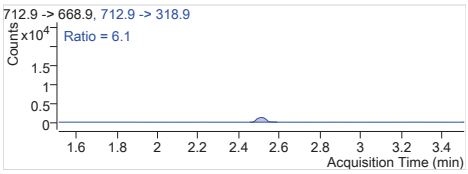

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 0.44 µg/L
Area ratio: 10.51235
Sample type: QC



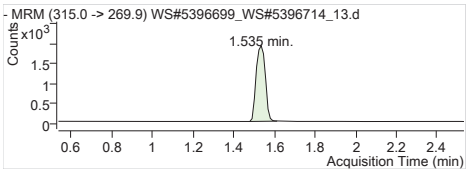



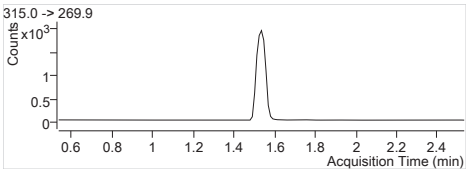

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.445 (2.445)
Calc. conc. 0.47 µg/L
Area ratio: 13.01459
Sample type: QC



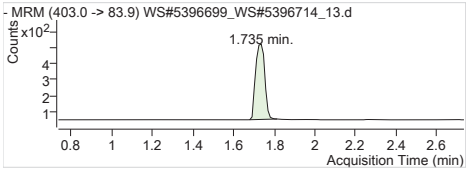



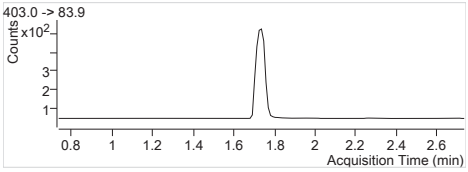

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 0.43 µg/L
Area ratio: 9.54393
Sample type: QC



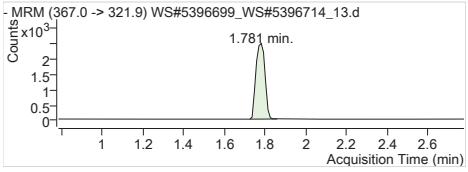



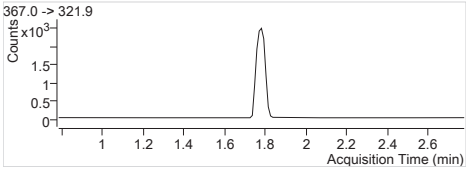

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.535 (1.535)
Calc. conc. 119.94 µg/L
Area ratio: 0.28250
Sample type: QC



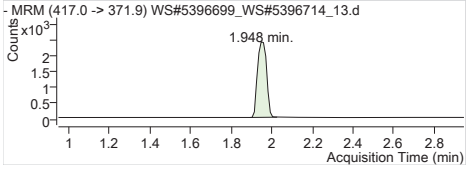



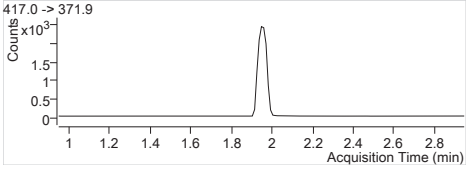

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.735 (1.735)
Calc. conc. 128.18 µg/L
Area ratio: 0.07038
Sample type: QC



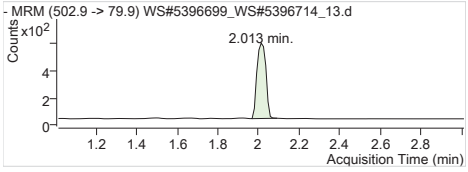



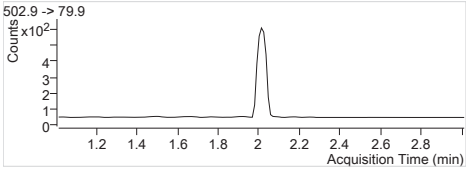

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 128.68 µg/L
Area ratio: 0.36161
Sample type: QC



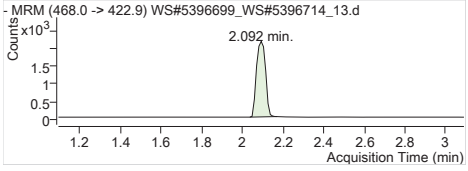



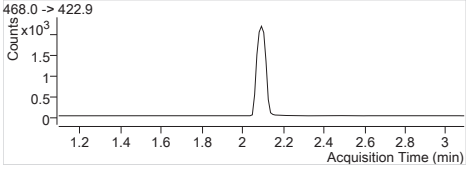

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.948 (1.948)
Calc. conc. 131.92 µg/L
Area ratio: 0.35193
Sample type: QC



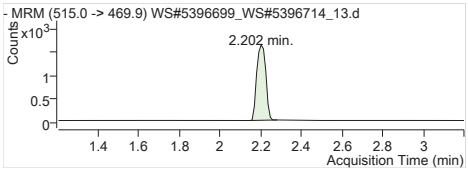



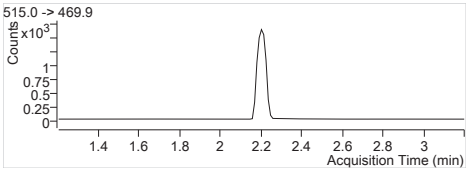

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 130.30 µg/L
Area ratio: 0.08034
Sample type: QC



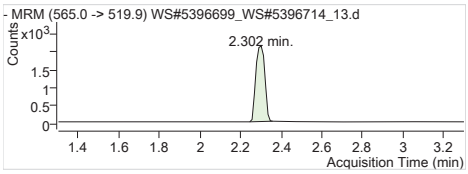



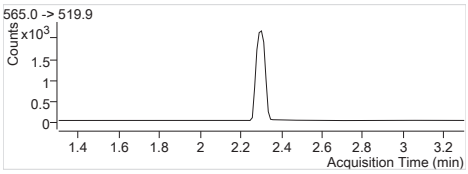

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 127.51 µg/L
Area ratio: 0.31735
Sample type: QC



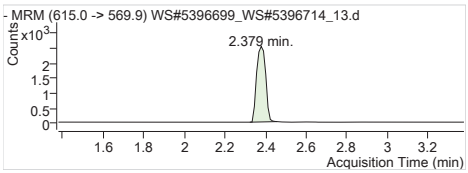



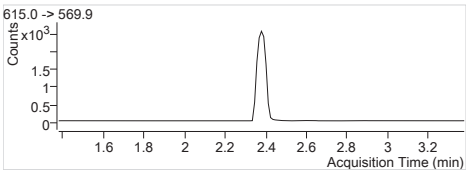

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 118.24 µg/L
Area ratio: 0.21471
Sample type: QC



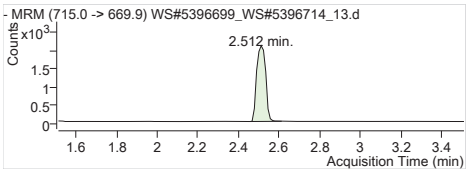



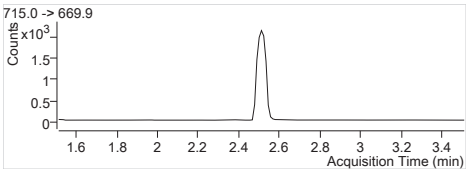

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 120.17 µg/L
Area ratio: 0.28251
Sample type: QC



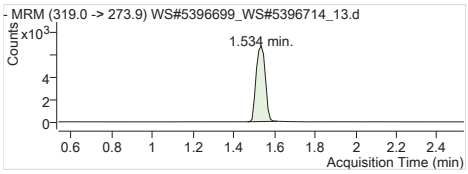



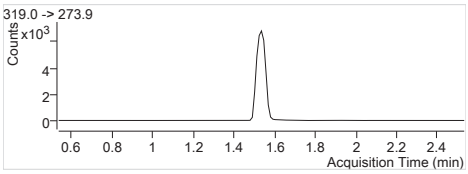

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 109.47 µg/L
Area ratio: 0.33501
Sample type: QC



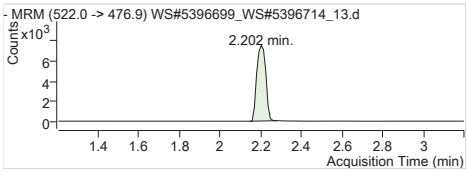



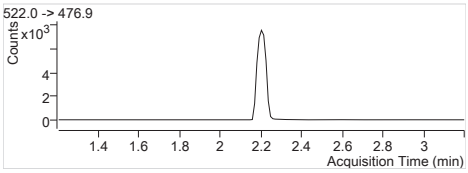

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 103.05 µg/L
Area ratio: 0.27876
Sample type: QC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 2.07 µg/L
Area ratio: 0
Sample type: QC



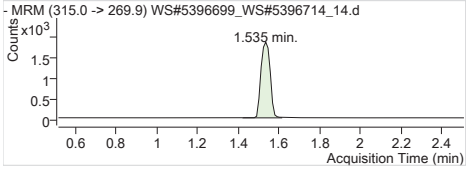

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 2.29 µg/L
Area ratio: 0
Sample type: QC

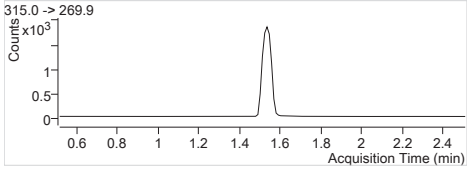
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **5396699:MTRX SPK:D1** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_14.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-B4 |
| **Acq. Date** | 2018/02/15 5:15:02 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | FZA786 | | |

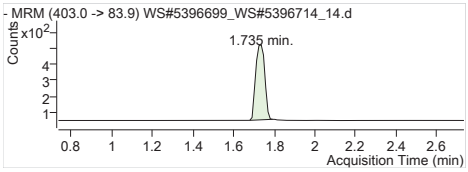
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5719 | 1.53 | 1 µg/L | | |
| MPFHxS | 1468 | 1.74 | 1 µg/L | | |
| MPFHpA | 6693 | 1.78 | 1 µg/L | | |
| MPFOA | 7133 | 1.96 | 1 µg/L | | |
| MPFOS | 1494 | 2.01 | 1 µg/L | | |
| MPFNA | 6110 | 2.09 | 1 µg/L | | |
| MPFDA | 4472 | 2.20 | 1 µg/L | | |
| MPFUnA | 5751 | 2.30 | 1 µg/L | | |
| MPFDoA | 7368 | 2.38 | 1 µg/L | | |
| MPFTeDA | 5714 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 21284 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 23790 | 2.20 | 1 µg/L | | |

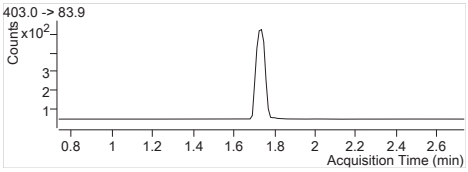
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 16975 | 1.20 | 20.80 | 0.40 µg/L | 80.35 |
| PFHxA 1 | 58265 | 1.53 | 20.80 | 0.45 µg/L | 90.38 |
| PFHxS 1 | 17619 | 1.74 | 20.80 | 0.43 µg/L | 85.60 |
| PFHpA 1 | 75158 | 1.78 | 20.80 | 0.46 µg/L | 93.02 |
| PFOA 1 | 92988 | 1.96 | 20.80 | 0.50 µg/L | 101.05 |
| PFOS 1 | 18014 | 2.01 | 20.80 | 0.53 µg/L | 106.35 |
| PFNA 1 | 64269 | 2.09 | 20.80 | 0.45 µg/L | 90.29 |
| PFDA 1 | 61842 | 2.20 | 20.80 | 0.45 µg/L | 90.92 |
| PFUnA 1 | 66460 | 2.30 | 20.80 | 0.47 µg/L | 93.16 |
| PFDoA 1 | 78446 | 2.38 | 20.80 | 0.45 µg/L | 89.15 |
| PFTrDA 1 | 80464 | 2.44 | 20.80 | 0.50 µg/L | 100.92 |
| PFTeDA 1 | 60196 | 2.51 | 20.80 | 0.47 µg/L | 95.07 |
| 13C2-PFHxA | 5664 | 1.53 | 100.00 | 112.98 µg/L | 112.98 |
| 18O2-PFHxS | 1468 | 1.74 | 100.00 | 125.62 µg/L | 125.62 |
| 13C4-PFHpA | 6693 | 1.78 | 100.00 | 111.90 µg/L | 111.90 |
| 13C4-PFOA | 7133 | 1.96 | 100.00 | 125.63 µg/L | 125.63 |
| 13C4-PFOS | 1494 | 2.01 | 100.00 | 113.84 µg/L | 113.84 |
| 13C5-PFNA | 6111 | 2.09 | 100.00 | 115.36 µg/L | 115.36 |
| 13C2-PFDA | 4432 | 2.20 | 100.00 | 102.59 µg/L | 102.59 |
| 13C2-PFUnA | 5751 | 2.30 | 100.00 | 102.82 µg/L | 102.82 |
| 13C2-PFDoA | 7368 | 2.38 | 100.00 | 101.20 µg/L | 101.20 |
| 13C2-PFTeDA | 5814 | 2.51 | 100.00 | 90.34 µg/L | 90.34 |
| 13C6-PFHxA | 21284 | 1.53 | 100.00 | 2.08 µg/L | 86.80 |
| 13C9-PFDA | 23790 | 2.20 | 100.00 | 2.35 µg/L | 97.71 |



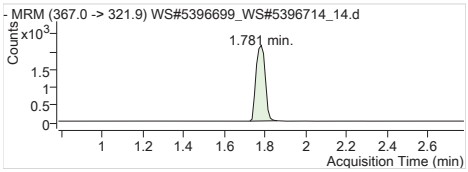



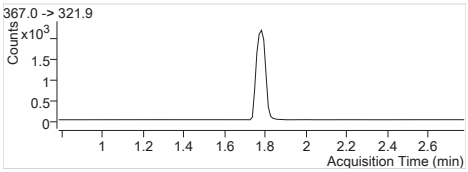

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | QC |



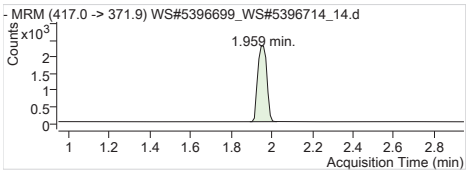



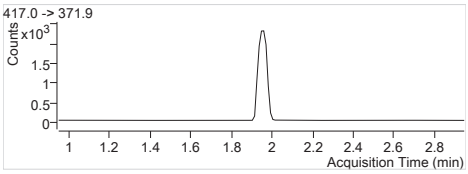

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: QC



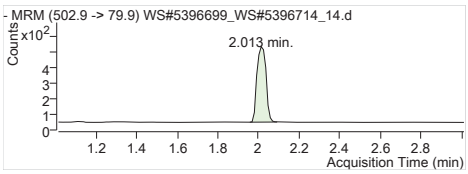



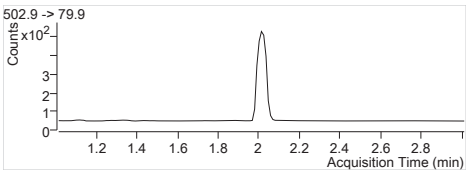

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: QC



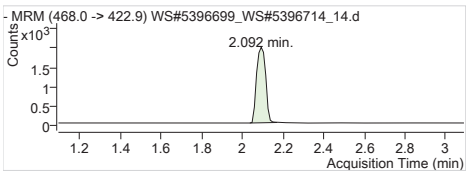



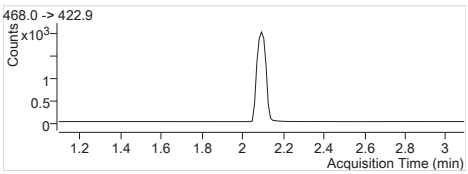

**MPFOA** Internal Standard
RT (Exp. RT): 1.959 (1.948)
Concentration: 1 µg/L
Sample type: QC



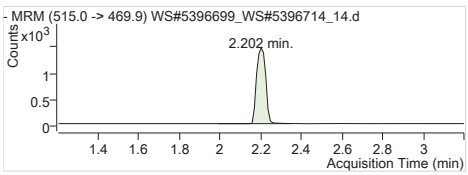



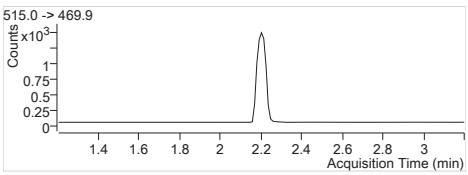

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: QC



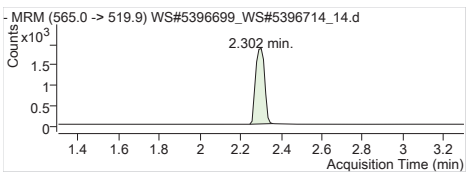



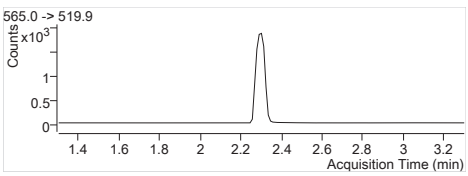

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: QC



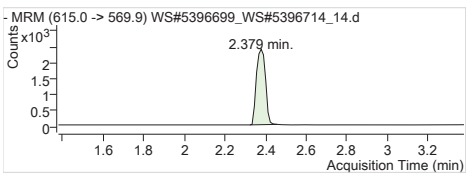



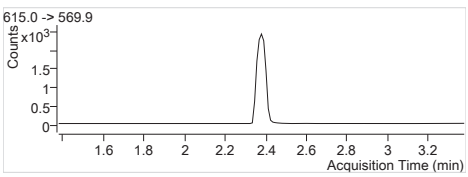

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: QC



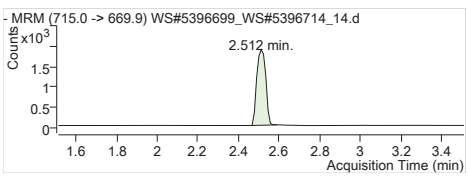



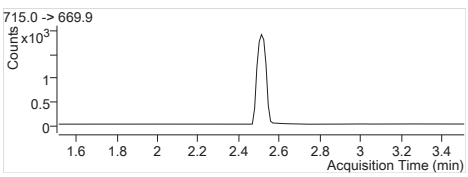

**MPFUnA** Internal Standard
RT (Exp. RT): 2.302 (2.302)
Concentration: 1 µg/L
Sample type: QC



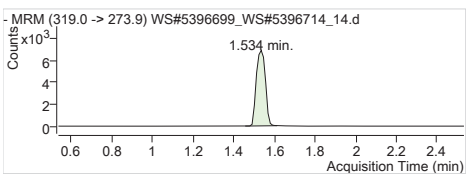



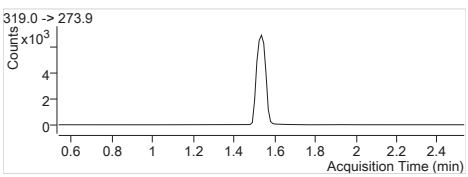

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: QC



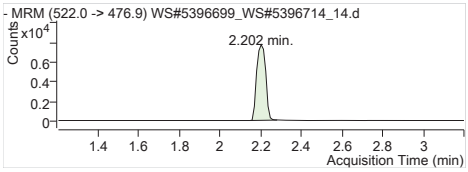



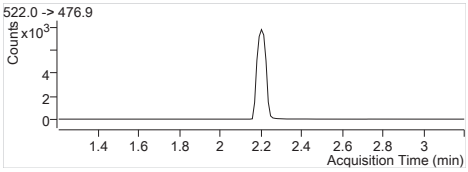

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: QC



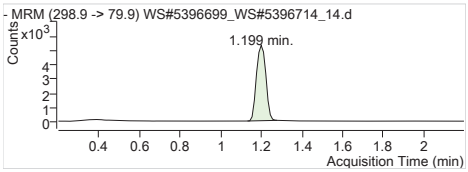



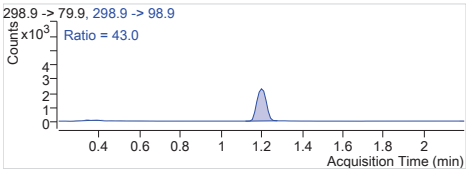

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: QC



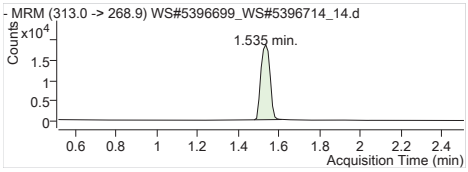



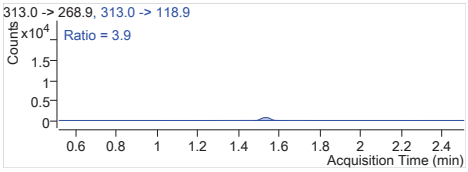

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: QC



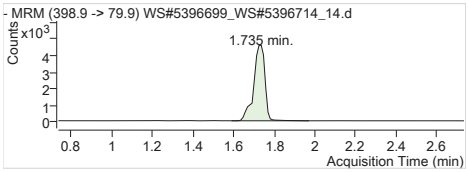



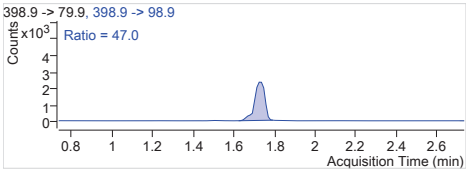

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.199 (1.199)
Calc. conc. 0.40 µg/L
Area ratio: 11.56335
Sample type: QC



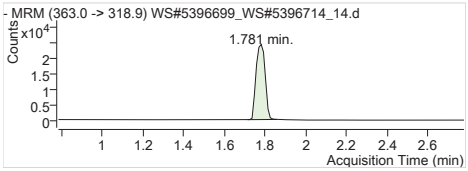



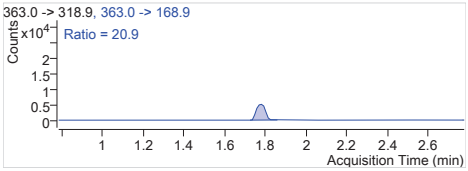

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 0.45 µg/L
Area ratio: 10.18797
Sample type: QC



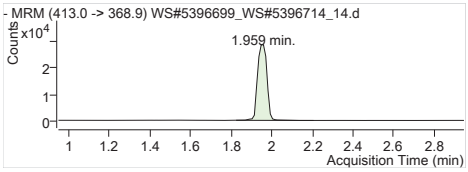



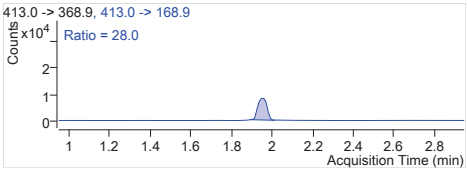

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.735 (1.735)
Calc. conc. 0.43 µg/L
Area ratio: 12.00204
Sample type: QC



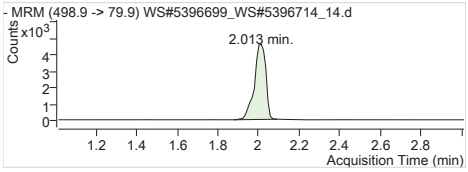



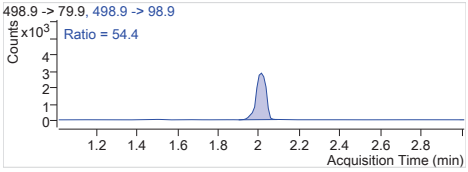

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 0.46 µg/L
Area ratio: 11.22934
Sample type: QC



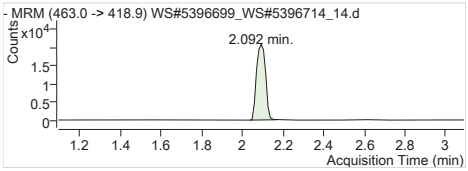



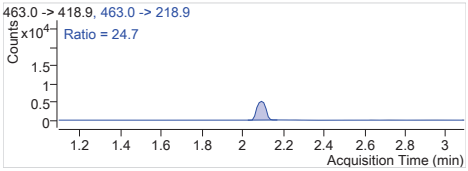

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.959 (1.948)
Calc. conc. 0.50 µg/L
Area ratio: 13.03631
Sample type: QC



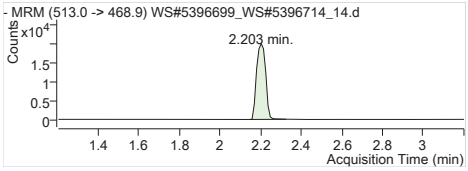



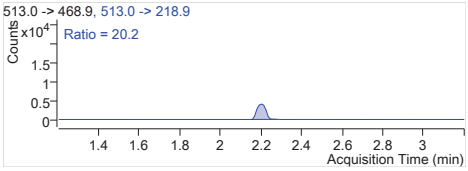

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 0.53 µg/L
Area ratio: 12.05756
Sample type: QC



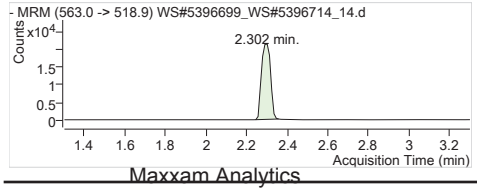



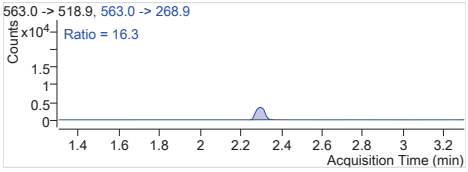

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 0.45 µg/L
Area ratio: 10.51866
Sample type: QC



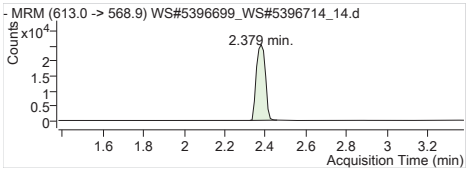



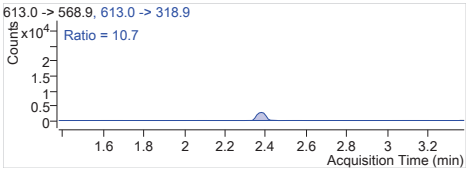

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 0.45 µg/L
Area ratio: 13.82871
Sample type: QC



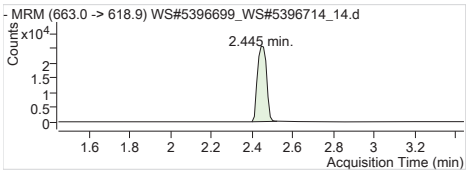



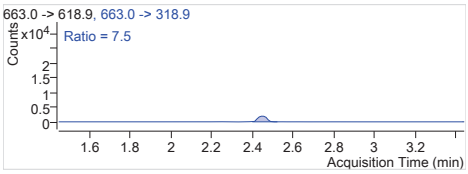

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 0.47 µg/L
Area ratio: 11.55625
Sample type: QC



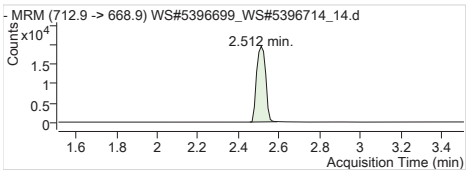



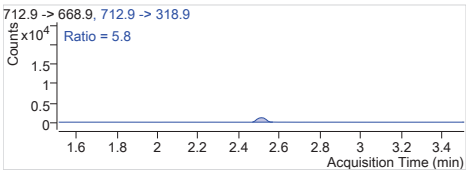

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.379 (2.379) |
| Calc. conc. | 0.45 µg/L |
| Area ratio: | 10.64685 |
| Sample type: | QC |



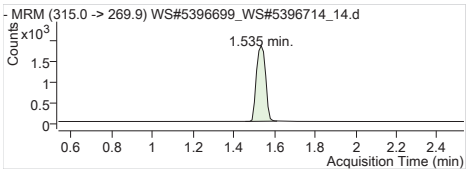



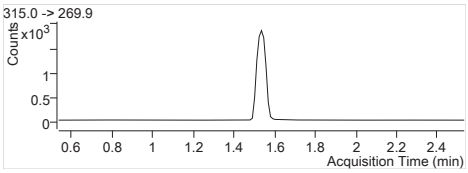

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.445 (2.445) |
| Calc. conc. | 0.50 µg/L |
| Area ratio: | 14.08190 |
| Sample type: | QC |



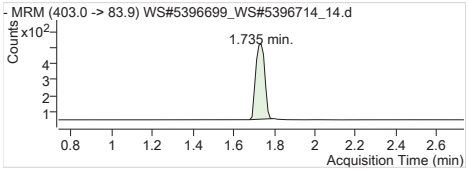



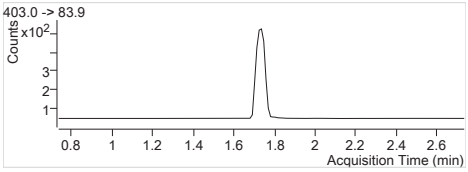

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.512 (2.512) |
| Calc. conc. | 0.47 µg/L |
| Area ratio: | 10.53483 |
| Sample type: | QC |



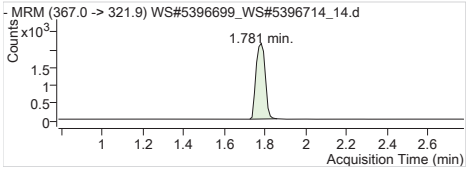



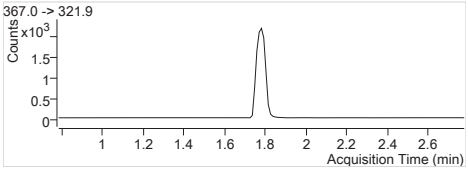

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 112.98 µg/L |
| Area ratio: | 0.26612 |
| Sample type: | QC |



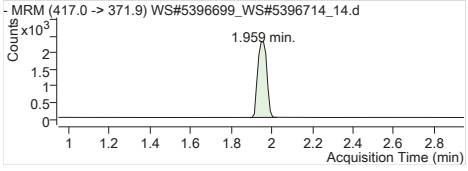



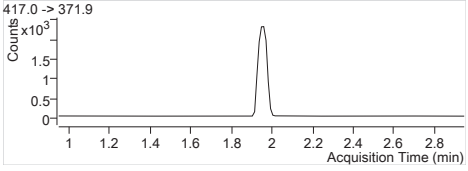

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 125.62 µg/L |
| Area ratio: | 0.06897 |
| Sample type: | QC |



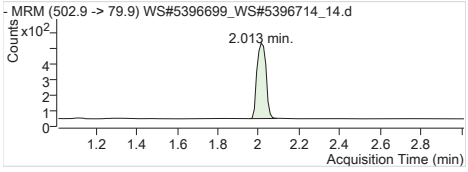



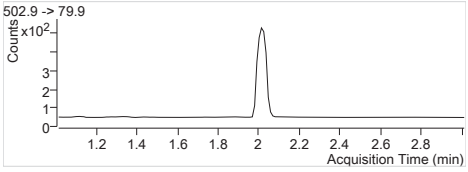

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 111.90 µg/L |
| Area ratio: | 0.31446 |
| Sample type: | QC |



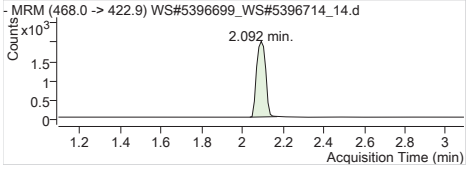



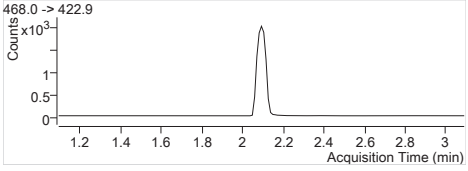

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.959 (1.948) |
| Calc. conc. | 125.63 µg/L |
| Area ratio: | 0.33513 |
| Sample type: | QC |



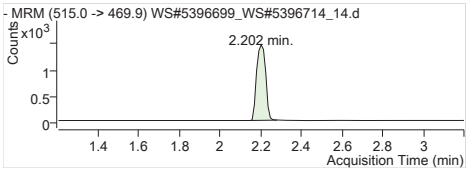



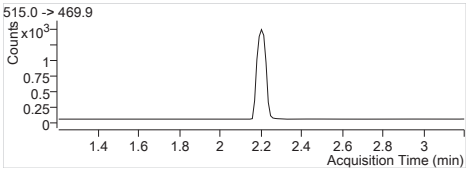

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 113.84 µg/L |
| Area ratio: | 0.07019 |
| Sample type: | QC |



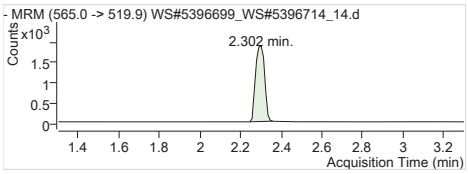



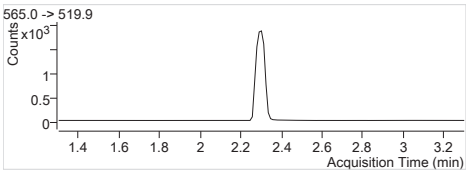

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 115.36 µg/L |
| Area ratio: | 0.28712 |
| Sample type: | QC |



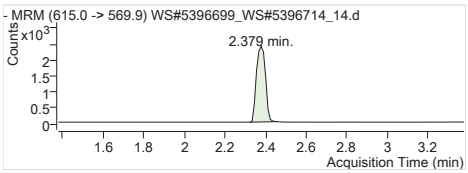



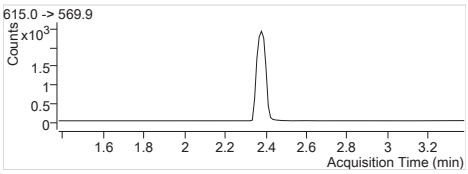

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 102.59 µg/L
Area ratio: 0.18630
Sample type: QC



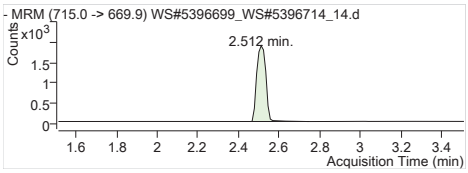



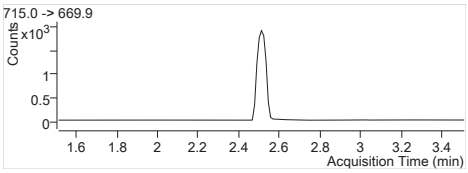

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 102.82 µg/L
Area ratio: 0.24174
Sample type: QC



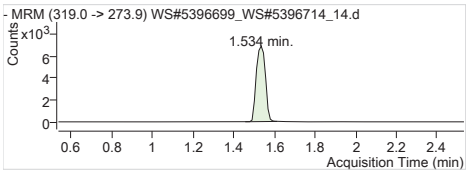



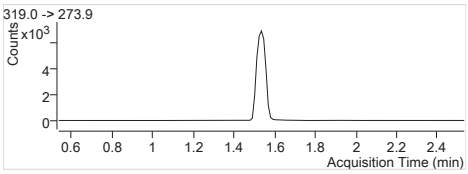

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 101.20 µg/L
Area ratio: 0.30971
Sample type: QC



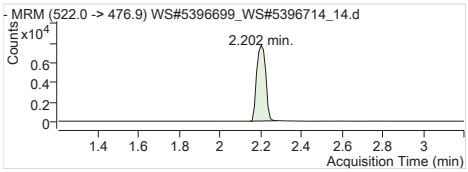



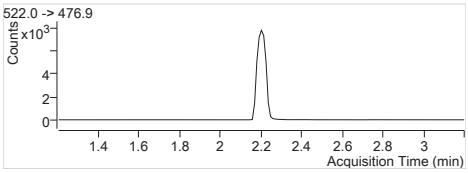

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 90.34 µg/L
Area ratio: 0.24439
Sample type: QC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 2.08 µg/L
Area ratio: 0
Sample type: QC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 2.35 µg/L
Area ratio: 0
Sample type: QC

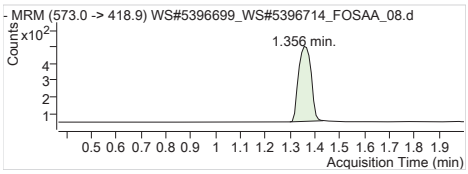
# Quantitation Results

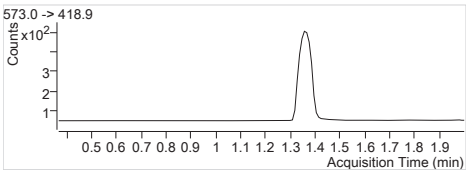
Agilent Technologies

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | IB | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_08.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A8 |
| **Acq. Date** | 2018/02/15 10:53:40 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

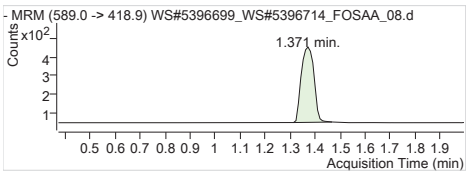
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1587 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1421 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 27800 | 1.12 | 1 µg/L | | |

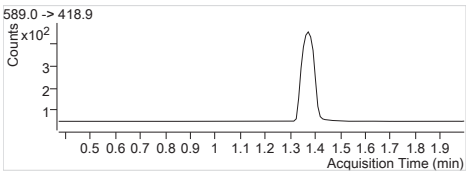
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 1624 | 1.36 | - | 106.12 µg/L | - |
| D5-EtFOSAA | 1438 | 1.37 | - | 107.90 µg/L | - |
| 13C9-PFDA | 27370 | 1.12 | - | 2.47 µg/L | - |



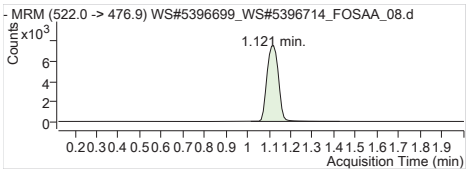


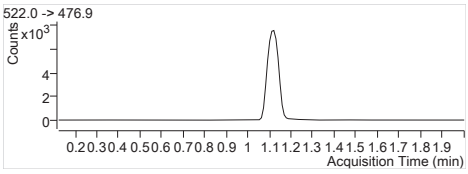

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: Sample



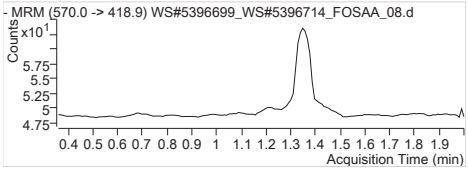


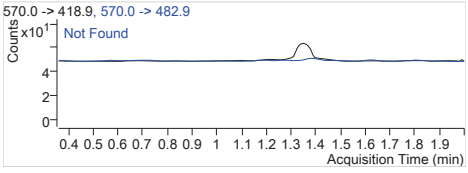

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: Sample



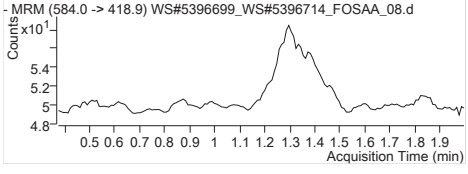


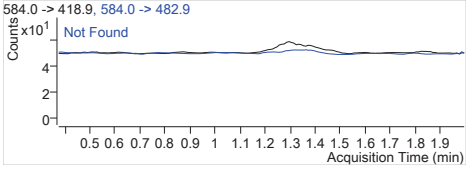

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.121 (1.121)
Concentration: 1 µg/L
Sample type: Sample



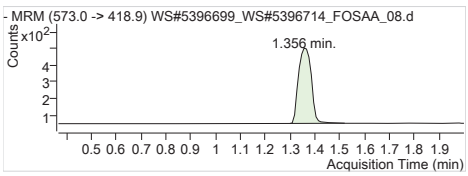


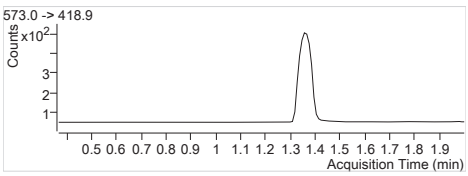

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.358)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



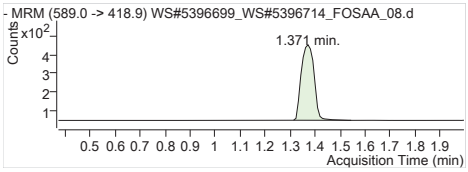


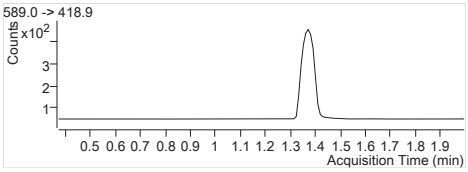

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.373)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



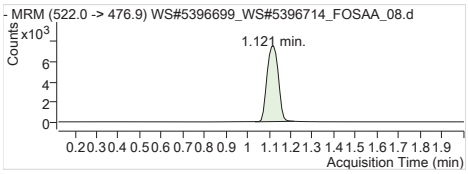


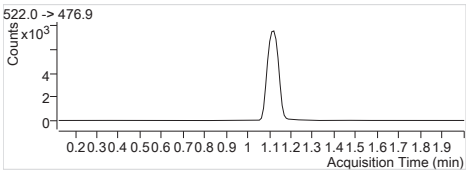

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 106.12 µg/L
Area ratio: 0.05842
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 107.90 µg/L |
| Area ratio: | 0.05173 |
| Sample type: | Sample |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.121 (1.121) |
| Calc. conc. | 2.47 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

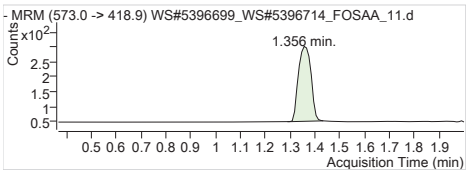
# Quantitation Results

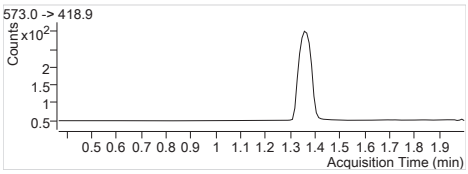
Agilent Technologies

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **5396699:BLANK** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_11.d | **Operator** | |
| **Sample Type** | Sample | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B1 |
| **Acq. Date** | 2018/02/15 11:00:53 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

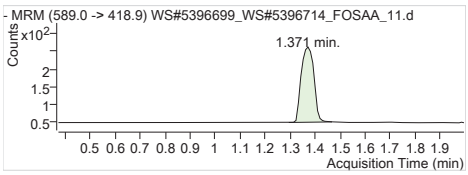
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 880 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 748 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 27095 | 1.12 | 1 µg/L | | |

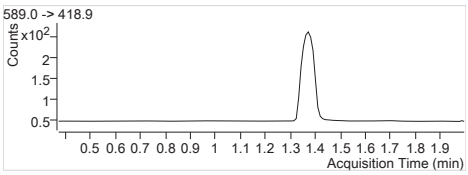
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | | | - | ND | - |
| EtFOSAA 1 | | | - | ND | - |
| D3-MeFOSAA | 896 | 1.36 | - | 60.07 µg/L | - |
| D5-EtFOSAA | 750 | 1.37 | - | 57.74 µg/L | - |
| 13C9-PFDA | 26675 | 1.12 | - | 2.41 µg/L | - |



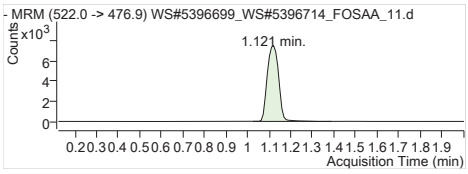



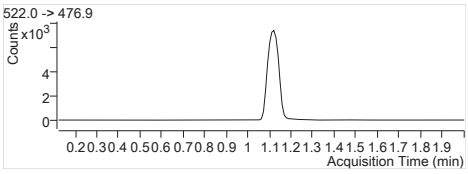

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: Sample



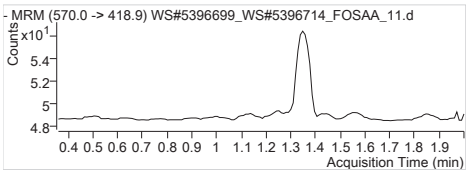



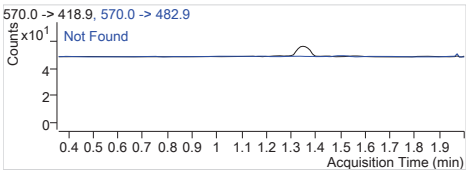

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: Sample



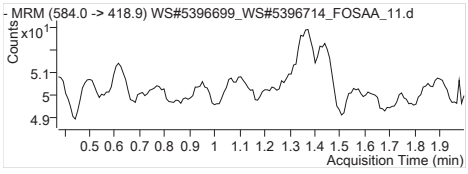



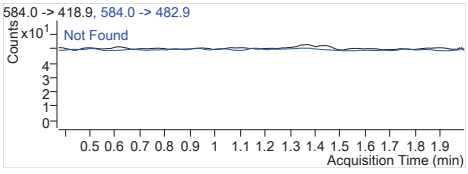

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.121 (1.121)
Concentration: 1 µg/L
Sample type: Sample



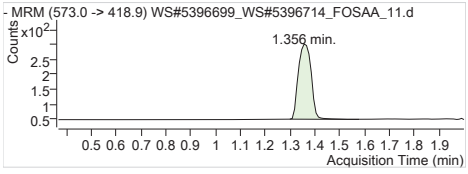



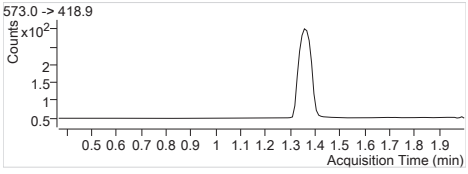

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.358)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



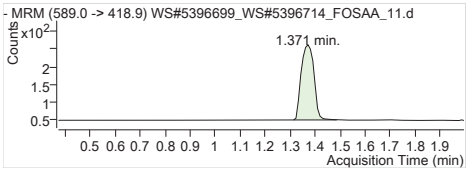



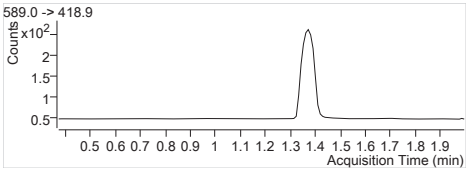

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.373)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



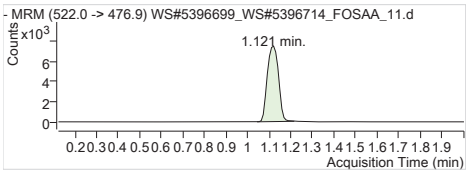



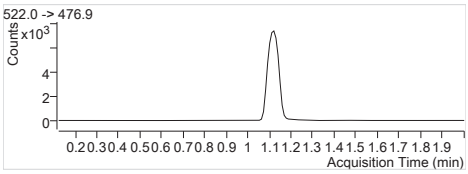

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 60.07 µg/L
Area ratio: 0.03307
Sample type: Sample




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 57.74 µg/L |
| Area ratio: | 0.02768 |
| Sample type: | Sample |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.121 (1.121) |
| Calc. conc. | 2.41 µg/L |
| Area ratio: | 0 |
| Sample type: | Sample |

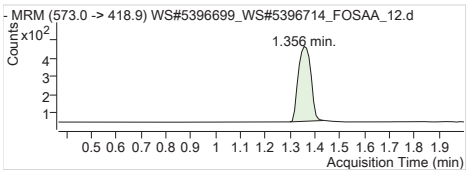
# Quantitation Results

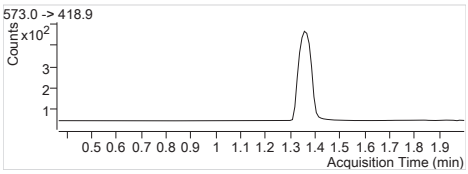
Agilent Technologies

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **5396699:SPIKE** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_12.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B2 |
| **Acq. Date** | 2018/02/15 11:03:19 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

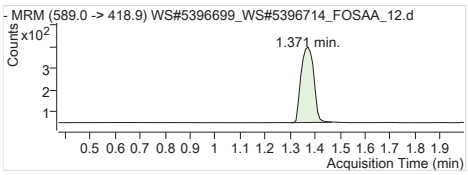
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1458 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1234 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 28179 | 1.12 | 1 µg/L | | |

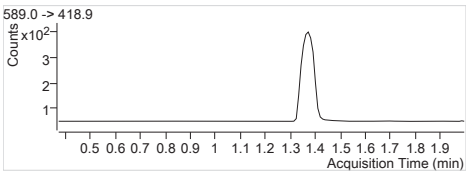
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 12436 | 1.36 | 20.80 | 0.41 µg/L | 81.95 |
| EtFOSAA 1 | 12282 | 1.37 | 20.80 | 0.41 µg/L | 81.60 |
| D3-MeFOSAA | 1497 | 1.36 | 100.00 | 96.50 µg/L | 96.50 |
| D5-EtFOSAA | 1246 | 1.37 | 100.00 | 92.24 µg/L | 92.24 |
| 13C9-PFDA | 27766 | 1.12 | 100.00 | 2.51 µg/L | 104.56 |



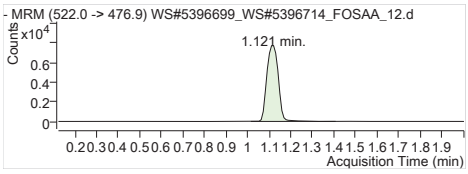



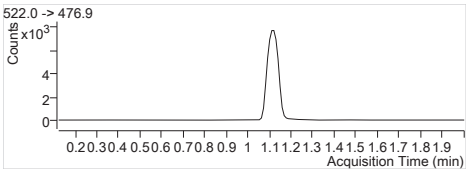

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: QC



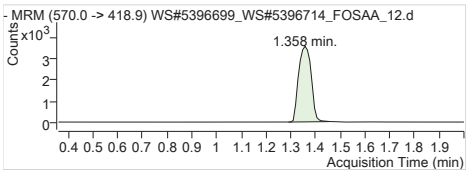



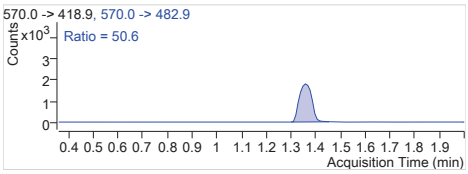

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: QC



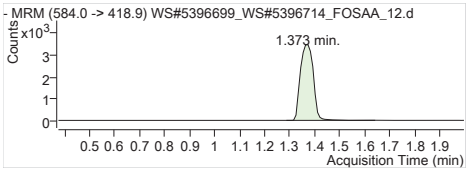



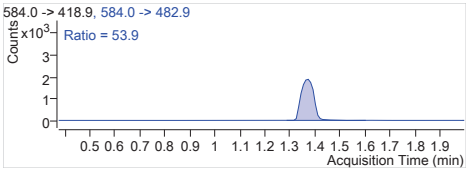

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.121 (1.121)
Concentration: 1 µg/L
Sample type: QC



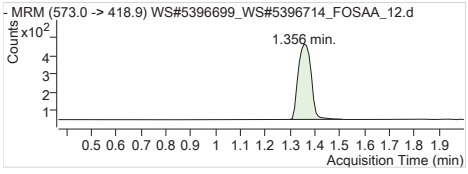



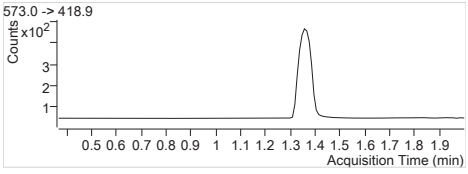

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.358 (1.358)
Calc. conc. 0.41 µg/L
Area ratio: 8.52949
Sample type: QC



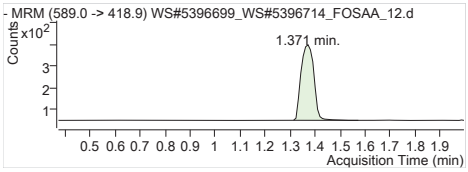



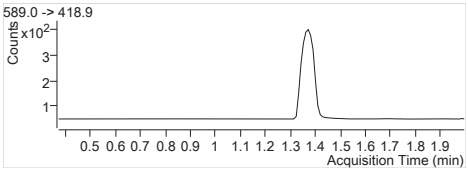

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.373 (1.373)
Calc. conc. 0.41 µg/L
Area ratio: 9.95300
Sample type: QC



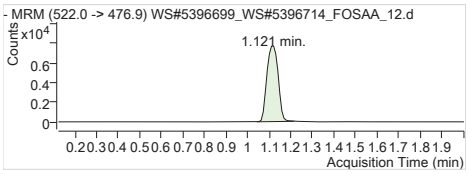



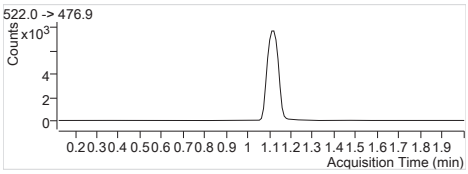

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 96.50 µg/L
Area ratio: 0.05312
Sample type: QC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 92.24 µg/L |
| Area ratio: | 0.04422 |
| Sample type: | QC |



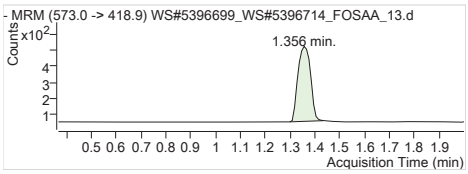



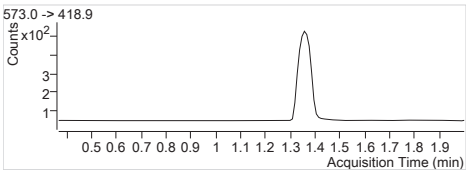

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.121 (1.121) |
| Calc. conc. | 2.51 µg/L |
| Area ratio: | 0 |
| Sample type: | QC |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **5396699:MTRX SPK** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_13.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B3 |
| **Acq. Date** | 2018/02/15 11:05:44 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | FZA786 | | |

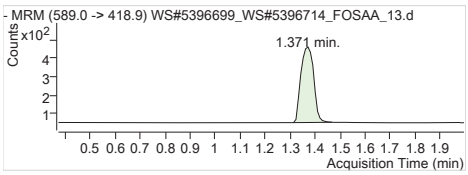
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1665 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1468 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 26043 | 1.11 | 1 µg/L | | |

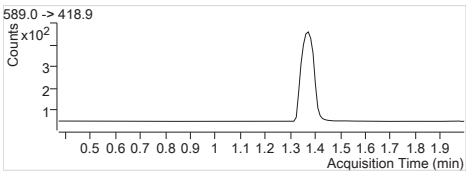
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 14546 | 1.36 | 20.80 | 0.42 µg/L | 83.91 |
| EtFOSAA 1 | 14688 | 1.36 | 20.80 | 0.41 µg/L | 82.02 |
| D3-MeFOSAA | 1707 | 1.36 | 100.00 | 119.06 µg/L | 119.06 |
| D5-EtFOSAA | 1474 | 1.37 | 100.00 | 118.06 µg/L | 118.06 |
| 13C9-PFDA | 25285 | 1.11 | 100.00 | 2.29 µg/L | 95.22 |



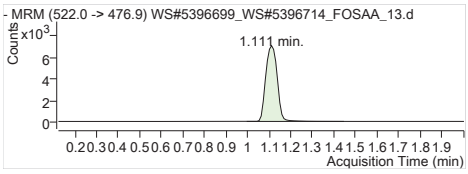



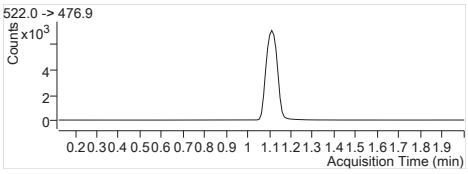

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: QC



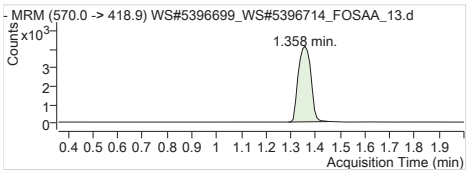



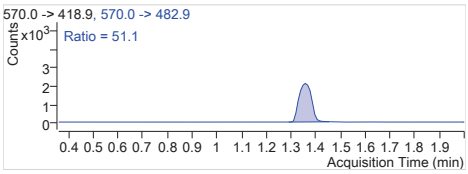

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: QC



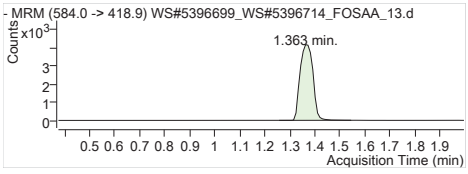



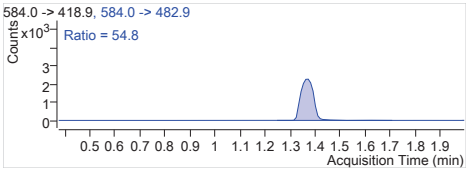

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.111 (1.121)
Concentration: 1 µg/L
Sample type: QC



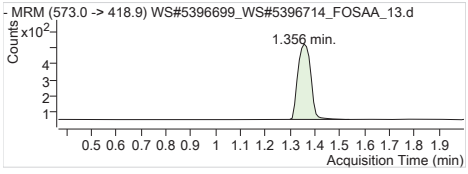



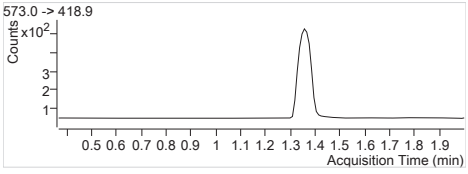

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.358 (1.358)
Calc. conc. 0.42 µg/L
Area ratio: 8.73634
Sample type: QC



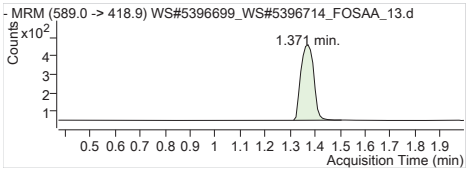



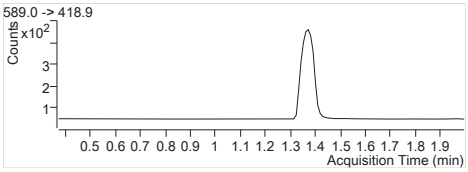

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.363 (1.373)
Calc. conc. 0.41 µg/L
Area ratio: 10.00545
Sample type: QC



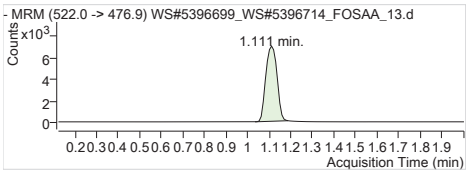



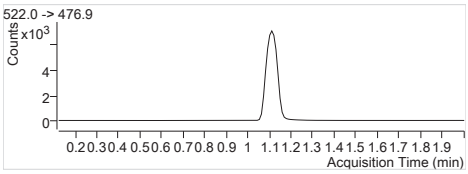

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 119.06 µg/L
Area ratio: 0.06555
Sample type: QC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 118.06 µg/L |
| Area ratio: | 0.05660 |
| Sample type: | QC |



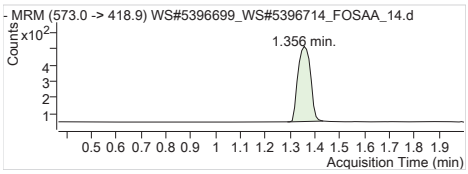



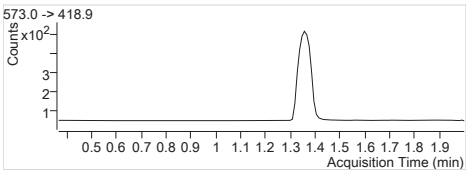

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.111 (1.121) |
| Calc. conc. | 2.29 µg/L |
| Area ratio: | 0 |
| Sample type: | QC |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **5396699:MTRX SPK:D1** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_14.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-B4 |
| **Acq. Date** | 2018/02/15 11:08:09 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | FZA786 | | |

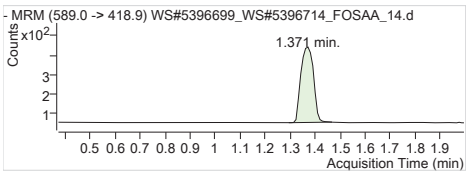
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1631 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1381 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 26287 | 1.12 | 1 µg/L | | |

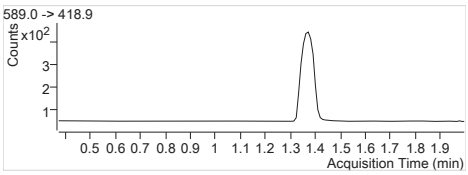
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 14718 | 1.36 | 20.80 | 0.43 µg/L | 86.63 |
| EtFOSAA 1 | 14610 | 1.36 | 20.80 | 0.43 µg/L | 86.64 |
| D3-MeFOSAA | 1657 | 1.36 | 100.00 | 114.50 µg/L | 114.50 |
| D5-EtFOSAA | 1398 | 1.37 | 100.00 | 110.94 µg/L | 110.94 |
| 13C9-PFDA | 25897 | 1.12 | 100.00 | 2.34 µg/L | 97.52 |



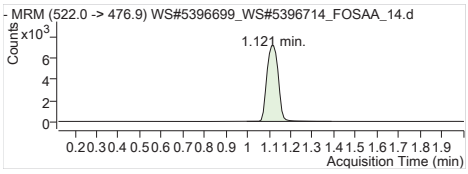



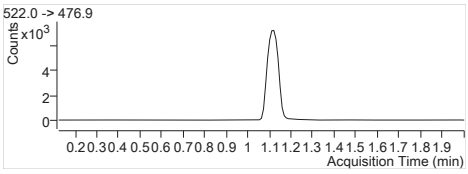

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: QC



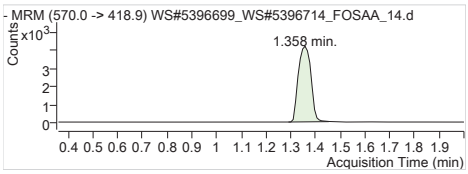



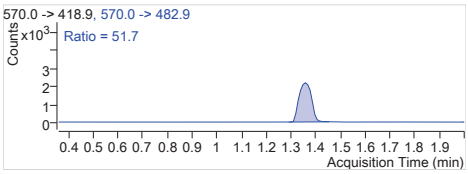

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: QC



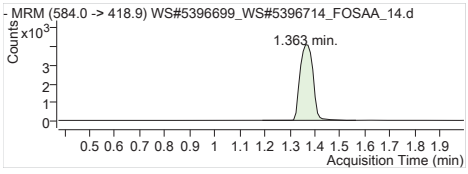



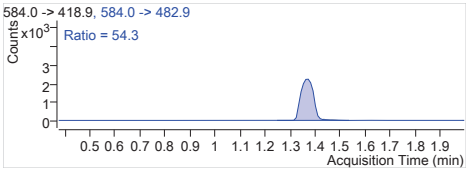

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.121 (1.121)
Concentration: 1 µg/L
Sample type: QC



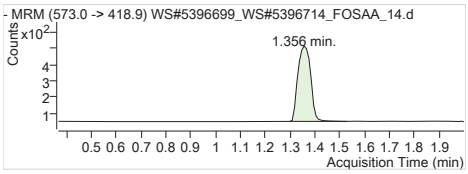



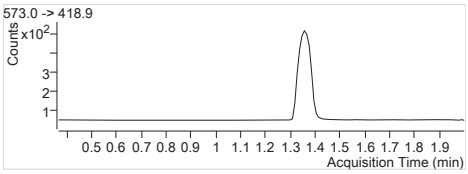

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.358 (1.358)
Calc. conc. 0.43 µg/L
Area ratio: 9.02391
Sample type: QC



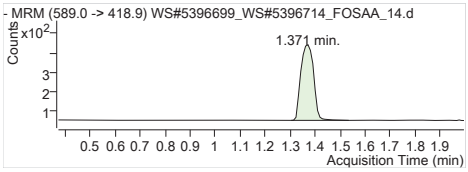



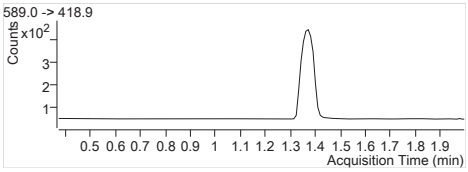

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.363 (1.373)
Calc. conc. 0.43 µg/L
Area ratio: 10.57929
Sample type: QC



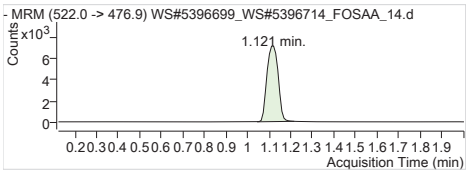



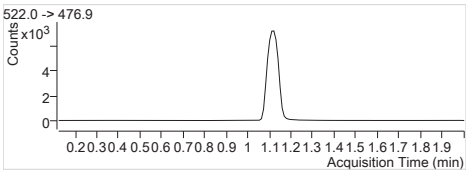

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 114.50 µg/L
Area ratio: 0.06303
Sample type: QC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 110.94 µg/L |
| Area ratio: | 0.05318 |
| Sample type: | QC |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.121 (1.121) |
| Calc. conc. | 2.34 µg/L |
| Area ratio: | 0 |
| Sample type: | QC |

## DoD Projects - Internal Data Validation Checklist

Run date: 2018/02/06

Worksheet # (s): 5383466

Analysis: PFOS PLCM-W

| | Primary review by the analyst - 1st 100 % analysis review | 1st 100% review yes | no | n/a | *2nd 100% review |
|---|---|---|---|---|---|
| 1 | Sample analyses meet hold time criteria | ✓ | | | |
| 2 | Analysis set-up meets method criteria | ✓ | | | |
| 3 | Tuning and correct calibration used - criteria meets method criteria | ✓ | | | |
| 4 | SQC/Control Charts updated, analysis in statistical/method control | ✓ | | | |
| 5 | Internal area counts checked (if applicable) | ✓ | | | |
| 6 | LCS, SRM are within acceptance criteria | ✓ | | | |
| 7 | Surrogate Recovery(s) is within acceptance criteria | ✓ | ✓ | | |
| 8 | Method Blank meets acceptance criteria | ✓ | | | |
| 9 | Matrix Spike recovery(s) meets acceptance criteria | ✓ | | | |
| 10 | Duplicate precision meets acceptance criteria | ✓ | | | |
| 11 | QC is documented on the run logs | ✓ | | | |
| 12 | Runs checked for carryover | ✓ | | | |
| 13 | Prep log / worksheet(s) are present, signed / dated by a prep / instrument analysts | ✓ | | | |
| 14 | Initial weights, splits, impringer volumes (where applicable) are documented | ✓ | | | |
| 15 | Standards and reagents traceable to Certificates of Analysis | ✓ | | | |
| 16 | Samples above calibration range diluted and reanalyzed | | | ✓ | |
| 17 | Dilution factors (where justified) have been checked for correctness and entered | ✓ | | | |
| 18 | Analytical observations/anomalies documented in LIMS | | | ✓ | |
| 19 | Random calculation checked and in correct units | ✓ | | | |
| 20 | If corrective actions were applied they are documented, initialed & dated | | | ✓ | |
| 21 | Manual integration – before & after data with a reason included, initialed & dated | | | ✓ | |
| 22 | Transferred data is validated in LIMS for correctness | ✓ | | | |
| 23 | Data package assembled (where required) | ✓ | | | |

Reviewed by: [illegible] Date: 2018/02/07

Comments:

| | Secondary Supervisor/Qualified Data Review Staff - 2nd 100% verification review | yes | no | n/a |
|---|---|---|---|---|
| 1 | Repeats documented and referenced | ✓ | | |
| 2 | Method and sample deviations noted, anomalies described (if applicable) | | | ✓ |
| 3 | Data and QC validated in LIMS | ✓ | | |
| 4 | Random calculation checked | ✓ | | |
| 5 | Benchsheet (s) signed and dated | ✓ | | |
| 6 | Data Package (if required) checked for completeness | ✓ | | |

Reviewed by: AD Date: 2018/02/08

Comments: All samples sent for rework for PFDoA, PF7rDA, PF7cDA due to spike failed to meet acceptance criteria. AD 2018/02/08

*Note: 2nd 100% verification review documented by secondary qualified data review

*Primary and Secondary Internal Data Review Check must be performed by a different person*

# Worksheet Data Validation Checklist - Extractable Organics

Worksheet # | Testcode: PEOSALCM-W

| Sample Preparation | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Samples extracted within hold time | ✓ | | |
| 2 | Client sample ID verified against Lab ID (waters & oils) | | | ✓ |
| 3 | Parameter list and Client comments reviewed, (Spiking solutions matched to parameter list) | ✓ | | |
| 4 | Height of sediment or if sample was decanted, recorded on worksheet | ✓ | | |
| 5 | Method required QC processed with samples, maximum batch size = 20 client samples. | ✓ | | |
| 6 | Sample, duplicate, matrix spike appear similar, initial sample as well as final extract | ✓ | | |
| 7 | Sample weight or initial volume and extract final volume, aliquot factor clearly recorded. | ✓ | | |
| 8 | If performed any additional dilution clearly recorded | | | ✓ |
| 9 | Matrix spike / Duplicate performed on IOL samples if present | | | ✓ |
| 10 | Spiking solutions valid (haven't expired), ID and volume used clearly identified on worksheet | ✓ | | |
| 11 | Spiking process witnessed and signed off | ✓ | | |
| 12 | Extraction type recorded (N3A2B = neutral, 3 x acidic, 2 x basic) | | | ✓ |
| 13 | Sample prep deviations documented within CompliantPro as a Policy Deviation | | | ✓ |
| 14 | Job Remarks reviewed on 2nd page of worksheet. | ✓ | | |
| 15 | Worksheet and reagent tracking record completed and authorized. | ✓ | | |

Reviewed by: [illegible] | Date: 2018/02/03

Comments:

| Worksheet Approval | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Verified the position of the vials in autosampler against sequence list; signed off sequence list | | | |
| 2 | Calibration and CCV standards valid ( haven't expired) | | | |
| 3 | Initial calibration curve and DFTPP tune (if applicable) acceptable | | | |
| 4 | Continuing and Final CCV and DFTPP tune (if applicable) acceptable | | | |
| 5 | System performance check acceptable (if applicable) | | | |
| 6 | Internal standard responses acceptable | | | |
| 7 | Method blank meets acceptance criteria | | | |
| 8 | Lab Control Samples recoveries meets acceptance criteria | | | |
| 9 | Duplicate RPD meets acceptance criteria | | | |
| 10 | Matrix spike recoveries meets acceptance criteria | | | |
| 11 | Surrogate recoveries meets acceptance criteria | | | |
| 12 | Appropriate control charts updated | | | |
| 13 | Samples above calibration range diluted and reanalyzed | | | |
| 14 | Dilutions clearly documented on tracking record, inst file and verified during data upload | | | |
| 15 | Samples following high level samples checked for carryover. | | | |
| 16 | Mass spectra ion ratios acceptable for positive results, hardcopy in file. | | | |
| 17 | Analytical observations / anomalies documented | | | |
| 18 | DQW comments entered in LIMS, hardcopy in file | | | |
| 19 | Sample Prep section (above) reviewed and verified. | | | |
| 20 | WS Approval performed in LIMS | | | |

Reviewed by: | Date:

Comments:

| Worksheet Validation | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Calibration, QC and sample results reviewed and determined acceptable | | | |
| 2 | Manual integrations verified | | | |
| 3 | Random calculation checked | | | |
| 4 | Data and QC validated in LIMS | | | |
| 5 | Comments reviewed for appropriateness | | | |
| 6 | Reworks / relogs documented in file | | | |
| 7 | Worksheet signed and dated, | | | |
| 8 | Worksheet approved and validated within LIMS | | | |

Reviewed by: | Date:

Comments:

**WS# : 5383466**

Page #: 1/2

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Saturday, February 03, 2018

Assigned to : Shahbaz Ahmad

Test Code : PFOSALCM-W

Instrument Id:

Test Description : PFOS and PFOA in water by LC-MS/MS

sediment 2ml 2ml SAA 2018/02/03

| | Job Number | Sample Number | D | Sample ID | F | % Moisture | Wt or Vol | Final Vol | DF or AF | # Cont | Expiry Date | Test DeadLine | Criteria | Extract Date | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,5 | | MTRX SPK | 0 | PFOS FZA786-01 | | 0.2 | 125 | 3 | 1X | | | | | 2018/02/03 | 33.0 |
| 5,7 | | MTRX SPK | 1 | PFOS FZA786-01 | | 0.2 | 125 | 3 | 1X | | | | | 2018/02/03 | 34.1 |
| 5,3 | | SPIKE | | PFOS | | 0 | 125 | 3 | 1X | | | | | 2018/02/03 | 26.8 |
| 5,11 | | BLANK | | | | 0 | 125 | 3 | 1X | | | | | 2018/02/03 | 29.8 |
| 5,9 | B818419 | *FZA783-01R | | OLD-002-51A-0118 | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 31.0 |
| 5,11 | B818419 | *FZA784-01R | | OLD-002-51A-0118* | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 31.9 |
| 5,13 | B818419 | *FZA785-01R | | OLD-002-11A-0118 | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 30.3 |
| 5,15 | B818419 | *FZA786-01R | | OLD-002-03A-0118 | | 0.2 | 125 | 3 | 1X | 6 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 26.8 |
| 5,17 | B818419 | *FZA788-01R | | EB-GW-012218-1 | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 31 |
| 5,19 | B818419 | *FZA789-01R | | FB-OLD-012218-1 | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 31.3 |
| 6,1 | B818419 | *FZA790-01R | | FB-OLD-012218-2 | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 25.8 |
| 6,3 | B818419 | *FZA791-01R | | EB-WC-012218-1 | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 25.8 |
| 6,5 | B818419 | *FZA792-01R | | EB-DPT-012218-1 | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 27.9 |
| 6,7 | B819794 | *FZH336-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/03 | 34.8 |
| 6,9 | B819794 | *FZH338-01R | | [redacted] | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/03 | 25.3 |
| 6,11 | B819794 | *FZH339-01R | | [redacted] | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/03 | 27.5 |
| 6,13 | B819794 | *FZH340-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/03 | 28.3 |
| 6,15 | B819794 | *FZH341-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/03 | 28.5 |
| 6,17 | B819794 | *FZH342-01R | | [redacted] | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/03 | 35.0 |
| 6,19 | B819794 | *FZH343-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/03 | 31.8 |

SAA 2018/02/03

Remarks:

Samples extracted by: Shahbaz Ahmad SAA 2018/02/03

Instrumentation performed by: MA Date: 2018/02/06

Calculations performed by: AZ Date: 2018/02/07

Validated by: AD Date: 2018/02/08

| Job No. | Rep / Remarks | Client Name / Contact | Client Tier | National |
|---|---|---|---|---|
| GB818419 | SP8 | Earth Toxics Inc / Rick Carr | Tier 5 (Enviro.) | AECOM |
| | NREG. PFOSALCM-W MS/MSD required on FZA786 Level IV Package and TetraTech EDD required Project #: JM11 NTC Orlando | | | |
| GB819794 | [redacted] | | | |

SBD 2018/02/03

| Job | Sample | Lab Comments |
|---|---|---|
| | MTRX SPK | |
| | MTRX SPK | |
| | SPIKE | |
| | BLANK | |
| B818419 | FZA783-01R | |
| B818419 | FZA784-01R | |
| B818419 | FZA785-01R | |
| B818419 | FZA786-01R | |
| B818419 | FZA788-01R | |
| B818419 | FZA789-01R | |
| B818419 | FZA790-01R | |
| B818419 | FZA791-01R | |
| B818419 | FZA792-01R | |
| B819794 | FZH336-01R | |
| B819794 | FZH338-01R | |
| B819794 | FZH339-01R | |
| B819794 | FZH340-01R | |
| B819794 | FZH341-01R | |
| B819794 | FZH342-01R | |
| B819794 | FZH343-01R | |

Folder: 20180206

| Standard | vol of MeOH | Amount Spiked | |
|---|---|---|---|
| S1 | 2825 | 25 | SK-7390 1/2 |
| S2 | 2800 | 50 | |
| S3 | 2700 | 150 | |
| S4 | 2813 | 37.5 | I-5297 |
| S5 | 2775 | 75 | |
| S6 | | | |
| ICV | 2725 | 125 | |
| IB | 2788<br>2850 | 62.5 | I-5299 |

Worksheet Reagent Tracking Record  Worksheet # 5383466

| Surrogate/Spike solutions | √ | Solution ID # | Conc. | Volume (µL) Blk-Spk Solid | Blk-Spk Liquid | MS Solid | MS Liquid | Samples Solid | Samples Liquid |
|---|---|---|---|---|---|---|---|---|---|
| DGT Spike | | | 100 ug/mL | 60 | 30 | 60 | 30 | NA | NA |
| Diquat Dibromide | | | 50 ug/mL | NA | 350 | NA | 350 | NA | NA |
| Explosives Spiking solution A | | | 20 ug/mL | 250 | 100 | 250 | 100 | NA | NA |
| Explosives Spiking solution B | | | 20/80 ug/mL | 250 | 100 | 250 | 100 | NA | NA |
| Formaldehyde Spike | | | 100 ug/mL | 25 | 25 | 25 | 25 | NA | NA |
| Glyphosate Spike | | | 25 ug/mL | 500 | 20 | 500 | 20 | NA | NA |
| Nonylphenol Ethoxylate Spike | | | 100 ug/mL | 100 | 100 | 100 | 100 | NA | NA |
| Nonylphenol Spike | | | 10 ug/mL | 100 | 100 | 100 | 100 | NA | NA |
| Paraquat Cl Tetrahydrate | | | 20 ug/mL | NA | 125 | NA | 125 | NA | NA |
| Perchlorate Standard Spike | | | 10 ng/mL | NA | 100 | NA | 100 | NA | NA |
| Perchlorate Standard Spike | | | 500 ng/mL | 40 | NA | 40 | NA | NA | NA |
| Perchlorate O-18 Internal Standard | | | 0.10 ng/uL | 20 | 20 | 20 | 20 | 20 | 20 |
| Morpholine Second Source Working Std | | | 2500 ug/L | NA | 80 | NA | 80 | NA | NA |
| Morpholine-D8 Internal Standard | | | 10 ug/mL | NA | 50 | NA | 50 | NA | 50 |
| Steril Second Source Spiking Solution | | | NA | 20 | NA | 20 | NA | NA | NA |
| Sterilants Comp. IS Working Solution | | | 3 ug/mL | 50 | NA | 50 | NA | 50 | NA |
| Comp. PFC Working Solution A | ✓ | F-5299 1/3 | 1ug/mL | 75 | 21 62.5 | 75 | 21 62.5 | NA | NA |
| PFC Internal Standard Solution | ✓ | SE 6765 2/4 [illegible] | 50/125 ng/mL | 200 | 100 150 | 200 | 100 150 | 200 | 100/150 |
| PFC Injection IS | ✓ | SE 6716 3/4 [illegible] | 400 ng/mL | 20 | 20 | 20 | 20 | 20 | 20 |
| ICV | ✓ | F5299 1/3 | | | | | | | |

| Solvent/Reagent | √ | Lot No. | Date Opened | Solvent/Reagent | √ | Lot No. | Date Opened/ Prepared |
|---|---|---|---|---|---|---|---|
| DCM | | | | 50% NaOH | | | |
| Ottawa Sand | | | | o-Phosphoric Acid | | | |
| Methanol | ✓ | SHBJ5451 | 2018/02/02 | Borax | | | |
| 2-Propanol (IPA) | | | | Calcium Chloride | | | |
| Acetonitrile | | | | EDTA | | | |
| Sodium Sulfate | | | | Phosphate Buffer | | | |
| 70:30 Methanol: Water | | | | Sodium Thiosulphate | | | |
| 60:40 Water: Methanol | | | | DNPH | | | |
| DCM:Ethyl Ether (75:25) | | | | FMOC | | | |
| Hexane:IPA (98:2) | | | | 5M Acetate Buffer | | | |
| 2% Formic Acid | ✓ | PRLRE | 108-334 | 0.2% $NH_4OH$ | ✓ | PRLRE | 108-337 |
| 0.2% Formic Acid | | | | Leachate Fluid | | | |
| 0.05M KOH | | | | Reagent Water | ✓ | 57297 | 2018/2/2 |
| 0.05M HCl | | | | | | | |
| | | | | | | | |
| | | | | | | | |

*Spiked by: SAD

Spike Date: 2018/02/03

Spike Syringe/Pipette ID#: L32773F

Int. Std Syringe/Pipette ID#: K19865F

*Spiking Witnessed by: JPB

Final pH:

| Equipment & ID | √ | Equipment | ID# | √ | Equipment | Lot # |
|---|---|---|---|---|---|---|
| Pipettor L32773F K19865F | | SPE Cartridge | | | QC Balance ID | |
| | | Filter | | | Thermometer ID &Temp | |
| Dispenser | | Centrifuge | | | | |
| | | Sonicator | | | | |

Bottle Tracking ✓

Bottle# 18587

Cap# 18422

Systems plus Lot#: 17-12-11

Comments:

* - SPIKING OF QC'S & SAMPLES MUST BE WITNESSED AT ALL TIMES.

Worksheet Number: **5383466**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | Units | MTRX SPK | MTRX SPK Dup1 | SPIKE | BLANK | B818419 FZA783 | B818419 FZA784 |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | ug/L | 98.37626 | 92.01237 | 96.11331 | 0 | N/A******* | N/A******* |
| 8:2 Fluorotelomer sulfonate | ug/L | 86.62930 | 92.03689 | 90.62876 | 0 | N/A******* | N/A******* |
| N-ethylperfluorooctane sulfonamide | ug/L | 74.44754 | 97.35368 | N/A******* | 0 | N/A******* | N/A******* |
| EtFOSAA | ug/L | 87.30327 | 93.84580 | !! 63.7510 | 0 | 0 | 0 |
| N-ethylperfluorooctane sulfonamidoe | ug/L | 91.90741 | 104.11467 | N/A******* | 0 | N/A******* | N/A******* |
| N-methylperfluorooctane sulfonamide | ug/L | 76.91467 | 100.23684 | N/A******* | 0 | N/A******* | N/A******* |
| MeFOSAA | ug/L | 90.03268 | 93.65003 | !! 68.0806 | 0 | 0 | 0 |
| N-methylperfluorooctanesulfonamidol | ug/L | 95.67363 | 106.57021 | N/A******* | 0 | N/A******* | N/A******* |
| Perfluorobutanoic acid | ug/L | 98.21468 | 106.85716 | N/A******* | 0 | N/A******* | N/A******* |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 82.89653 | 95.79209 | 99.67851 | 0 | 0 | 0.00518978 |
| Perfluorodecane Sulfonate | ug/L | 92.45756 | 91.41692 | N/A******* | 0 | N/A******* | N/A******* |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 86.81164 | 94.10782 | 93.60885 | 0 | 0 | 0 |
| Perfluoroheptane sulfonate | ug/L | 90.98726 | 101.20481 | N/A******* | 0 | N/A******* | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 91.96093 | 92.78204 | 88.50372 | 0 | 0.01054153 | 0 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 87.52991 | 95.60760 | 97.20073 | 0 | 0.00887340 | 0.00870697 |
| Perfluorononanoic Acid (PFNA) | ug/L | 93.43522 | 96.72312 | 92.66732 | 0 | 0 | 0 |
| Perfluorooctane Sulfonamide (PFOSA) | ug/L | 89.72318 | 92.62598 | 73.80000 | 0 | N/A******* | N/A******* |
| Perfluoropentanoic Acid (PFPeA) | ug/L | 89.37200 | 95.20211 | N/A******* | 0 | N/A******* | N/A******* |
| Perfluorotetradecanoic Acid | ug/L | 95.89857 | 96.32574 | !! 67.7402 | 0 | 0 | 0 |
| Perfluorotridecanoic Acid | ug/L | 96.29521 | 95.44624 | !! 65.8448 | 0 | 0 | 0 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 96.46350 | 102.22507 | 72.08254 | 0 | 0 | 0 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 102.37893 | 95.12233 | 83.49513 | 0 | 0 | 0 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 90.78481 | 96.72123 | !! 62.1820 | 0 | 0 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 95.93662 | 93.98174 | 97.19234 | 0 | 0 | 0 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 94.99755 | 108.74849 | 100.84658 | 0 | 0 | 0 |
| 13C2-6:2 Fluorotelomer sulfonate | ug/L | 114.338062 | 127.448872 | N/A******* | 113.307957 | N/A******* | N/A******* |
| 13C2-8:2 Fluorotelomer sulfonate | ug/L | 115.440507 | 121.518490 | N/A******* | 106.113909 | N/A******* | N/A******* |
| 13C2-perfluorotetradecanoic acid | ug/L | 82.1416632 | 98.8016425 | 109.679857 | 51.9150278 | 76.4072488 | 85.4869829 |
| 13C4-Perfluorobutanoic acid | ug/L | 77.5120182 | 83.1025398 | N/A******* | 105.324665 | N/A******* | N/A******* |
| D3-MeFOSAA | ug/L | 85.9779888 | 94.4857630 | 97.3966072 | 56.8873348 | 75.2789238 | 96.7656805 |
| D5-EtFOSAA | ug/L | 86.9803015 | 94.0731946 | 101.825486 | 51.6461405 | 76.6323194 | 94.6359966 |
| N-methyl-d3-perfluorooctane sulfona | ug/L | 69.3815036 | 80.5225348 | N/A******* | 49.9444954 | N/A******* | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | ug/L | 74.2509996 | 82.4447942 | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-Perfluorodecanoic acid | ug/L | 84.9829149 | 104.124832 | 102.743556 | 84.5472739 | 85.8951135 | 107.176218 |
| 13C2-Perfluorododecanoic acid | ug/L | 85.0687692 | 96.3858250 | 121.072838 | !! 47.0485 | 80.7479578 | 98.6366498 |
| 13C2-Perfluorohexanoic acid | ug/L | 91.9963409 | 97.1022640 | 90.1829971 | 106.199163 | 88.1415799 | 109.981383 |
| 13C2-Perfluoroundecanoic acid | ug/L | 87.1043163 | 97.3023074 | 122.399275 | 55.3508344 | 82.7148159 | 91.0925685 |
| 13C4-Perfluoroheptanoic acid | ug/L | 102.395216 | 103.278540 | 92.4433542 | 109.351244 | 86.9681260 | 114.092549 |
| 13C5-Perfluorononanoic acid | ug/L | 100.042328 | 101.475792 | 97.4697765 | 103.507539 | 91.3425498 | 118.788865 |
| 13C4-Perfluorooctanoic acid | ug/L | 96.7876585 | 104.962665 | 89.9736143 | 107.163039 | 89.9404074 | 111.145407 |
| 13C4-Perfluorooctanesulfonate | ug/L | 100.788647 | 99.1059572 | 88.3395098 | 104.464942 | 95.2156371 | 122.062293 |
| 13C5-Perfluoropentanoic acid | ug/L | 103.538890 | 100.012540 | N/A******* | 104.079397 | N/A******* | N/A******* |
| 13C8-Perfluorooctane Sulfonamide | ug/L | 83.4616405 | 94.3043519 | N/A******* | 76.7569834 | N/A******* | N/A******* |
| 18O2-Perfluorohexanesulfonate | ug/L | 103.719356 | 102.254100 | 89.3711957 | 103.625993 | 87.7003331 | 114.442701 |

2018/2/27

Worksheet Number: **5383466**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | B818419 FZA785 | B818419 FZA786 | B818419 FZA788 | B818419 FZA789 | B818419 FZA790 | B818419 FZA791 | B818419 FZA792 |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-ethylperfluorooctane sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| EtFOSAA | 0 | 0 | 0 | 0.00631487 | 0 | 0.00686332 | 0 |
| N-ethylperfluorooctane sulfonamidoe | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-methylperfluorooctane sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| MeFOSAA | 0 | 0 | 0 | 0.00425524 | 0 | 0.00472317 | 0 |
| N-methylperfluorooctanesulfonamidoi | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorobutanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorobutane Sulfonate (PFBS) | 0 | 0.01193250 | 0 | 0 | 0 | 0 | 0 |
| Perfluorodecane Sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluoroheptanoic Acid (PFHpA) | 0 | 0.02478493 | 0 | 0 | 0 | 0 | 0 |
| Perfluoroheptane sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | 0.01013417 | 0.03463848 | 0 | 0 | 0 | 0 | 0 |
| Perfluorohexane Sulfonate (PFHxS) | 0.01292668 | 0.02680901 | 0 | 0 | 0 | 0 | 0 |
| Perfluorononanoic Acid (PFNA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perfluorooctane Sulfonamide (PFOSA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluoropentanoic Acid (PFPeA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorotetradecanoic Acid | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perfluorotridecanoic Acid | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perfluoroundecanoic Acid (PFUnA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perfluorodecanoic Acid (PFDA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perfluorododecanoic Acid (PFDoA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.01241350 | 0.13900978 | 0 | 0 | 0 | 0 | 0 |
| Perfluorooctane Sulfonate (PFOS) | 0 | 0.08384642 | 0 | 0 | 0 | 0 | 0 |
| 13C2-6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-perfluorotetradecanoic acid | 85.4142379 | 88.0451122 | 90.3541599 | 82.7616701 | 79.7376927 | 91.8342583 | 78.6502893 |
| 13C4-Perfluorobutanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| D3-MeFOSAA | 88.7512946 | 96.5307079 | 79.8667176 | 84.4242428 | 80.6499269 | 85.7074761 | 81.0173050 |
| D5-EtFOSAA | 92.2812853 | 94.4723015 | 83.1968631 | 86.3076807 | 76.2579366 | 85.8390887 | 80.1326144 |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-Perfluorodecanoic acid | 94.7633248 | 92.9341622 | 98.2133293 | 93.5583158 | 85.5432448 | 105.273795 | 101.554717 |
| 13C2-Perfluorododecanoic acid | 85.7494157 | 89.7584173 | 86.2010403 | 90.0551321 | 84.4332738 | 97.0746443 | 89.3930862 |
| 13C2-Perfluorohexanoic acid | 82.2543348 | 96.1208807 | 108.781731 | 109.242403 | 99.6946472 | 103.727305 | 89.7307559 |
| 13C2-Perfluoroundecanoic acid | 96.3707223 | 91.5754004 | 96.1159327 | 91.3052098 | 83.6232551 | 102.356730 | 94.9027912 |
| 13C4-Perfluoroheptanoic acid | 98.9300004 | 101.168675 | 116.185939 | 113.024733 | 107.022817 | 107.029242 | 92.1590805 |
| 13C5-Perfluorononanoic acid | 101.219717 | 103.281922 | 111.933531 | 106.056714 | 103.080275 | 109.467849 | 93.0812003 |
| 13C4-Perfluorooctanoic acid | 98.2843273 | 99.7939782 | 109.683986 | 113.264299 | 99.6416921 | 108.631589 | 101.487366 |
| 13C4-Perfluorooctanesulfonate | 99.0594609 | 111.521580 | 109.581844 | 114.476256 | 102.068445 | 105.769386 | 103.628421 |
| 13C5-Perfluoropentanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C8-Perfluorooctane Sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 18O2-Perfluorohexanesulfonate | 96.7596645 | 102.692574 | 111.368531 | 102.706610 | 100.921354 | 94.7315136 | 96.1584669 |

Worksheet Number: **5383466**

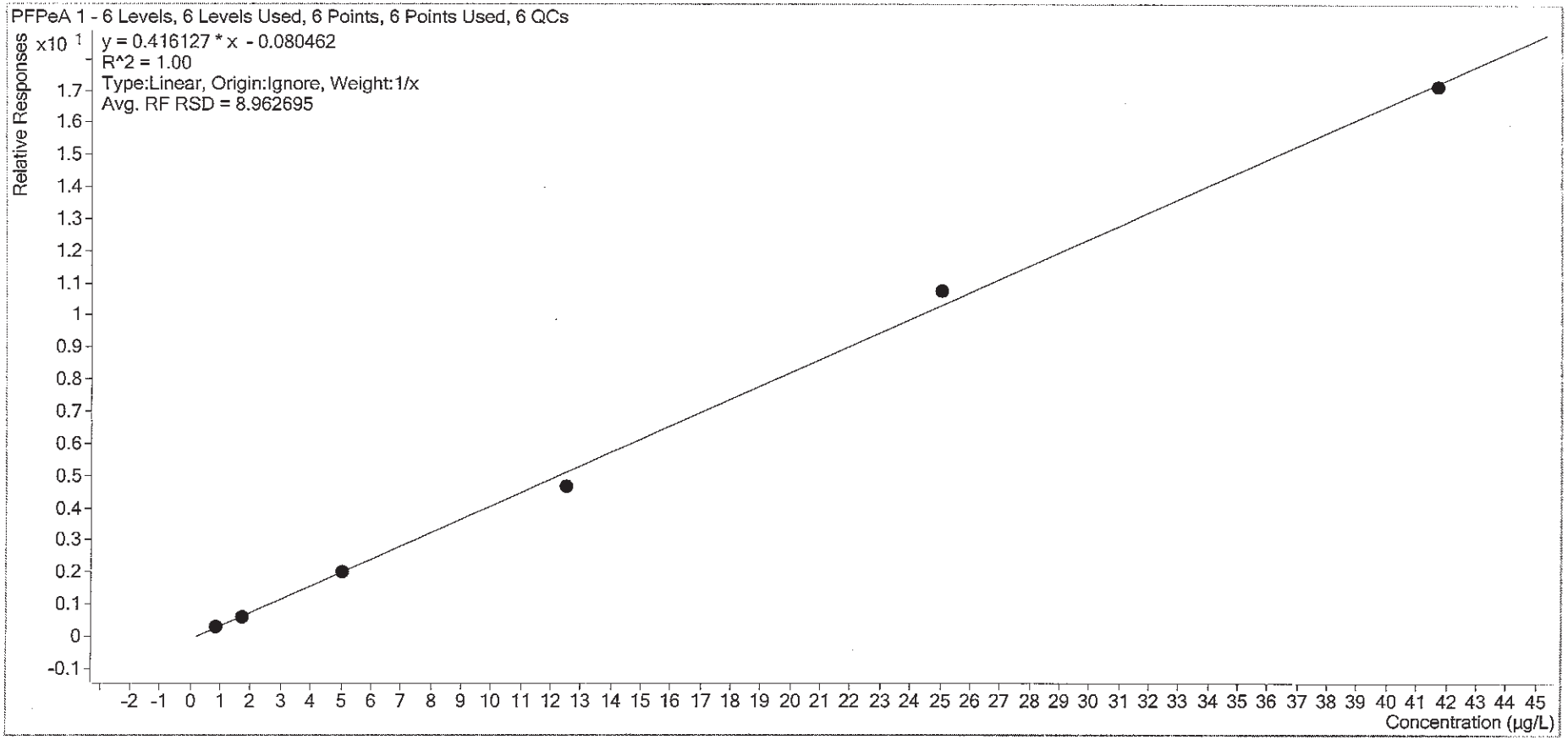
PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | B819794 FZH336 | B819794 FZH338 | B819794 FZH339 | B819794 FZH340 | B819794 FZH341 | B819794 FZH342 | B819794 FZH343 |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0 | N/A******* | N/A******* | N/A******* | 0 | N/A******* | N/A******* |
| 8:2 Fluorotelomer sulfonate | 0 | N/A******* | N/A******* | N/A******* | 0 | N/A******* | N/A******* |
| N-ethylperfluorooctane sulfonamide | 0 | N/A******* | N/A******* | N/A******* | 0 | N/A******* | N/A******* |
| EtFOSAA | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N-ethylperfluorooctane sulfonamidoe | 0 | N/A******* | N/A******* | N/A******* | 0 | N/A******* | N/A******* |
| N-methylperfluorooctane sulfonamide | 0 | N/A******* | N/A******* | N/A******* | 0 | N/A******* | N/A******* |
| MeFOSAA | 0 | 0 | 0 | 0 | 0 | 0.00369223 | 0 |
| N-methylperfluorooctanesulfonamidol | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorobutanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorobutane Sulfonate (PFBS) | N/A******* | 0.00578757 | 0.00580984 | 0.00830906 | N/A******* | 0.00546567 | 0 |
| Perfluorodecane Sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluoroheptanoic Acid (PFHpA) | N/A******* | 0 | 0 | 0.03766183 | N/A******* | 0.01384674 | 0.03785991 |
| Perfluoroheptane sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | N/A******* | 0.01087472 | 0.01061936 | 0.03328450 | N/A******* | 0.02075096 | 0.02922022 |
| Perfluorohexane Sulfonate (PFHxS) | N/A******* | 0.01865163 | 0.02011585 | 0.03548554 | N/A******* | 0.01337441 | 0.01063257 |
| Perfluorononanoic Acid (PFNA) | N/A******* | 0 | 0 | 0.02114793 | N/A******* | 0 | 0.01371525 |
| Perfluorooctane Sulfonamide (PFOSA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluoropentanoic Acid (PFPeA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorotetradecanoic Acid | N/A******* | 0 | 0 | 0 | N/A******* | 0 | 0 |
| Perfluorotridecanoic Acid | N/A******* | 0 | 0 | 0 | N/A******* | 0 | 0 |
| Perfluoroundecanoic Acid (PFUnA) | N/A******* | 0 | 0 | 0 | N/A******* | 0 | 0 |
| Perfluorodecanoic Acid (PFDA) | N/A******* | 0 | 0 | 0 | N/A******* | 0 | 0 |
| Perfluorododecanoic Acid (PFDoA) | N/A******* | 0 | 0 | 0 | N/A******* | 0 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | N/A******* | 0 | 0 | 0.11760894 | N/A******* | 0.00999132 | 0.03320958 |
| Perfluorooctane Sulfonate (PFOS) | N/A******* | 0 | 0.00729654 | 0.16776425 | N/A******* | 0.01122045 | 0.05863242 |
| 13C2-6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-perfluorotetradecanoic acid | N/A******* | 73.9561732 | 79.4066955 | 85.3303714 | N/A******* | 83.0714057 | 92.8280190 |
| 13C4-Perfluorobutanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| D3-MeFOSAA | N/A******* | 85.3319462 | 95.1483448 | 80.3632760 | N/A******* | 88.2167770 | 93.7794006 |
| D5-EtFOSAA | N/A******* | 82.0348917 | 90.3125828 | 82.1893041 | N/A******* | 90.4363256 | 93.1031969 |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-Perfluorodecanoic acid | N/A******* | 90.0390222 | 112.392065 | 96.7434826 | N/A******* | 100.549863 | 100.976896 |
| 13C2-Perfluorododecanoic acid | N/A******* | 86.1004444 | 102.156897 | 91.3866200 | N/A******* | 89.0216764 | 95.7538358 |
| 13C2-Perfluorohexanoic acid | N/A******* | 97.6177087 | 105.148131 | 106.286616 | N/A******* | 100.102876 | 108.780066 |
| 13C2-Perfluoroundecanoic acid | N/A******* | 86.1893416 | 108.104630 | 85.0206170 | N/A******* | 91.9654141 | 98.7652956 |
| 13C4-Perfluoroheptanoic acid | N/A******* | 100.249172 | 113.607486 | 108.784192 | N/A******* | 106.836593 | 112.639666 |
| 13C5-Perfluorononanoic acid | N/A******* | 103.568549 | 106.424781 | 112.255674 | N/A******* | 103.583624 | 117.561769 |
| 13C4-Perfluorooctanoic acid | N/A******* | 99.8442087 | 112.712030 | 103.491143 | N/A******* | 100.938387 | 116.551762 |
| 13C4-Perfluorooctanesulfonate | N/A******* | 92.1919661 | 113.246941 | 98.0248112 | N/A******* | 108.324230 | 100.908838 |
| 13C5-Perfluoropentanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C8-Perfluorooctane Sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 18O2-Perfluorohexanesulfonate | N/A******* | 100.398533 | 115.916245 | 111.416464 | N/A******* | 94.1928131 | 109.218905 |

PFOS and PFOA in water by SPE/LCMS - Water
ug/L

| Parameter Name | DL | RDL | MDL | IDL | | | |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0.02 | 0.02 | 0.0066 | 0 | | | |
| 8:2 Fluorotelomer sulfonate | 0.02 | 0.02 | 0.0066 | 0 | | | |
| N-ethylperfluorooctane sulfonamide | 0.02 | 0.02 | 0.01 | 0 | | | |
| EtFOSAA | 0.02 | 0.02 | 0.0033 | 0 | | | |
| N-ethylperfluorooctane sulfonamidoe | 0.02 | 0.02 | 0.0079 | 0 | | | |
| N-methylperfluorooctane sulfonamide | 0.02 | 0.02 | 0.013 | 0 | | | |
| MeFOSAA | 0.02 | 0.02 | 0.0029 | 0 | | | |
| N-methylperfluorooctanesulfonamidol | 0.02 | 0.02 | 0.012 | 0 | | | |
| Perfluorobutanoic acid | 0.02 | 0.02 | 0.0055 | 0 | | | |
| Perfluorobutane Sulfonate (PFBS) | 0.02 | 0.02 | 0.0054 | 0 | | | |
| Perfluorodecane Sulfonate | 0.02 | 0.02 | 0.006 | 0 | | | |
| Perfluoroheptanoic Acid (PFHpA) | 0.02 | 0.02 | 0.0074 | 0 | | | |
| Perfluoroheptane sulfonate | 0.02 | 0.02 | 0.008 | 0 | | | |
| Perfluorohexanoic Acid (PFHxA) | 0.02 | 0.02 | 0.0035 | 0 | | | |
| Perfluorohexane Sulfonate (PFHxS) | 0.02 | 0.02 | 0.0056 | 0 | | | |
| Perfluorononanoic Acid (PFNA) | 0.02 | 0.02 | 0.0087 | 0 | | | |
| Perfluorooctane Sulfonamide (PFOSA) | 0.02 | 0.02 | 0.0034 | 0 | | | |
| Perfluoropentanoic Acid (PFPeA) | 0.02 | 0.02 | 0.0075 | 0 | | | |
| Perfluorotetradecanoic Acid | 0.02 | 0.02 | 0.0027 | 0 | | | |
| Perfluorotridecanoic Acid | 0.02 | 0.02 | 0.0038 | 0 | | | |
| Perfluoroundecanoic Acid (PFUnA) | 0.02 | 0.02 | 0.0025 | 0 | | | |
| Perfluorodecanoic Acid (PFDA) | 0.02 | 0.02 | 0.0061 | 0 | | | |
| Perfluorododecanoic Acid (PFDoA) | 0.02 | 0.02 | 0.005 | 0 | | | |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.02 | 0.02 | 0.0033 | 0 | | | |
| Perfluorooctane Sulfonate (PFOS) | 0.02 | 0.02 | 0.006 | 0 | | | |
| 13C2-6:2 Fluorotelomer sulfonate | | | | | | | |
| 13C2-8:2 Fluorotelomer sulfonate | | | | | | | |
| 13C2-perfluorotetradecanoic acid | | | | | | | |
| 13C4-Perfluorobutanoic acid | | | | | | | |
| D3-MeFOSAA | | | | | | | |
| D5-EtFOSAA | | | | | | | |
| N-methyl-d3-perfluorooctane sulfona | | | | | | | |
| N-ethyl-d5-perfluorooctane sulfonam | | | | | | | |
| 13C2-Perfluorodecanoic acid | | | | | | | |
| 13C2-Perfluorododecanoic acid | | | | | | | |
| 13C2-Perfluorohexanoic acid | | | | | | | |
| 13C2-Perfluoroundecanoic acid | | | | | | | |
| 13C4-Perfluoroheptanoic acid | | | | | | | |
| 13C5-Perfluorononanoic acid | | | | | | | |
| 13C4-Perfluorooctanoic acid | | | | | | | |
| 13C4-Perfluorooctanesulfonate | | | | | | | |
| 13C5-Perfluoropentanoic acid | | | | | | | |
| 13C8-Perfluorooctane Sulfonamide | | | | | | | |
| 18O2-Perfluorohexanesulfonate | | | | | | | |




Manual calculation for SpK:

8.2275 = 0.416127 x - 0.080462

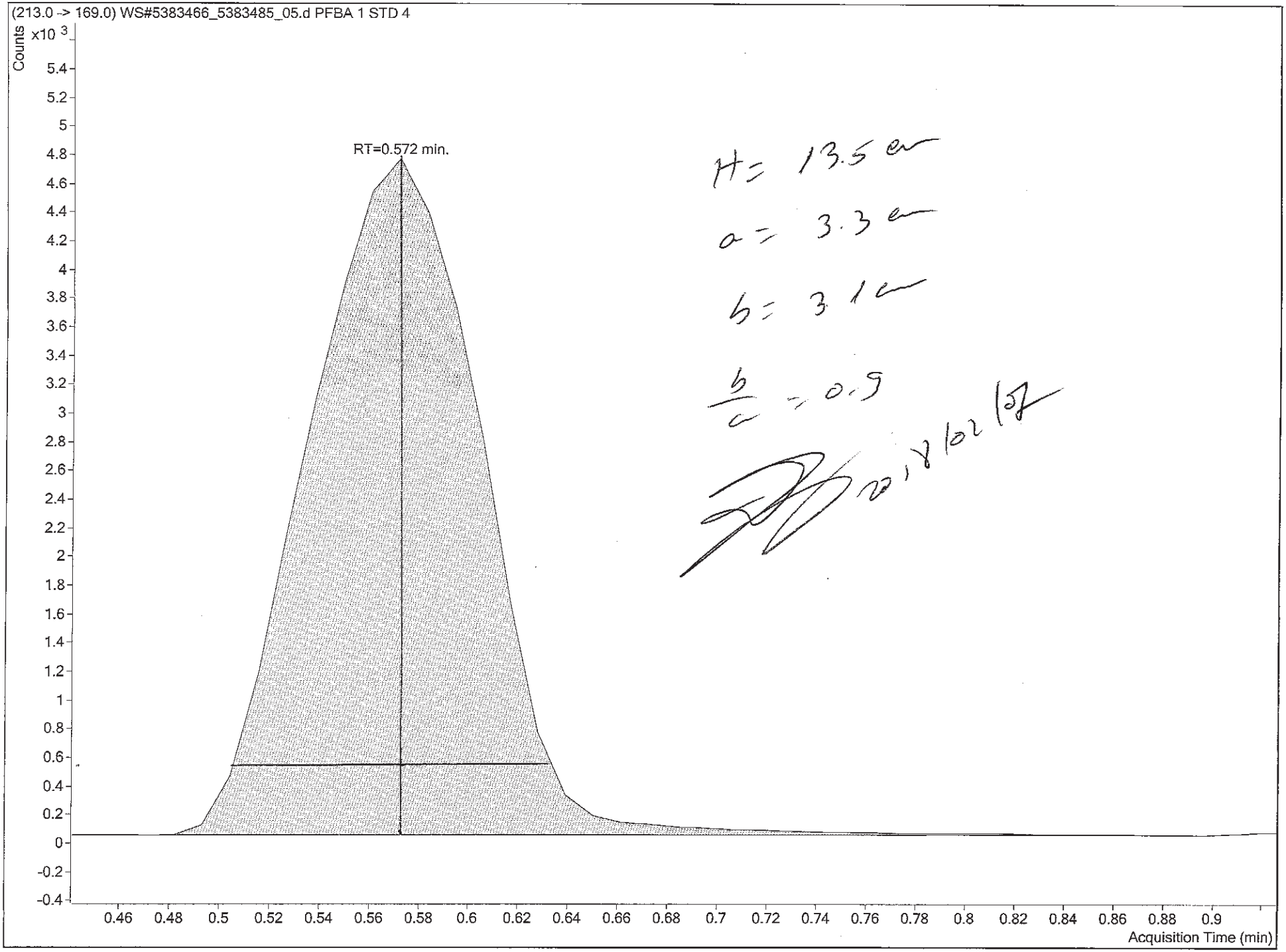
x = 19.964967 x 0.024

= 0.479159 µg/L

$\frac{0.479159}{0.5} \times 100 = 95.8\ \%$

AD
2018/02/08

2018/02/07



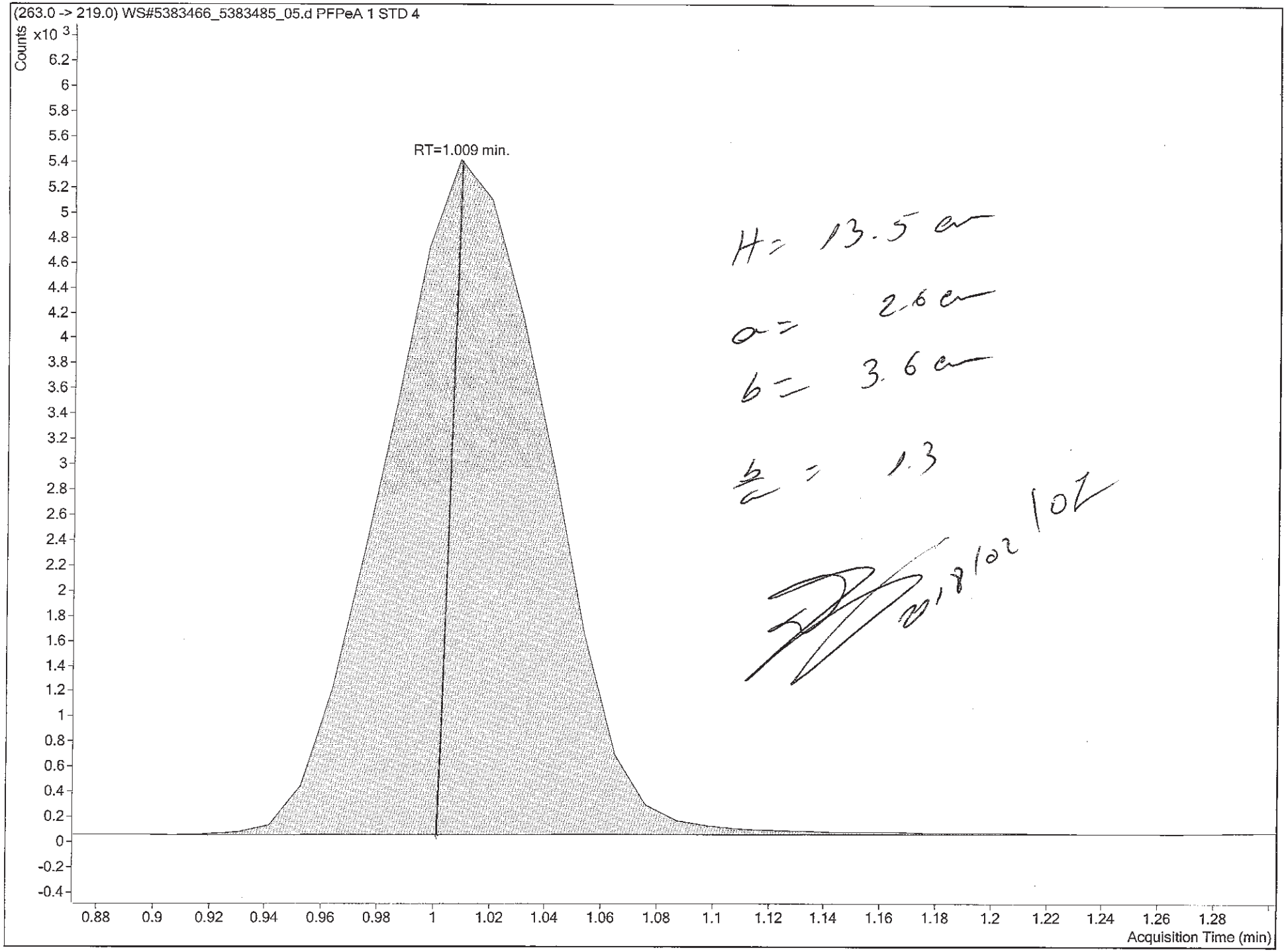

H = 13.5 cm

a = 3.3 cm

b = 3.1 cm

$\frac{b}{a} = 0.9$

2018/02/07




H = 13.5 cm

a = 2.6 cm

b = 3.6 cm

b/a = 1.3

10/8/02

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/03

Test Code: **PFOSALCM-W**

Worksheet Number: **5383466**

| Sample Number | Parameter Code | Parameter | |
|---|---|---|---|
| FZA783-01 | ETFOSAA | EtFOSAA | * |
| FZA784-01 | MEFOSAA | MeFOSAA | * |
| FZA785-01 | PFBS | Perfluorobutane Sulfonate (PFBS) | |
| FZA786-01 | PFHPA | Perfluoroheptanoic Acid (PFHpA) | |
| FZA788-01 | PFHXA | Perfluorohexanoic Acid (PFHxA) | |
| FZA789-01 | PFHXS | Perfluorohexane Sulfonate (PFHxS) | |
| FZA790-01 | PFNA | Perfluorononanoic Acid (PFNA) | |
| FZA791-01 | PFTEDA | Perfluorotetradecanoic Acid | |
| FZA792-01 | PFTRDA | Perfluorotridecanoic Acid | |
| FZH338-01 | PFUNA | Perfluoroundecanoic Acid (PFUnA) | |
| FZH339-01 | PFDA | Perfluorodecanoic Acid (PFDA) | |
| FZH340-01 | PFDOA | Perfluorododecanoic Acid (PFDoA) | |
| FZH342-01 | PFOA | Perfluoro-n-Octanoic Acid (PFOA) | |
| FZH343-01 | PFOS | Perfluorooctane Sulfonate (PFOS) | |
| FZH336-01 | NONE | NONE | |
| FZH341-01 | | | |

2018/02/03

* - This parameter is usually off, but will be reported for this group of samples!

# WorkSheet 5383466 Instrument Sequences

| | | |
|---|---|---|
| 1. | 5383466:MTRX SPK | MTRX SPK |
| 2. | 5383466:MTRX SPK:D1 | MTRX SPK :D1 |
| 3. | 5383466:SPIKE | SPIKE |
| 4. | 5383466:BLANK | BLANK |
| 5. | 5383466:FZA783-01 | OLD-002-51A-0118 |
| 6. | 5383466:FZA784-01 | OLD-002-51A-0118D |
| 7. | 5383466:FZA785-01 | OLD-002-11A-0118 |
| 8. | 5383466:FZA786-01 | OLD-002-03A-0118 |
| 9. | 5383466:FZA788-01 | EB-GW-012218-1 |
| 10. | 5383466:FZA789-01 | FB-OLD-012218-1 |
| 11. | 5383466:FZA790-01 | FB-OLD-012218-2 |
| 12. | 5383466:FZA791-01 | EB-WC-012218-1 |
| 13. | 5383466:FZA792-01 | EB-DPT-012218-1 |
| 14. | 5383466:FZH336-01 | [redacted] |
| 15. | 5383466:FZH338-01 | [redacted] |
| 16. | 5383466:FZH339-01 | [redacted] |
| 17. | 5383466:FZH340-01 | [redacted] |
| 18. | 5383466:FZH341-01 | [redacted] |
| 19. | 5383466:FZH342-01 | [redacted] |
| 20. | 5383466:FZH343-01 | [redacted] |

2018/02/03

# Worklist Report

Agilent Technologies

Maxxam Analytics

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180206_Low.wkl

**Operator Name:** ---
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\Data\PFC\20180206\WS#5383466_5383485
**Pre-Worklist Script:** ---
**Post-Worklist Script:** SCP_InstrumentStandby(){MH_Acq_Scripts.exe}
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** Column #198
MP A1: Solution# 265 (FSRE18)
MP B1: Methanol lot# SHBJ6339, Sigma

20180206 6M

2018/02/06

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P2 | |

**Worklist Table**

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Solvent | P2-A1 | PFC_Water_Low.m | WS#5383466_5383485_01.d | Sample | | As Method | - |
| 2 | STD 1 | P2-A2 | PFC_Water_Low.m | WS#5383466_5383485_02.d | Calibration | STD 1 | As Method | - |
| 3 | STD 2 | P2-A3 | PFC_Water_Low.m | WS#5383466_5383485_03.d | Calibration | STD 2 | As Method | - |
| 4 | STD 3 | P2-A4 | PFC_Water_Low.m | WS#5383466_5383485_04.d | Calibration | STD 3 | As Method | - |
| 5 | STD 4 | P2-A5 | PFC_Water_Low.m | WS#5383466_5383485_05.d | Calibration | STD 4 | As Method | - |
| 6 | STD 5 | P2-A6 | PFC_Water_Low.m | WS#5383466_5383485_06.d | Calibration | STD 5 | As Method | - |
| 7 | STD 6 | P2-A7 | PFC_Water_Low.m | WS#5383466_5383485_07.d | Calibration | STD 6 | As Method | - |

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# Worklist Report

Agilent Technologies

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 8 | IB | P2-A8 | PFC_Water_Low.m | WS#5383466_53834 85_08.d | Sample | | As Method | - |
| 9 | ICV | P2-A9 | PFC_Water_Low.m | WS#5383466_53834 85_09.d | QC | ICV | As Method | - |
| 10 | ISC | P2-A2 | PFC_Water_Low.m | WS#5383466_53834 85_10.d | ConCal | STD 1 | As Method | - |
| 11 | 5383466:BLANK | P2-B1 | PFC_Water_Low.m | WS#5383466_53834 85_11.d | Sample | | As Method | - |
| 12 | 5383466:SPIKE | P2-B2 | PFC_Water_Low.m | WS#5383466_53834 85_12.d | QC | ICV | As Method | - |
| 13 | 5383466:MTRX SPK | P2-B3 | PFC_Water_Low.m | WS#5383466_53834 85_13.d | QC | ICV | As Method | - |
| 14 | 5383466:MTRX SPK:D1 | P2-B4 | PFC_Water_Low.m | WS#5383466_53834 85_14.d | Sample | | As Method | - |
| 15 | IB | P2-A8 | PFC_Water_Low.m | WS#5383466_53834 85_15.d | Sample | | As Method | - |
| 16 | 5383466:FZA783-01 | P2-B5 | PFC_Water_Low.m | WS#5383466_53834 85_16.d | Sample | | As Method | - |
| 17 | 5383466:FZA784-01 | P2-B6 | PFC_Water_Low.m | WS#5383466_53834 85_17.d | Sample | | As Method | - |
| 18 | 5383466:FZA785-01 | P2-B7 | PFC_Water_Low.m | WS#5383466_53834 85_18.d | Sample | | As Method | - |
| 19 | 5383466:FZA786-01 | P2-B8 | PFC_Water_Low.m | WS#5383466_53834 85_19.d | Sample | | As Method | - |
| 20 | 5383466:FZA788-01 | P2-B9 | PFC_Water_Low.m | WS#5383466_53834 85_20.d | Sample | | As Method | - |
| 21 | 5383466:FZA789-01 | P2-C1 | PFC_Water_Low.m | WS#5383466_53834 85_21.d | Sample | | As Method | - |
| 22 | 5383466:FZA790-01 | P2-C2 | PFC_Water_Low.m | WS#5383466_53834 85_22.d | Sample | | As Method | - |
| 23 | 5383466:FZA791-01 | P2-C3 | PFC_Water_Low.m | WS#5383466_53834 85_23.d | Sample | | As Method | - |
| 24 | 5383466:FZA792-01 | P2-C4 | PFC_Water_Low.m | WS#5383466_53834 85_24.d | Sample | | As Method | - |
| 25 | CCV | P2-A5 | PFC_Water_Low.m | WS#5383466_53834 85_25.d | ConCal | STD 4 | As Method | - |
| 26 | 5383466:FZH336-01 | P2-C5 | PFC_Water_Low.m | WS#5383466_53834 85_26.d | Sample | | As Method | - |
| 27 | 5383466:FZH338-01 | P2-C6 | PFC_Water_Low.m | WS#5383466_53834 85_27.d | Sample | | As Method | - |
| 28 | 5383466:FZH339-01 | P2-C7 | PFC_Water_Low.m | WS#5383466_53834 85_28.d | Sample | | As Method | - |
| 29 | 5383466:FZH340-01 | P2-C8 | PFC_Water_Low.m | WS#5383466_53834 85_29.d | Sample | | As Method | - |
| 30 | 5383466:FZH341-01 | P2-C9 | PFC_Water_Low.m | WS#5383466_53834 85_30.d | Sample | | As Method | - |

Maxxam Analytics

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# Worklist Report

Agilent Technologies

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 31 | 5383466:FZH342-01 | P2-D1 | PFC_Water_Low.m | WS#5383466_53834 85_31.d | Sample | | As Method | - |
| 32 | 5383466:FZH343-01 | P2-D2 | PFC_Water_Low.m | WS#5383466_53834 85_32.d | Sample | | As Method | - |
| 33 | CCV | P2-A5 | PFC_Water_Low.m | WS#5383466_53834 85_33.d | ConCal | STD 4 | As Method | - |
| 34 | 5383485:FZH337-01 | P2-D3 | PFC_Water_Low.m | WS#5383466_53834 85_34.d | Sample | | As Method | - |
| 35 | 5383485:MTRX SPK | P2-D4 | PFC_Water_Low.m | WS#5383466_53834 85_35.d | Sample | | As Method | - |
| 36 | 5383485:MTRX SPK:D1 | P2-D5 | PFC_Water_Low.m | WS#5383466_53834 85_36.d | Sample | | As Method | - |
| 37 | IB | P2-A8 | PFC_Water_Low.m | WS#5383466_53834 85_37.d | Sample | | As Method | - |
| 38 | CCV | P2-A5 | PFC_Water_Low.m | WS#5383466_53834 85_38.d | ConCal | STD 4 | As Method | - |

Maxxam Analytics

# Worklist Report

Agilent Technologies

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180206_Low_FOSAA.wkl

Maxxam Analytics

**Operator Name:** ---
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\Data\PFC\20180206\WS#5383466_5383485_FOSAA
**Pre-Worklist Script:** ---
**Post-Worklist Script:** SCP_InstrumentStandby(){MH_Acq_Scripts.exe}
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** Column #198
MP A1: Solution# 265 (FSRE18)
MP B2: Solution# 272 [FSRE18]

2018/02/06 MG

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P2 | |

**Worklist Table**

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Solvent | P2-A1 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_01.d | Sample | | As Method | - |
| 2 | STD 1 | P2-A2 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_02.d | Calibration | STD 1 | As Method | - |
| 3 | STD 2 | P2-A3 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_03.d | Calibration | STD 2 | As Method | - |
| 4 | STD 3 | P2-A4 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_04.d | Calibration | STD 3 | As Method | - |
| 5 | STD 4 | P2-A5 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_05.d | Calibration | STD 4 | As Method | - |
| 6 | STD 5 | P2-A6 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_06.d | Calibration | STD 5 | As Method | - |
| 7 | STD 6 | P2-A7 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_07.d | Calibration | STD 6 | As Method | - |
| 8 | IB | P2-A8 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_08.d | Sample | | As Method | - |

2018/02/06

# Worklist Report

Agilent Technologies

Maxxam Analytics

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 9 | ICV | P2-A9 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_09.d | QC | ICV | As Method | - |
| 10 | ISC | P2-A2 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_10.d | ConCal | STD 1 | As Method | - |
| 11 | 5383466:BLANK | P2-B1 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_11.d | Sample | | As Method | - |
| 12 | 5383466:SPIKE | P2-B2 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_12.d | QC | ICV | As Method | - |
| 13 | 5383466:MTRX SPK | P2-B3 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_13.d | QC | ICV | As Method | - |
| 14 | 5383466:MTRX SPK:D1 | P2-B4 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_14.d | Sample | | As Method | - |
| 15 | IB | P2-A8 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_15.d | Sample | | As Method | - |
| 16 | 5383466:FZA783-01 | P2-B5 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_16.d | Sample | | As Method | - |
| 17 | 5383466:FZA784-01 | P2-B6 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_17.d | Sample | | As Method | - |
| 18 | 5383466:FZA785-01 | P2-B7 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_18.d | Sample | | As Method | - |
| 19 | 5383466:FZA786-01 | P2-B8 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_19.d | Sample | | As Method | - |
| 20 | 5383466:FZA788-01 | P2-B9 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_20.d | Sample | | As Method | - |
| 21 | 5383466:FZA789-01 | P2-C1 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_21.d | Sample | | As Method | - |
| 22 | 5383466:FZA790-01 | P2-C2 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_22.d | Sample | | As Method | - |
| 23 | 5383466:FZA791-01 | P2-C3 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_23.d | Sample | | As Method | - |
| 24 | 5383466:FZA792-01 | P2-C4 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_24.d | Sample | | As Method | - |
| 25 | CCV | P2-A5 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_25.d | ConCal | STD 4 | As Method | - |
| 26 | 5383466:FZH336-01 | P2-C5 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_26.d | Sample | | As Method | - |
| 27 | 5383466:FZH338-01 | P2-C6 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_27.d | Sample | | As Method | - |
| 28 | 5383466:FZH339-01 | P2-C7 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_28.d | Sample | | As Method | - |
| 29 | 5383466:FZH340-01 | P2-C8 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_29.d | Sample | | As Method | - |
| 30 | 5383466:FZH341-01 | P2-C9 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_30.d | Sample | | As Method | - |
| 31 | 5383466:FZH342-01 | P2-D1 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_31.d | Sample | | As Method | - |
| 32 | 5383466:FZH343-01 | P2-D2 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_32.d | Sample | | As Method | - |
| 33 | CCV | P2-A5 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_33.d | ConCal | STD 4 | As Method | - |
| 34 | 5383485:FZH337-01 | P2-D3 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_34.d | Sample | | As Method | - |



D:\MassHunter\Worklists\PFCs\PFC_180206_Low_FOSAA.wkl

Report generation date: 06-Feb-2018 12:51:12 PM

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 35 | 5383485:MTRX SPK | P2-D4 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_35.d | Sample | | As Method | - |
| 36 | 5383485:MTRX SPK:D1 | P2-D5 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_36.d | Sample | | As Method | - |
| 37 | IB | P2-A8 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_37.d | Sample | | As Method | - |
| 38 | CCV | P2-A5 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_38.d | ConCal | STD 4 | As Method | - |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| STD 1 | - | 2018/02/06 6:11 PM | PFC_Water_Low.m | WS#5383466_5383485_02.d | P2-A2 |
| STD 2 | - | 2018/02/06 6:16 PM | PFC_Water_Low.m | WS#5383466_5383485_03.d | P2-A3 |
| STD 3 | - | 2018/02/06 6:21 PM | PFC_Water_Low.m | WS#5383466_5383485_04.d | P2-A4 |
| STD 4 | - | 2018/02/06 6:26 PM | PFC_Water_Low.m | WS#5383466_5383485_05.d | P2-A5 |
| STD 5 | - | 2018/02/06 6:31 PM | PFC_Water_Low.m | WS#5383466_5383485_06.d | P2-A6 |
| STD 6 | - | 2018/02/06 6:36 PM | PFC_Water_Low.m | WS#5383466_5383485_07.d | P2-A7 |
| IB | - | 2018/02/06 6:41 PM | PFC_Water_Low.m | WS#5383466_5383485_08.d | P2-A8 |
| ICV | - | 2018/02/06 6:46 PM | PFC_Water_Low.m | WS#5383466_5383485_09.d | P2-A9 |
| ISC | - | 2018/02/06 6:51 PM | PFC_Water_Low.m | WS#5383466_5383485_10.d | P2-A2 |
| 5383466:BLANK | - | 2018/02/06 6:56 PM | PFC_Water_Low.m | WS#5383466_5383485_11.d | P2-B1 |
| 5383466:SPIKE | - | 2018/02/06 7:01 PM | PFC_Water_Low.m | WS#5383466_5383485_12.d | P2-B2 |
| 5383466:MTRX SPK | FZA786 | 2018/02/06 7:06 PM | PFC_Water_Low.m | WS#5383466_5383485_13.d | P2-B3 |
| 5383466:MTRX SPK:D1 | FZA786 | 2018/02/06 7:11 PM | PFC_Water_Low.m | WS#5383466_5383485_14.d | P2-B4 |
| IB | - | 2018/02/06 7:16 PM | PFC_Water_Low.m | WS#5383466_5383485_15.d | P2-A8 |
| 5383466:FZA783-01 | - | 2018/02/06 7:21 PM | PFC_Water_Low.m | WS#5383466_5383485_16.d | P2-B5 |
| 5383466:FZA784-01 | - | 2018/02/06 7:25 PM | PFC_Water_Low.m | WS#5383466_5383485_17.d | P2-B6 |
| 5383466:FZA785-01 | - | 2018/02/06 7:30 PM | PFC_Water_Low.m | WS#5383466_5383485_18.d | P2-B7 |
| 5383466:FZA786-01 | - | 2018/02/06 7:35 PM | PFC_Water_Low.m | WS#5383466_5383485_19.d | P2-B8 |
| 5383466:FZA788-01 | - | 2018/02/06 7:40 PM | PFC_Water_Low.m | WS#5383466_5383485_20.d | P2-B9 |
| 5383466:FZA789-01 | - | 2018/02/06 7:45 PM | PFC_Water_Low.m | WS#5383466_5383485_21.d | P2-C1 |
| 5383466:FZA790-01 | - | 2018/02/06 7:50 PM | PFC_Water_Low.m | WS#5383466_5383485_22.d | P2-C2 |
| 5383466:FZA791-01 | - | 2018/02/06 7:55 PM | PFC_Water_Low.m | WS#5383466_5383485_23.d | P2-C3 |
| 5383466:FZA792-01 | - | 2018/02/06 8:00 PM | PFC_Water_Low.m | WS#5383466_5383485_24.d | P2-C4 |
| CCV | - | 2018/02/06 8:05 PM | PFC_Water_Low.m | WS#5383466_5383485_25.d | P2-A5 |
| 5383466:FZH336-01 | - | 2018/02/06 8:10 PM | PFC_Water_Low.m | WS#5383466_5383485_26.d | P2-C5 |
| 5383466:FZH338-01 | - | 2018/02/06 8:15 PM | PFC_Water_Low.m | WS#5383466_5383485_27.d | P2-C6 |
| 5383466:FZH339-01 | - | 2018/02/06 8:20 PM | PFC_Water_Low.m | WS#5383466_5383485_28.d | P2-C7 |
| 5383466:FZH340-01 | - | 2018/02/06 8:25 PM | PFC_Water_Low.m | WS#5383466_5383485_29.d | P2-C8 |
| 5383466:FZH341-01 | - | 2018/02/06 8:30 PM | PFC_Water_Low.m | WS#5383466_5383485_30.d | P2-C9 |
| 5383466:FZH342-01 | - | 2018/02/06 8:34 PM | PFC_Water_Low.m | WS#5383466_5383485_31.d | P2-D1 |
| 5383466:FZH343-01 | - | 2018/02/06 8:39 PM | PFC_Water_Low.m | WS#5383466_5383485_32.d | P2-D2 |
| CCV | - | 2018/02/06 8:44 PM | PFC_Water_Low.m | WS#5383466_5383485_33.d | P2-A5 |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| STD 1 | - | 2018/02/06 12:28 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_02.d | P2-A2 |
| STD 2 | - | 2018/02/06 12:30 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_03.d | P2-A3 |
| STD 3 | - | 2018/02/06 12:32 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_04.d | P2-A4 |
| STD 4 | - | 2018/02/06 12:35 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_05.d | P2-A5 |
| STD 5 | - | 2018/02/06 12:37 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_06.d | P2-A6 |
| STD 6 | - | 2018/02/06 12:40 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_07.d | P2-A7 |
| IB | - | 2018/02/06 12:42 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_08.d | P2-A8 |
| ICV | - | 2018/02/06 12:44 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_09.d | P2-A9 |
| ISC | - | 2018/02/06 12:47 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_10.d | P2-A2 |
| 5383466:BLANK | - | 2018/02/06 12:49 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_11.d | P2-B1 |
| 5383466:SPIKE | - | 2018/02/06 12:52 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_12.d | P2-B2 |
| 5383466:MTRX SPK | FZA786 | 2018/02/06 12:54 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_13.d | P2-B3 |
| 5383466:MTRX SPK:D1 | FZA786 | 2018/02/06 12:57 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_14.d | P2-B4 |
| IB | - | 2018/02/06 12:59 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_15.d | P2-A8 |
| 5383466:FZA783-01 | - | 2018/02/06 1:01 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_16.d | P2-B5 |
| 5383466:FZA784-01 | - | 2018/02/06 1:04 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_17.d | P2-B6 |
| 5383466:FZA785-01 | - | 2018/02/06 1:06 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_18.d | P2-B7 |
| 5383466:FZA786-01 | - | 2018/02/06 1:09 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_19.d | P2-B8 |
| 5383466:FZA788-01 | - | 2018/02/06 1:11 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_20.d | P2-B9 |
| 5383466:FZA789-01 | - | 2018/02/06 1:13 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_21.d | P2-C1 |
| 5383466:FZA790-01 | - | 2018/02/06 1:16 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_22.d | P2-C2 |
| 5383466:FZA791-01 | - | 2018/02/06 1:18 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_23.d | P2-C3 |
| 5383466:FZA792-01 | - | 2018/02/06 1:21 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_24.d | P2-C4 |
| CCV | - | 2018/02/06 1:23 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_25.d | P2-A5 |
| 5383466:FZH336-01 | - | 2018/02/06 1:25 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_26.d | P2-C5 |
| 5383466:FZH338-01 | - | 2018/02/06 1:28 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_27.d | P2-C6 |
| 5383466:FZH339-01 | - | 2018/02/06 1:30 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_28.d | P2-C7 |
| 5383466:FZH340-01 | - | 2018/02/06 1:33 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_29.d | P2-C8 |
| 5383466:FZH341-01 | - | 2018/02/06 1:35 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_30.d | P2-C9 |
| 5383466:FZH342-01 | - | 2018/02/06 1:38 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_31.d | P2-D1 |
| 5383466:FZH343-01 | - | 2018/02/06 1:40 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_32.d | P2-D2 |
| CCV | - | 2018/02/06 1:42 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_33.d | P2-A5 |
| CCV | - | 2018/02/06 2:52 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_39.d | P2-A5 |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| 5383466:SPIKE:R | Not used | 2018/02/06 2:55 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_40.d | P2-B2 |
| CCV | - | 2018/02/06 2:57 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_41.d | P2-A5 |

## DoD Projects - Internal Data Validation Checklist

Run date: 2018/02/08

Worksheet # (s): 5386102

Analysis: PFOSALEM-W

| | Primary review by the analyst - 1st 100 % analysis review | 1st 100% review yes | no | n/a | *2nd 100% review |
|---|---|---|---|---|---|
| 1 | Sample analyses meet hold time criteria | ✓ | | | ✓ |
| 2 | Analysis set-up meets method criteria | ✓ | | | ✓ |
| 3 | Tuning and correct calibration used - criteria meets method criteria | ✓ | | | ✓ |
| 4 | SQC/Control Charts updated, analysis in statistical/method control | ✓ | | | ✓ |
| 5 | Internal area counts checked (if applicable) | ✓ | | | ✓ |
| 6 | LCS, SRM are within acceptance criteria | ✓ | | | ✓ |
| 7 | Surrogate Recovery(s) is within acceptance criteria | | ✓ | | ✓ |
| 8 | Method Blank meets acceptance criteria | ✓ | | | ✓ |
| 9 | Matrix Spike recovery(s) meets acceptance criteria | | ✓ | | ✓ |
| 10 | Duplicate precision meets acceptance criteria | ✓ | | | ✓ |
| 11 | QC is documented on the run logs | ✓ | | | ✓ |
| 12 | Runs checked for carryover | ✓ | | | ✓ |
| 13 | Prep log / worksheet(s) are present, signed / dated by a prep / instrument analysts | ✓ | | | ✓ |
| 14 | Initial weights, splits, impringer volumes (where applicable) are documented | ✓ | | | ✓ |
| 15 | Standards and reagents traceable to Certificates of Analysis | ✓ | | | ✓ |
| 16 | Samples above calibration range diluted and reanalyzed | | | ✓ | ✓ |
| 17 | Dilution factors (where justified) have been checked for correctness and entered | ✓ | | | ✓ |
| 18 | Analytical observations/anomalies documented in LIMS | | | ✓ | ✓ |
| 19 | Random calculation checked and in correct units | ✓ | | | ✓ |
| 20 | If corrective actions were applied they are documented, initialed & dated | | | ✓ | ✓ |
| 21 | Manual integration – before & after data with a reason included, initialed & dated | | | ✓ | ✓ |
| 22 | Transferred data is validated in LIMS for correctness | ✓ | | | ✓ |
| 23 | Data package assembled (where required) | ✓ | | | ✓ |

Reviewed by: AZ Date: 2018/02/09

Comments:

| | Secondary Supervisor/Qualified Data Review Staff - 2nd 100% verification review | yes | no | n/a |
|---|---|---|---|---|
| 1 | Repeats documented and referenced | ✓ | | |
| 2 | Method and sample deviations noted, anomalies described (if applicable) | | | ✓ |
| 3 | Data and QC validated in LIMS | ✓ | | |
| 4 | Random calculation checked | ✓ | | |
| 5 | Benchsheet (s) signed and dated | ✓ | | |
| 6 | Data Package (if required) checked for completeness | ✓ | | |

Reviewed by: SM Date: 2018/02/16

Comments: Samples FZJ934 reworked for PFOSA due to low recoveries of extracted IS. Sample FZA802 reworked for all parameters due to low recoveries of extracted IS.

*Note: 2nd 100% verification review documented by secondary qualified data review

Primary and Secondary Internal Data Review Check must be performed by a different person

# Worksheet Data Validation Checklist - Extractable Organics

Worksheet # 5386102 Testcode: PFOSALCM-W

| Sample Preparation | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Samples extracted within hold time | ✓ | | |
| 2 | Client sample ID verified against Lab ID (waters & oils) | ✓ | | |
| 3 | Parameter list and Client comments reviewed, (Spiking solutions matched to parameter list) | ✓ | | |
| 4 | Height of sediment or if sample was decanted, recorded on worksheet | ✓ | | |
| 5 | Method required QC processed with samples, maximum batch size = 20 client samples. | ✓ | | |
| 6 | Sample, duplicate, matrix spike appear similar, initial sample as well as final extract | ✓ | | |
| 7 | Sample weight or initial volume and extract final volume, aliquot factor clearly recorded. | ✓ | | |
| 8 | If performed any additional dilution clearly recorded | | | ✓ |
| 9 | Matrix spike / Duplicate performed on IOL samples if present | | | ✓ |
| 10 | Spiking solutions valid (haven't expired), ID and volume used clearly identified on worksheet | ✓ | | |
| 11 | Spiking process witnessed and signed off | ✓ | | |
| 12 | Extraction type recorded (N3A2B = neutral, 3 x acidic, 2 x basic) | | | ✓ |
| 13 | Sample prep deviations documented within CompliantPro as a Policy Deviation | | | ✓ |
| 14 | Job Remarks reviewed on 2nd page of worksheet. | ✓ | | |
| 15 | Worksheet and reagent tracking record completed and authorized. | ✓ | | |

Reviewed by: DM3 Date: 2018/02/06

Comments:

| Worksheet Approval | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Verified the position of the vials in autosampler against sequence list; signed off sequence list | | | |
| 2 | Calibration and CCV standards valid ( haven't expired) | | | |
| 3 | Initial calibration curve and DFTPP tune (if applicable) acceptable | | | |
| 4 | Continuing and Final CCV and DFTPP tune (if applicable) acceptable | | | |
| 5 | System performance check acceptable (if applicable) | | | |
| 6 | Internal standard responses acceptable | | | |
| 7 | Method blank meets acceptance criteria | | | |
| 8 | Lab Control Samples recoveries meets acceptance criteria | | | |
| 9 | Duplicate RPD meets acceptance criteria | | | |
| 10 | Matrix spike recoveries meets acceptance criteria | | | |
| 11 | Surrogate recoveries meets acceptance criteria | | | |
| 12 | Appropriate control charts updated | | | |
| 13 | Samples above calibration range diluted and reanalyzed | | | |
| 14 | Dilutions clearly documented on tracking record, inst file and verified during data upload | | | |
| 15 | Samples following high level samples checked for carryover. | | | |
| 16 | Mass spectra ion ratios acceptable for positive results, hardcopy in file. | | | |
| 17 | Analytical observations / anomalies documented | | | |
| 18 | DQW comments entered in LIMS, hardcopy in file | | | |
| 19 | Sample Prep section (above) reviewed and verified. | ✓ | | |
| 20 | WS Approval performed in LIMS | | | |

Reviewed by: Date:

Comments:

| Worksheet Validation | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Calibration, QC and sample results reviewed and determined acceptable | | | |
| 2 | Manual integrations verified | | | |
| 3 | Random calculation checked | | | |
| 4 | Data and QC validated in LIMS | | | |
| 5 | Comments reviewed for appropriateness | | | |
| 6 | Reworks / relogs documented in file | | | |
| 7 | Worksheet signed and dated, | | | |
| 8 | Worksheet approved and validated within LIMS | | | |

Reviewed by: Date:

Comments:

**WS# : 5386102**

Page #: 1/2

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Tuesday, February 06, 2018

Assigned to : Daniella McLean

Test Code : PFOSALCM-W

Instrument Id:

Test Description : PFOS and PFOA in water by LC-MS/MS

| | Job Number | Sample Number | D | Sample ID | ~~F~~ centrifuged sediments | ~~% Moisture~~ | Wt or Vol | Final Vol (mL) | DF or AF | # Cont | Expiry Date | Test DeadLine | Criteria | Extract Date | envi (ACB) (mg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,5 | | MTRX SPK | 0 | PFOS FZH347-01 | * | <0.1 | 125 | 3 | 1X | | | | | 2018/02/06 | 28 |
| 5,6 | | MTRX SPK | 1 | PFOS FZH347-01 | * | <0.1 | 125 | 3 | 1X | | | | | 2018/02/06 | 28 |
| 5,3 | | SPIKE | | PFOS | | 0 | 125 | 3 | 1X | | | | | 2018/02/06 | 33 |
| 5,1 | | BLANK | | | | 0 | 125 | 3 | 1X | | | | | 2018/02/06 | 32 |
| 5,8 | B818419 | *FZA801-01R | | FB-OLD-012318-3 | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/07 23:00 | DOD | 2018/01/31 | 29 |
| 5,10 | B818419 | *FZA802-01R | | EB-WC-012318-2 | * | <0.1 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/07 23:00 | DOD | 2018/01/31 | 27 |
| 5,12 | B818419 | *FZA803-01R | | EB-GW-012318-2 | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/07 23:00 | DOD | 2018/01/31 | 32 |
| 5,14 | B818419 | *FZA804-01R | | FB-OLD-012318-4 | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/07 23:00 | DOD | 2018/01/31 | 29 |
| 5,16 | B818419 | *FZA805-01R | | EB-DPT-012318-2 | | 0 | 120 | 3 | 1X | 2 | 2018/02/06 | 2018/02/07 23:00 | DOD | 2018/01/31 | 35 |
| 5,18 | B818419 | *FZA806-01R | | OLD-02-09A-0118 | * | <0.1 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/07 23:00 | DOD | 2018/01/31 | 25 |
| 5,20 | B819794 | *FZH328-01R | | [redacted] | * | <0.1 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/01/31 | 25 |
| 5,22 | B819794 | *FZH329-01R | | [redacted] | * | <0.1 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/01/31 | 27 |
| 5,24 | B819794 | *FZH330-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/01/31 | 28 |
| 6,1 | B819794 | *FZH335-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/01/31 | 29 |
| 6,3 | B819794 | *FZH344-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/02/05 | 33 |
| 6,5 | B819794 | *FZH345-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/02/05 | 31 |
| 6,7 | B819794 | *FZH346-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/02/05 | 27 |
| 6,9 | B819794 | *FZH347-01R | | [redacted] | * | <0.1 | 125 | 3 | 1X | 6 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/02/05 | 29 |
| 6,11 | B819794 | *FZH348-01R | | [redacted] | * | <0.1 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/02/05 | 27 |
| 6,14 | B820260 | *FZJ934-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 23:00 | DOD | 2018/02/06 | 28 |

2018/02/06 DM3

Remarks:

Samples extracted by: Daniella McLean DM3 2018/02/06

Instrumentation performed by: [signature] Date: 2018/02/07

Calculations performed by: [signature] Date: 2018/02/09

Validated by: [signature] Date: 2018/02/16

| Job No. | Rep / Client Name / Remarks | Contact | Client Tier | National |
|---|---|---|---|---|
| GB818419 | SP8 Earth Toxics Inc | Rick Carr | Tier 5 (Enviro.) | AECOM |
| | NREG. PFOSALCM-W MS/MSD required on FZA786 Level IV Package and TetraTech EDD required Project #: JM11 NTC Orlando | | | |
| GB819794 | [redacted] | | | |
| GB820260 | | | | |

| Job | Sample | Lab Comments |
|---|---|---|
| | MTRX SPK | |
| | MTRX SPK | |
| | SPIKE | |
| | BLANK | |
| B818419 | FZA801-01R | |
| B818419 | FZA802-01R | Sample was clogged; only 90mL of sample passed thru SPE. |
| B818419 | FZA803-01R | |
| B818419 | FZA804-01R | |
| B818419 | FZA805-01R | |
| B818419 | FZA806-01R | |
| B819794 | FZH328-01R | |
| B819794 | FZH329-01R | |
| B819794 | FZH330-01R | |
| B819794 | FZH335-01R | |
| B819794 | FZH344-01R | |
| B819794 | FZH345-01R | |
| B819794 | FZH346-01R | |
| B819794 | FZH347-01R | |
| B819794 | FZH348-01R | |
| B820260 | FZJ934-01R | |

S1 25
S2 50
S3 150
} SK-7377

S4 37.5
S5 75
S6 125
} I-5297

ICV 62.5 - I-5299

IB 2850µL MeOH + 150µL IS NPB 2018/02/06



Folder: 20180207 2018/02/09

Worksheet Reagent Tracking Record  Worksheet # 5386102

| Surrogate/Spike solutions | √ | Solution ID # | Conc. | Blk-Spk Volume (µL) Solid | Blk-Spk Volume (µL) Liquid | MS Volume (µL) Solid | MS Volume (µL) Liquid | Samples Volume (µL) Solid | Samples Volume (µL) Liquid |
|---|---|---|---|---|---|---|---|---|---|
| DGT Spike | | | 100 ug/mL | 60 | 30 | 60 | 30 | NA | NA |
| Diquat Dibromide | | | 50 ug/mL | NA | 350 | NA | 350 | NA | NA |
| Explosives Spiking solution A | | | 20 ug/mL | 250 | 100 | 250 | 100 | NA | NA |
| Explosives Spiking solution B | | | 20/80 ug/mL | 250 | 100 | 250 | 100 | NA | NA |
| Formaldehyde Spike | | | 100 ug/mL | 25 | 25 | 25 | 25 | NA | NA |
| Glyphosate Spike | | | 25 ug/mL | 500 | 20 | 500 | 20 | NA | NA |
| Nonylphenol Ethoxylate Spike | | | 100 ug/mL | 100 | 100 | 100 | 100 | NA | NA |
| Nonylphenol Spike | | | 10 ug/mL | 100 | 100 | 100 | 100 | NA | NA |
| Paraquat Cl Tetrahydrate | | | 20 ug/mL | NA | 125 | NA | 125 | NA | NA |
| Perchlorate Standard Spike | | | 10 ng/mL | NA | 100 | NA | 100 | NA | NA |
| Perchlorate Standard Spike | | | 500 ng/mL | 40 | NA | 40 | NA | NA | NA |
| Perchlorate O-18 Internal Standard | | | 0.10 ng/uL | 20 | 20 | 20 | 20 | 20 | 20 |
| Morpholine Second Source Working Std | | | 2500 ug/L | NA | 80 | NA | 80 | NA | NA |
| Morpholine-D8 Internal Standard | | | 10 ug/mL | NA | 50 | NA | 50 | NA | 50 |
| Sterll Second Source Spiking Solution | | | NA | 20 | NA | 20 | NA | NA | NA |
| Sterilants Comp. IS Working Solution | | | 3 ug/mL | 50 | NA | 50 | NA | 50 | NA |
| Comp. PFC Working Solution A | ✓ | I-5299 (1/3) KPM | 1ug/mL | 75 | 21 (62.5) | 75 | 21 (62.5) | NA | NA |
| PFC Internal Standard Solution | ✓ | SI-6763 (3/4) KPM | 50/125 ng/mL | 200 | 100 (150) | 200 | 100 (150) | 200 | 100/(150) |
| PFC Injection IS | ✓ | SI-6716 (4/4) KPM | 400 ng/mL | 20 | 20 | 20 | 20 | 20 | 20 |
| ICV | ✓ | I-5299 (1/3) | 1ug/mL | | 62.5 | | | | |

| Solvent/Reagent | √ | Lot No. | Date Opened | Solvent/Reagent | √ | Lot No. | Date Opened/ Prepared |
|---|---|---|---|---|---|---|---|
| DCM | | | | 50% NaOH | | | |
| Ottawa Sand | | | | o-Phosphoric Acid | | | |
| Methanol | ✓ | SHBJ7572 | 2018/02/06 | Borax | | | |
| 2-Propanol (IPA) | | | | Calcium Chloride | | | |
| Acetonitrile | | | | EDTA | | | |
| Sodium Sulfate | | | | Phosphate Buffer | | | |
| 70:30 Methanol: Water | | | | Sodium Thiosulphate | | | |
| 60:40 Water: Methanol | ✓ | PRLRE-108-341 | | DNPH | | | |
| DCM:Ethyl Ether (75:25) | | | | FMOC | | | |
| Hexane:IPA (98:2) | | | | 5M Acetate Buffer | ✓ | PRLRE-108-340 | |
| 2% Formic Acid | ✓ | PRLRE-105-342 | | 0.2% $NH_4OH$ | | | |
| 0.2% Formic Acid 2018/02/06 | ~~✓~~ | ~~PRLRE-108~~ DM3 | | Leachate Fluid | | | |
| 0.05M KOH | | | | Reagent Water | ✓ | 57297 | 2018/02/06 |
| 0.05M HCl | | | | | | | |
| | | | | | | | |
| | | | | | | | |

*Spiked by: DM3

Spike Date: 2018/02/06

Spike Syringe/Pipette ID#: G243906

Int. Std Syringe/Pipette ID#: M410117

*Spiking Witnessed by: KM

Final pH:

| Equipment & ID | √ | Equipment | ID# | √ | Equipment | Lot # |
|---|---|---|---|---|---|---|
| Pipettor M39732F | ✓ | SPE Cartridge | 0074377247A | ✓ | QC Balance ID | |
| B | ✓ | Filter | | | Thermometer ID &Temp | |
| Dispenser | | Centrifuge | 42148683 | ✓ | | |
| | | Sonicator | | | | |

Bottle Tracking
Bottle# 18587
Cap# 18422
Systems plus Lot#: 17-12-11

Comments: envi CARB Lot # 928061 V
250mL cylinder # 3026


* - SPIKING OF QC's & SAMPLES MUST BE WITNESSED AT ALL TIMES.

Worksheet Number: **5386102**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | Units | MTRX SPK | DL | MTRX SPK Dup1 | DL | SPIKE | DL |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | ug/L | 108.15371 | 0.02 | 98.76866 | 0.02 | 107.55127 | 0.02 |
| 8:2 Fluorotelomer sulfonate | ug/L | 105.22500 | 0.02 | 87.06656 | 0.02 | 107.51525 | 0.02 |
| N-ethylperfluorooctane sulfonamide | ug/L | 99.03512 | 0.02 | 90.45965 | 0.02 | 98.39542 | 0.02 |
| EtFOSAA | ug/L | 95.33636 | 0.02 | 104.42130 | 0.02 | 98.09913 | 0.02 |
| N-ethylperfluorooctane sulfonamidoe | ug/L | 93.35678 | 0.02 | 87.61801 | 0.02 | 113.89912 | 0.02 |
| N-methylperfluorooctane sulfonamide | ug/L | 83.28742 | 0.02 | 103.22239 | 0.02 | 101.35606 | 0.02 |
| MeFOSAA | ug/L | 101.77684 | 0.02 | 99.96694 | 0.02 | 97.78099 | 0.02 |
| N-methylperfluorooctanesulfonamidol | ug/L | 100.31349 | 0.02 | 87.25771 | 0.02 | 104.99119 | 0.02 |
| Perfluorobutanoic acid | ug/L | 68.82NC | 0.02 | 95.70794NC | 0.02 | 101.84148 | 0.02 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 112.38543 | 0.02 | 100.61221 | 0.02 | 117.02416 | 0.02 |
| Perfluorodecane Sulfonate | ug/L | 99.05686 | 0.02 | 97.41994 | 0.02 | 111.92506 | 0.02 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 98.26438 | 0.02 | 98.22745 | 0.02 | 98.49369 | 0.02 |
| Perfluoroheptane sulfonate | ug/L | 107.96692 | 0.02 | 107.59832 | 0.02 | 104.67055 | 0.02 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 95.72692 | 0.02 | 98.65000 | 0.02 | 97.41181 | 0.02 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 104.43760 | 0.02 | 91.37334 | 0.02 | 109.54785 | 0.02 |
| Perfluorononanoic Acid (PFNA) | ug/L | 95.03221 | 0.02 | 104.41951 | 0.02 | 106.04654 | 0.02 |
| Perfluorooctane Sulfonamide (PFOSA) | ug/L | 98.86020 | 0.02 | 93.35572 | 0.02 | 103.38504 | 0.02 |
| Perfluoropentanoic Acid (PFPeA) | ug/L | 93.15375 | 0.02 | 94.26917 | 0.02 | 102.52511 | 0.02 |
| Perfluorotetradecanoic Acid | ug/L | 154.666 | 0.02 | 105.22039 | 0.02 | 101.94241 | 0.02 |
| Perfluorotridecanoic Acid | ug/L | 158.270 | 0.02 | 111.95131 | 0.02 | 104.27929 | 0.02 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 98.09203 | 0.02 | 101.30229 | 0.02 | 96.89275 | 0.02 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 98.00575 | 0.02 | 100.23781 | 0.02 | 110.64655 | 0.02 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 105.64335 | 0.02 | 92.84556 | 0.02 | 113.24662 | 0.02 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 92.42467 | 0.02 | 96.20753 | 0.02 | 105.00987 | 0.02 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 91.13972 | 0.02 | 86.94286 | 0.02 | 103.05140 | 0.02 |
| 13C2-6:2 Fluorotelomer sulfonate | ug/L | 68.9613668 | | 67.8108940 | | 71.6481589 | |
| 13C2-8:2 Fluorotelomer sulfonate | ug/L | 71.1750825 | | 82.3529917 | | 67.0587668 | |
| 13C2-perfluorotetradecanoic acid | ug/L | 42.8361 | | 66.0475217 | | 63.4891895 | |
| 13C4-Perfluorobutanoic acid | ug/L | 83.2946400 | | 80.6195048 | | 79.9415155 | |
| D3-MeFOSAA | ug/L | 77.9996210 | | 76.4240017 | | 68.4101942 | |
| D5-EtFOSAA | ug/L | 81.5928407 | | 74.8411869 | | 68.7955679 | |
| N-methyl-d3-perfluorooctane sulfona | ug/L | N/A******* | | N/A******* | | N/A******* | |
| N-ethyl-d5-perfluorooctane sulfonam | ug/L | N/A******* | | N/A******* | | N/A******* | |
| 13C2-Perfluorodecanoic acid | ug/L | 79.6210853 | | 77.0055925 | | 63.7128328 | |
| 13C2-Perfluorododecanoic acid | ug/L | 69.8211258 | | 75.2559436 | | 58.6480479 | |
| 13C2-Perfluorohexanoic acid | ug/L | 84.4328542 | | 84.3499986 | | 76.9358520 | |
| 13C2-Perfluoroundecanoic acid | ug/L | 73.6835901 | | 75.1233196 | | 66.2959591 | |
| 13C4-Perfluoroheptanoic acid | ug/L | 82.0386836 | | 84.3916216 | | 75.5507180 | |
| 13C5-Perfluorononanoic acid | ug/L | 85.5040146 | | 75.1054366 | | 71.6273865 | |
| 13C4-Perfluorooctanoic acid | ug/L | 84.5625375 | | 81.2206057 | | 70.6755999 | |
| 13C4-Perfluorooctanesulfonate | ug/L | 85.5073478 | | 90.6554285 | | 70.6584673 | |
| 13C5-Perfluoropentanoic acid | ug/L | 90.5477492 | | 90.4640261 | | 77.2837511 | |
| 13C8-Perfluorooctane Sulfonamide | ug/L | 51.7356547 | | 58.6377082 | | 49.6039380 | |
| 18O2-Perfluorohexanesulfonate | ug/L | 84.5611238 | | 102.604631 | | 73.2621991 | |

Worksheet Number: **5386102**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | BLANK | DL | B818419 FZA801 | DL | B818419 FZA802 | DL | B818419 FZA803 |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| 8:2 Fluorotelomer sulfonate | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| N-ethylperfluorooctane sulfonamide | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| EtFOSAA | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| N-ethylperfluorooctane sulfonamidoe | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| N-methylperfluorooctane sulfonamide | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| MeFOSAA | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| N-methylperfluorooctanesulfonamidol | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluorobutanoic acid | 0 | 0.02 | 0 | 0.02 | N/A******* | 0.02 | 0 |
| Perfluorobutane Sulfonate (PFBS) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorodecane Sulfonate | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluoroheptanoic Acid (PFHpA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluoroheptane sulfonate | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorohexane Sulfonate (PFHxS) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorononanoic Acid (PFNA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorooctane Sulfonamide (PFOSA) | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluoropentanoic Acid (PFPeA) | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluorotetradecanoic Acid | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorotridecanoic Acid | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluoroundecanoic Acid (PFUnA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorodecanoic Acid (PFDA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorododecanoic Acid (PFDoA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorooctane Sulfonate (PFOS) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| 13C2-6:2 Fluorotelomer sulfonate | 65.6847542 | | N/A******* | | !! 36.5120 | | N/A******* |
| 13C2-8:2 Fluorotelomer sulfonate | 67.7970914 | | N/A******* | | !! 36.4839 | | N/A******* |
| 13C2-perfluorotetradecanoic acid | 53.8165347 | | 68.7721796 | | !! 33.1980 | | 62.0041684 |
| 13C4-Perfluorobutanoic acid | 75.1169245 | | N/A******* | | !! 45.1864 | | N/A******* |
| D3-MeFOSAA | 60.8161991 | | 74.6832419 | | !! 39.8715 | | 68.9618290 |
| D5-EtFOSAA | 58.7596527 | | 70.3220055 | | !! 38.7706 | | 64.3642347 |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | | N/A******* | | !! 26.9898 | | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | | N/A******* | | !! 25.3911 | | N/A******* |
| 13C2-Perfluorodecanoic acid | 58.4992490 | | 78.2132194 | | !! 41.9528 | | 73.3646314 |
| 13C2-Perfluorododecanoic acid | 58.3595831 | | 71.6939140 | | !! 39.2231 | | 68.6477042 |
| 13C2-Perfluorohexanoic acid | 71.2243373 | | 89.8935351 | | 49.6414834 | | 75.5855252 |
| 13C2-Perfluoroundecanoic acid | 61.7128372 | | 70.4119226 | | !! 43.2761 | | 76.8137756 |
| 13C4-Perfluoroheptanoic acid | 67.3128091 | | 91.1361061 | | !! 47.3920 | | 70.5279209 |
| 13C5-Perfluorononanoic acid | 63.4244159 | | 84.0412188 | | !! 12.7327 | | 75.3138869 |
| 13C4-Perfluorooctanoic acid | 64.7447075 | | 84.6514064 | | !! 25.4249 | | 80.3492784 |
| 13C4-Perfluorooctanesulfonate | 74.1314703 | | 73.1027902 | | !! 30.7815 | | 73.0334465 |
| 13C5-Perfluoropentanoic acid | 77.7306686 | | N/A******* | | !! 47.0771 | | N/A******* |
| 13C8-Perfluorooctane Sulfonamide | !! 44.6478 | | N/A******* | | !! 26.3583 | | N/A******* |
| 18O2-Perfluorohexanesulfonate | 72.0248675 | | 85.2267364 | | 50.8223270 | | 76.2273773 |

Worksheet Number: **5386102**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | DL | B818419 FZA804 | DL | B818419 FZA805 | DL | B818419 FZA806 | DL |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| 8:2 Fluorotelomer sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| N-ethylperfluorooctane sulfonamide | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| EtFOSAA | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| N-ethylperfluorooctane sulfonamidoe | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| N-methylperfluorooctane sulfonamide | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| MeFOSAA | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| N-methylperfluorooctanesulfonamidol | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| Perfluorobutanoic acid | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorobutane Sulfonate (PFBS) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorodecane Sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| Perfluoroheptanoic Acid (PFHpA) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluoroheptane sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| Perfluorohexanoic Acid (PFHxA) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorohexane Sulfonate (PFHxS) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorononanoic Acid (PFNA) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorooctane Sulfonamide (PFOSA) | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| Perfluoropentanoic Acid (PFPeA) | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| Perfluorotetradecanoic Acid | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorotridecanoic Acid | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluoroundecanoic Acid (PFUnA) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorodecanoic Acid (PFDA) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorododecanoic Acid (PFDoA) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorooctane Sulfonate (PFOS) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| 13C2-6:2 Fluorotelomer sulfonate | | N/A******* | | N/A******* | | N/A******* | |
| 13C2-8:2 Fluorotelomer sulfonate | | N/A******* | | N/A******* | | N/A******* | |
| 13C2-perfluorotetradecanoic acid | | 65.1107643 | | 63.8042546 | | 63.2599500 | |
| 13C4-Perfluorobutanoic acid | | N/A******* | | N/A******* | | N/A******* | |
| D3-MeFOSAA | | 62.5297766 | | 79.7525963 | | 72.9527681 | |
| D5-EtFOSAA | | 62.8210790 | | 77.5283919 | | 72.4039477 | |
| N-methyl-d3-perfluorooctane sulfona | | N/A******* | | N/A******* | | N/A******* | |
| N-ethyl-d5-perfluorooctane sulfonam | | N/A******* | | N/A******* | | N/A******* | |
| 13C2-Perfluorodecanoic acid | | 71.6273041 | | 74.5336956 | | 64.4915902 | |
| 13C2-Perfluorododecanoic acid | | 68.2987872 | | 71.6636355 | | 61.8666515 | |
| 13C2-Perfluorohexanoic acid | | 74.9423693 | | 78.9856587 | | 79.0768120 | |
| 13C2-Perfluoroundecanoic acid | | 67.2387275 | | 73.6624333 | | 68.0480823 | |
| 13C4-Perfluoroheptanoic acid | | 71.9233144 | | 83.4077403 | | 71.5851695 | |
| 13C5-Perfluorononanoic acid | | 71.4496653 | | 78.9271859 | | 78.0173095 | |
| 13C4-Perfluorooctanoic acid | | 70.4543610 | | 80.9202477 | | 69.1029365 | |
| 13C4-Perfluorooctanesulfonate | | 74.3789575 | | 79.7149216 | | 85.5302278 | |
| 13C5-Perfluoropentanoic acid | | N/A******* | | N/A******* | | N/A******* | |
| 13C8-Perfluorooctane Sulfonamide | | N/A******* | | N/A******* | | N/A******* | |
| 18O2-Perfluorohexanesulfonate | | 81.3970501 | | 84.9029632 | | 85.3024362 | |

Worksheet Number: **5386102**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | B819794 FZH328 | DL | B819794 FZH329 | DL | B819794 FZH330 | DL | B819794 FZH335 |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| 8:2 Fluorotelomer sulfonate | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| N-ethylperfluorooctane sulfonamide | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| EtFOSAA | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| N-ethylperfluorooctane sulfonamidoe | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| N-methylperfluorooctane sulfonamide | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| MeFOSAA | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| N-methylperfluorooctanesulfonamidol | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluorobutanoic acid | 0.20338904 | 0.02 | 0 | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluorobutane Sulfonate (PFBS) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorodecane Sulfonate | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluoroheptanoic Acid (PFHpA) | 0.01521830 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluoroheptane sulfonate | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | 0.01675640 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorohexane Sulfonate (PFHxS) | 0.01105225 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorononanoic Acid (PFNA) | 0.01251015 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorooctane Sulfonamide (PFOSA) | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluoropentanoic Acid (PFPeA) | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluorotetradecanoic Acid | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorotridecanoic Acid | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluoroundecanoic Acid (PFUnA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorodecanoic Acid (PFDA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorododecanoic Acid (PFDoA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.03051730 | 0.02 | 0.02421777 | 0.02 | 0 | 0.02 | 0 |
| Perfluorooctane Sulfonate (PFOS) | 0.11228609 | 0.02 | 0.01980499 | 0.02 | 0 | 0.02 | 0 |
| 13C2-6:2 Fluorotelomer sulfonate | N/A******* | | N/A******* | | N/A******* | | N/A******* |
| 13C2-8:2 Fluorotelomer sulfonate | N/A******* | | N/A******* | | N/A******* | | N/A******* |
| 13C2-perfluorotetradecanoic acid | 69.3238825 | | 73.1791544 | | 72.2186854 | | 80.5329504 |
| 13C4-Perfluorobutanoic acid | N/A******* | | N/A******* | | N/A******* | | N/A******* |
| D3-MeFOSAA | 68.1789647 | | 84.8842256 | | 89.5181511 | | 88.5315272 |
| D5-EtFOSAA | 68.1285820 | | 81.9677088 | | 86.4902034 | | 89.6064453 |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | | N/A******* | | N/A******* | | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | | N/A******* | | N/A******* | | N/A******* |
| 13C2-Perfluorodecanoic acid | 85.2662479 | | 81.8715336 | | 89.1963263 | | 97.3521106 |
| 13C2-Perfluorododecanoic acid | 75.2444161 | | 78.6059749 | | 76.6205993 | | 86.1558264 |
| 13C2-Perfluorohexanoic acid | 86.9107761 | | 86.0640809 | | 96.6662949 | | 103.074728 |
| 13C2-Perfluoroundecanoic acid | 78.5645985 | | 81.4177000 | | 89.7516126 | | 101.636981 |
| 13C4-Perfluoroheptanoic acid | 89.0740404 | | 86.0220603 | | 94.1360707 | | 97.7206945 |
| 13C5-Perfluorononanoic acid | 81.6591979 | | 89.9121539 | | 98.6014041 | | 95.1522073 |
| 13C4-Perfluorooctanoic acid | 86.8717496 | | 87.4723603 | | 87.5751390 | | 102.573025 |
| 13C4-Perfluorooctanesulfonate | 89.3562435 | | 94.9509994 | | 93.4441346 | | 103.195959 |
| 13C5-Perfluoropentanoic acid | N/A******* | | 92.9505695 | | 97.8079154 | | N/A******* |
| 13C8-Perfluorooctane Sulfonamide | N/A******* | | 78.9004503 | | 64.2276292 | | N/A******* |
| 18O2-Perfluorohexanesulfonate | 89.0931969 | | 101.473836 | | 100.667364 | | 100.286521 |

Worksheet Number: **5386102**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

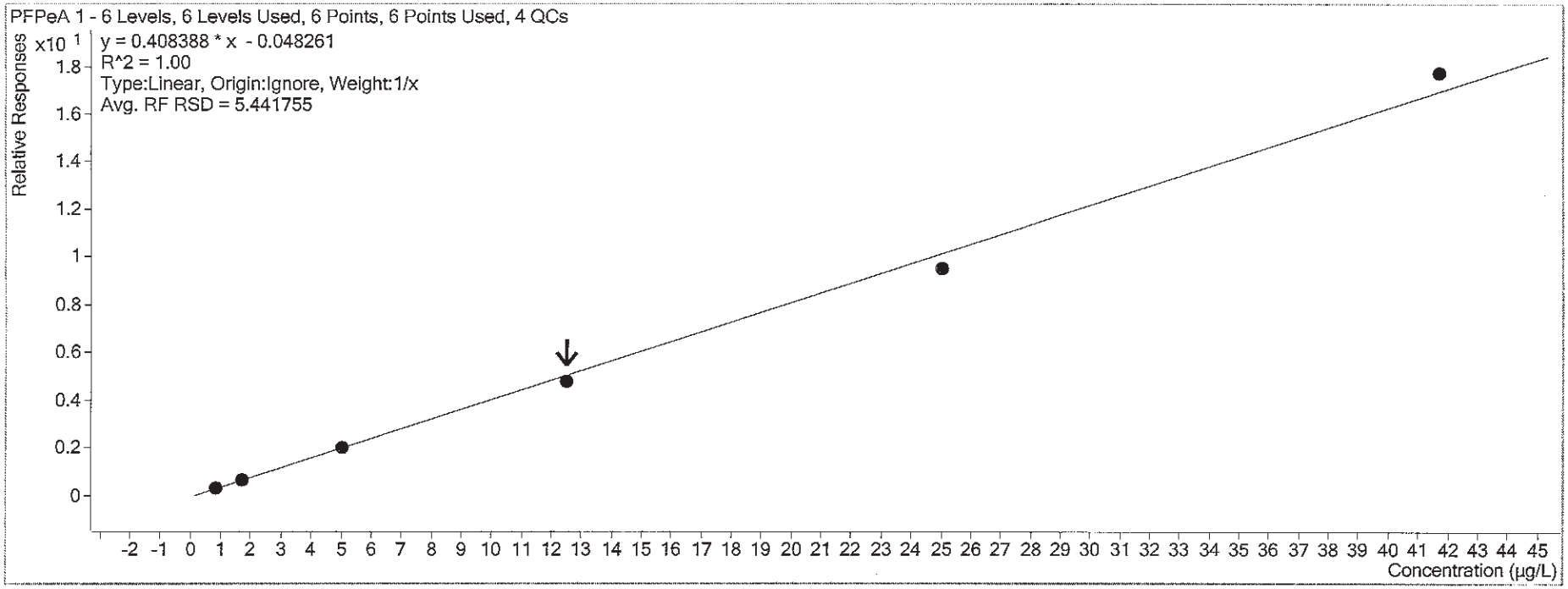
| Parameter Name | DL | B819794 FZH344 | DL | B819794 FZH345 | DL | B819794 FZH346 | DL |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| 8:2 Fluorotelomer sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| N-ethylperfluorooctane sulfonamide | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| EtFOSAA | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| N-ethylperfluorooctane sulfonamidoe | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| N-methylperfluorooctane sulfonamide | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| MeFOSAA | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| N-methylperfluorooctanesulfonamidol | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| Perfluorobutanoic acid | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| Perfluorobutane Sulfonate (PFBS) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluorodecane Sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| Perfluoroheptanoic Acid (PFHpA) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluoroheptane sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| Perfluorohexanoic Acid (PFHxA) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluorohexane Sulfonate (PFHxS) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluorononanoic Acid (PFNA) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluorooctane Sulfonamide (PFOSA) | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| Perfluoropentanoic Acid (PFPeA) | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| Perfluorotetradecanoic Acid | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluorotridecanoic Acid | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluoroundecanoic Acid (PFUnA) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluorodecanoic Acid (PFDA) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluorododecanoic Acid (PFDoA) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluorooctane Sulfonate (PFOS) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| 13C2-6:2 Fluorotelomer sulfonate | | N/A******* | | N/A******* | | N/A******* | |
| 13C2-8:2 Fluorotelomer sulfonate | | N/A******* | | N/A******* | | N/A******* | |
| 13C2-perfluorotetradecanoic acid | | 77.1908524 | | 71.9470181 | | 75.3855990 | |
| 13C4-Perfluorobutanoic acid | | N/A******* | | N/A******* | | N/A******* | |
| D3-MeFOSAA | | 84.7396178 | | 73.5421858 | | 81.3894851 | |
| D5-EtFOSAA | | 86.1073348 | | 75.8329929 | | 80.2984169 | |
| N-methyl-d3-perfluorooctane sulfona | | N/A******* | | N/A******* | | N/A******* | |
| N-ethyl-d5-perfluorooctane sulfonam | | N/A******* | | N/A******* | | N/A******* | |
| 13C2-Perfluorodecanoic acid | | 99.0546764 | | 82.1760373 | | 94.9012927 | |
| 13C2-Perfluorododecanoic acid | | 84.1751686 | | 73.8662504 | | 76.5459481 | |
| 13C2-Perfluorohexanoic acid | | 103.981453 | | 89.5273662 | | 98.6190842 | |
| 13C2-Perfluoroundecanoic acid | | 90.4203887 | | 76.5271325 | | 94.6068299 | |
| 13C4-Perfluoroheptanoic acid | | 99.2321321 | | 88.3159353 | | 96.4711965 | |
| 13C5-Perfluorononanoic acid | | 96.3452767 | | 86.2244037 | | 96.3752530 | |
| 13C4-Perfluorooctanoic acid | | 98.5254289 | | 86.2726611 | | 102.455275 | |
| 13C4-Perfluorooctanesulfonate | | 100.342167 | | 86.1902780 | | 90.6185606 | |
| 13C5-Perfluoropentanoic acid | | 97.1968980 | | 91.5038071 | | 101.174284 | |
| 13C8-Perfluorooctane Sulfonamide | | 76.1132788 | | 62.8588376 | | 67.2981523 | |
| 18O2-Perfluorohexanesulfonate | | 97.7587480 | | 91.2758797 | | 97.1877814 | |

PFOS and PFOA in water by SPE/LCMS - Water
ug/L

| Parameter Name | B819794 FZH347 | DL | B819794 FZH348 | DL | B820260 FZJ934 | DL | RDL |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | N/A******* | 0.02 | N/A******* | 0.02 | 0 | 0.02 | 0.02 |
| 8:2 Fluorotelomer sulfonate | N/A******* | 0.02 | N/A******* | 0.02 | 0 | 0.02 | 0.02 |
| N-ethylperfluorooctane sulfonamide | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | 0.02 |
| EtFOSAA | 0 | 0.02 | 0 | 0.02 | N/A******* | 0.02 | 0.02 |
| N-ethylperfluorooctane sulfonamidoe | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | 0.02 |
| N-methylperfluorooctane sulfonamide | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | 0.02 |
| MeFOSAA | 0 | 0.02 | 0 | 0.02 | N/A******* | 0.02 | 0.02 |
| N-methylperfluorooctanesulfonamidol | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | 0.02 |
| Perfluorobutanoic acid | 1.32435011 | 0.02 | N/A******* | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorobutane Sulfonate (PFBS) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorodecane Sulfonate | N/A******* | 0.02 | N/A******* | 0.02 | 0 | 0.02 | 0.02 |
| Perfluoroheptanoic Acid (PFHpA) | 0.01259488 | 0.02 | 0.01117351 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluoroheptane sulfonate | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | 0.02 |
| Perfluorohexanoic Acid (PFHxA) | 0.01407001 | 0.02 | 0.01319642 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorohexane Sulfonate (PFHxS) | 0.00977400 | 0.02 | 0.00778421 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorononanoic Acid (PFNA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorooctane Sulfonamide (PFOSA) | N/A******* | 0.02 | N/A******* | 0.02 | 0 | 0.02 | 0.02 |
| Perfluoropentanoic Acid (PFPeA) | N/A******* | 0.02 | N/A******* | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorotetradecanoic Acid | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorotridecanoic Acid | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluoroundecanoic Acid (PFUnA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorodecanoic Acid (PFDA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorododecanoic Acid (PFDoA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.03076766 | 0.02 | 0.02327353 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorooctane Sulfonate (PFOS) | 0.02087630 | 0.02 | 0.01707903 | 0.02 | 0 | 0.02 | 0.02 |
| 13C2-6:2 Fluorotelomer sulfonate | N/A******* | | N/A******* | | 83.7850573 | | |
| 13C2-8:2 Fluorotelomer sulfonate | N/A******* | | N/A******* | | 81.4629185 | | |
| 13C2-perfluorotetradecanoic acid | 65.2261649 | | 66.6786894 | | 64.7172540 | | |
| 13C4-Perfluorobutanoic acid | N/A******* | | N/A******* | | 89.2547297 | | |
| D3-MeFOSAA | 73.7337370 | | 83.8622985 | | N/A******* | | |
| D5-EtFOSAA | 71.9622175 | | 81.6914136 | | N/A******* | | |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | | N/A******* | | N/A******* | | |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | | N/A******* | | N/A******* | | |
| 13C2-Perfluorodecanoic acid | 68.0330052 | | 79.8067445 | | 67.9065261 | | |
| 13C2-Perfluorododecanoic acid | 67.6070511 | | 71.7300881 | | 63.2119014 | | |
| 13C2-Perfluorohexanoic acid | 74.8592925 | | 76.5367429 | | 86.4727994 | | |
| 13C2-Perfluoroundecanoic acid | 69.7976855 | | 75.6814541 | | 68.4996292 | | |
| 13C4-Perfluoroheptanoic acid | 69.1457833 | | 87.0723268 | | 81.1903390 | | |
| 13C5-Perfluorononanoic acid | 72.5916047 | | 82.8828909 | | 85.0057938 | | |
| 13C4-Perfluorooctanoic acid | 70.8560945 | | 82.3483394 | | 86.5523980 | | |
| 13C4-Perfluorooctanesulfonate | 77.7487498 | | 87.3949690 | | 82.5559714 | | |
| 13C5-Perfluoropentanoic acid | N/A******* | | N/A******* | | 88.3457088 | | |
| 13C8-Perfluorooctane Sulfonamide | N/A******* | | N/A******* | | 11.48.6323 | | |
| 18O2-Perfluorohexanesulfonate | 87.4774020 | | 82.3917817 | | 95.0887111 | | |

PFOS and PFOA in water by SPE/LCMS - Water
ug/L

| Parameter Name | MDL | IDL | | | | | |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0.0066 | 0 | | | | | |
| 8:2 Fluorotelomer sulfonate | 0.0066 | 0 | | | | | |
| N-ethylperfluorooctane sulfonamide | 0.01 | 0 | | | | | |
| EtFOSAA | 0.0033 | 0 | | | | | |
| N-ethylperfluorooctane sulfonamidoe | 0.0079 | 0 | | | | | |
| N-methylperfluorooctane sulfonamide | 0.013 | 0 | | | | | |
| MeFOSAA | 0.0029 | 0 | | | | | |
| N-methylperfluorooctanesulfonamidol | 0.012 | 0 | | | | | |
| Perfluorobutanoic acid | 0.0055 | 0 | | | | | |
| Perfluorobutane Sulfonate (PFBS) | 0.0054 | 0 | | | | | |
| Perfluorodecane Sulfonate | 0.006 | 0 | | | | | |
| Perfluoroheptanoic Acid (PFHpA) | 0.0074 | 0 | | | | | |
| Perfluoroheptane sulfonate | 0.008 | 0 | | | | | |
| Perfluorohexanoic Acid (PFHxA) | 0.0035 | 0 | | | | | |
| Perfluorohexane Sulfonate (PFHxS) | 0.0056 | 0 | | | | | |
| Perfluorononanoic Acid (PFNA) | 0.0087 | 0 | | | | | |
| Perfluorooctane Sulfonamide (PFOSA) | 0.0034 | 0 | | | | | |
| Perfluoropentanoic Acid (PFPeA) | 0.0075 | 0 | | | | | |
| Perfluorotetradecanoic Acid | 0.0027 | 0 | | | | | |
| Perfluorotridecanoic Acid | 0.0038 | 0 | | | | | |
| Perfluoroundecanoic Acid (PFUnA) | 0.0025 | 0 | | | | | |
| Perfluorodecanoic Acid (PFDA) | 0.0061 | 0 | | | | | |
| Perfluorododecanoic Acid (PFDoA) | 0.005 | 0 | | | | | |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.0033 | 0 | | | | | |
| Perfluorooctane Sulfonate (PFOS) | 0.006 | 0 | | | | | |
| 13C2-6:2 Fluorotelomer sulfonate | | | | | | | |
| 13C2-8:2 Fluorotelomer sulfonate | | | | | | | |
| 13C2-perfluorotetradecanoic acid | | | | | | | |
| 13C4-Perfluorobutanoic acid | | | | | | | |
| D3-MeFOSAA | | | | | | | |
| D5-EtFOSAA | | | | | | | |
| N-methyl-d3-perfluorooctane sulfona | | | | | | | |
| N-ethyl-d5-perfluorooctane sulfonam | | | | | | | |
| 13C2-Perfluorodecanoic acid | | | | | | | |
| 13C2-Perfluorododecanoic acid | | | | | | | |
| 13C2-Perfluorohexanoic acid | | | | | | | |
| 13C2-Perfluoroundecanoic acid | | | | | | | |
| 13C4-Perfluoroheptanoic acid | | | | | | | |
| 13C5-Perfluorononanoic acid | | | | | | | |
| 13C4-Perfluorooctanoic acid | | | | | | | |
| 13C4-Perfluorooctanesulfonate | | | | | | | |
| 13C5-Perfluoropentanoic acid | | | | | | | |
| 13C8-Perfluorooctane Sulfonamide | | | | | | | |
| 18O2-Perfluorohexanesulfonate | | | | | | | |




Manual calculation for Spike:

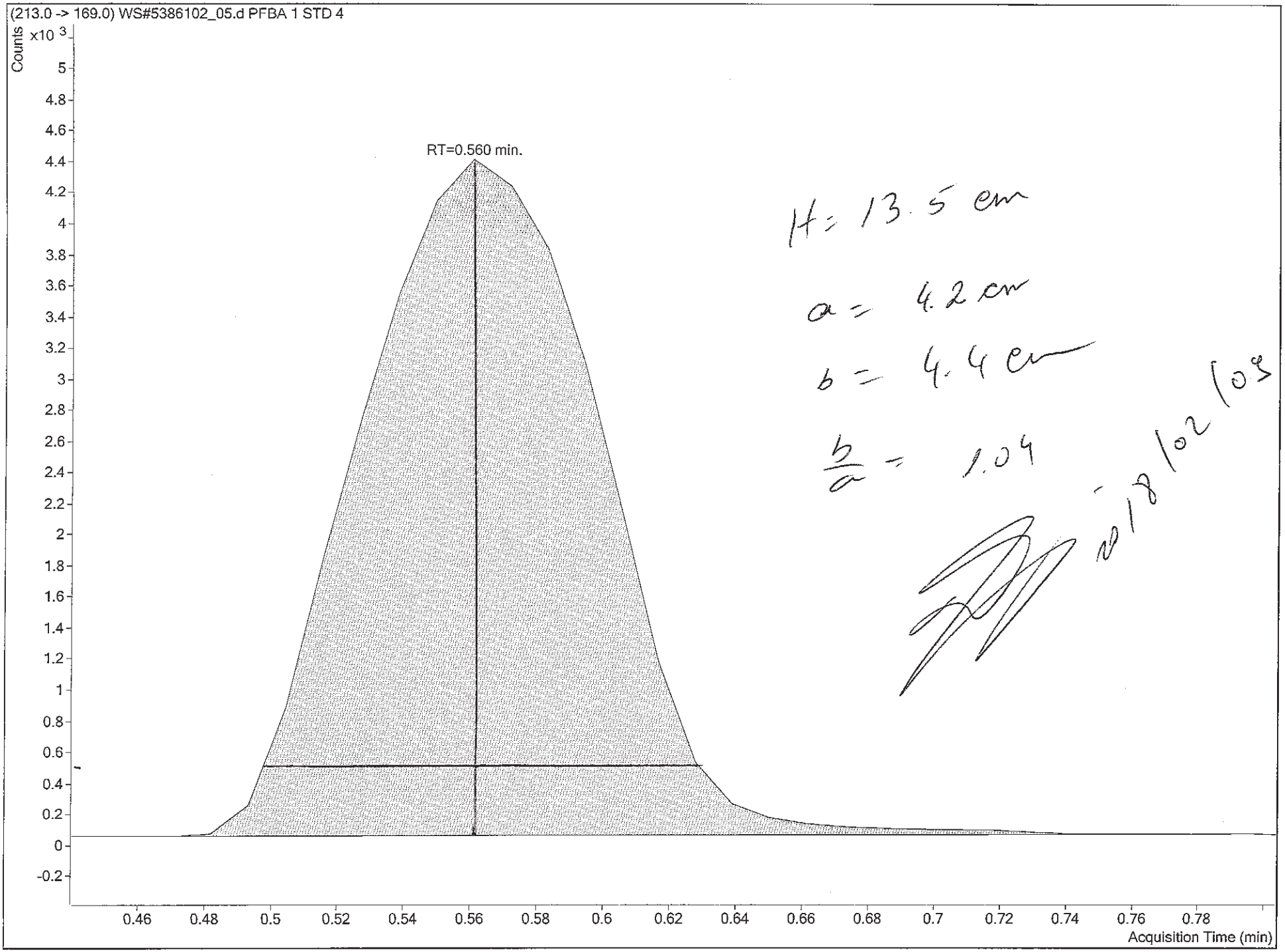
$0.6747 = 0.408388x - 0.048261$

$x = 21.359 \times 0.024$

$= 0.5126\ \mu g/L$

$\frac{0.5126}{0.5} \times 100 = 102.5\%$

2018/02/09



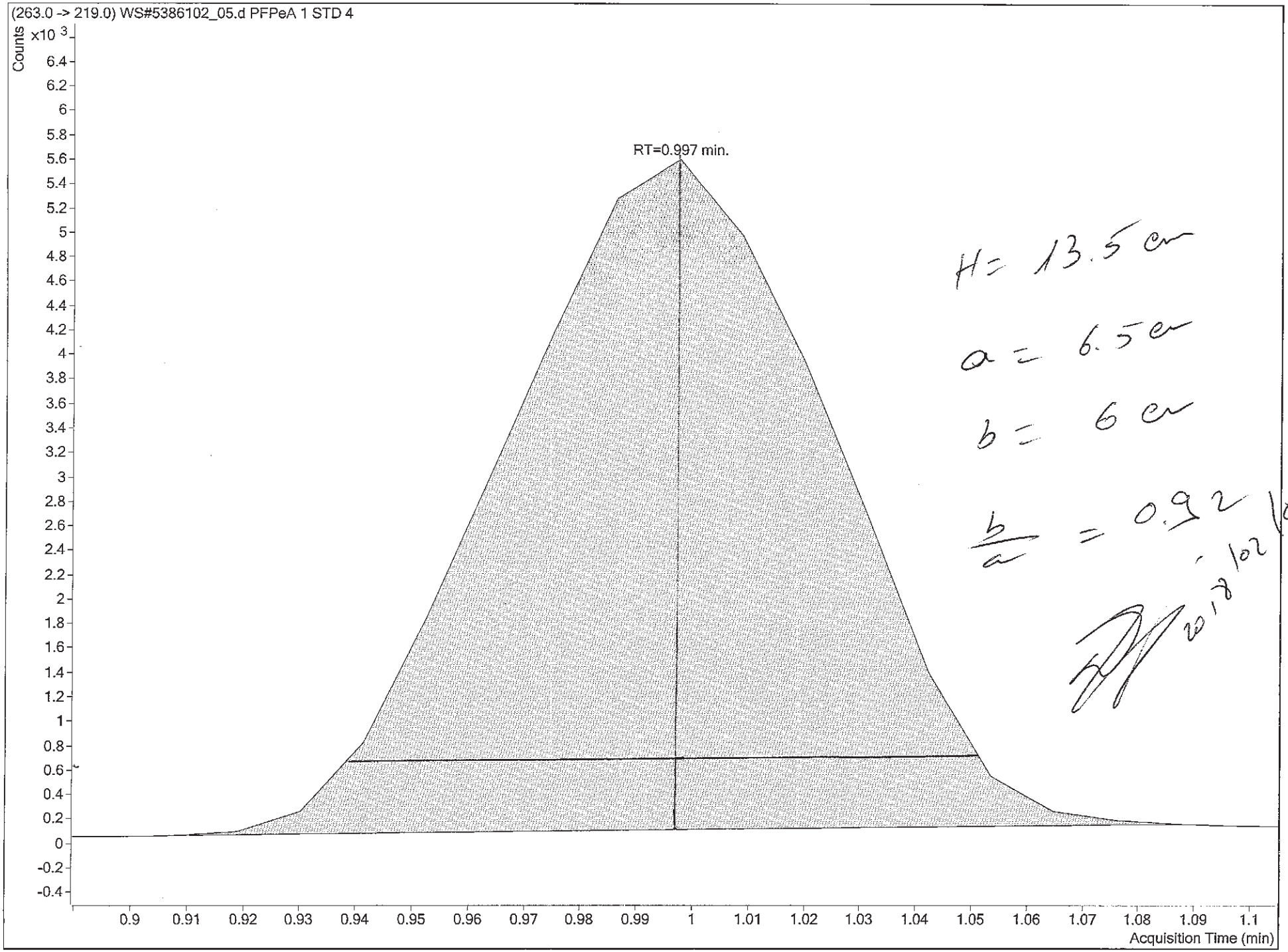

H = 13.5 cm

a = 4.2 cm

b = 4.4 cm

$\frac{b}{a}$ = 1.04

2018/02/09


(263.0 -> 219.0) WS#5386102_05.d PFPeA 1 STD 4
Counts
x10 3
RT=0.997 min.
Acquisition Time (min)
H= 13.5 cm
a = 6.5 cm
b = 6 cm
b/a = 0.92

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/06

Test Code: **PFOSALCM-W**

Worksheet Number: **5386102**

| Sample Number | Parameter Code | Parameter | |
|---|---|---|---|
| FZA801-01 | ETFOSAA | EtFOSAA | * |
| FZA802-01 | MEFOSAA | MeFOSAA | * |
| FZA803-01 | PFBS | Perfluorobutane Sulfonate (PFBS) | |
| FZA804-01 | PFHPA | Perfluoroheptanoic Acid (PFHpA) | |
| FZA805-01 | PFHXA | Perfluorohexanoic Acid (PFHxA) | |
| FZA806-01 | PFHXS | Perfluorohexane Sulfonate (PFHxS) | |
| FZH328-01 | PFNA | Perfluorononanoic Acid (PFNA) | |
| FZH329-01 | PFTEDA | Perfluorotetradecanoic Acid | |
| FZH335-01 | PFTRDA | Perfluorotridecanoic Acid | |
| FZH347-01 | PFUNA | Perfluoroundecanoic Acid (PFUnA) | |
| FZH348-01 | PFDA | Perfluorodecanoic Acid (PFDA) | |
| | PFDOA | Perfluorododecanoic Acid (PFDoA) | |
| | PFOA | Perfluoro-n-Octanoic Acid (PFOA) | |
| | PFOS | Perfluorooctane Sulfonate (PFOS) | |
| FZH330-01 | NONE | NONE | |
| FZH344-01 | | | |
| FZH345-01 | | | |
| FZH346-01 | | | |
| FZJ934-01 | 6:2FTS | 6:2 Fluorotelomer sulfonate | * |
| | 8:2FTS | 8:2 Fluorotelomer sulfonate | * |
| | PFBA | Perfluorobutanoic acid | |
| | PFBS | Perfluorobutane Sulfonate (PFBS) | |
| | PFDS | Perfluorodecane Sulfonate | |
| | PFHPA | Perfluoroheptanoic Acid (PFHpA) | |
| | PFHXA | Perfluorohexanoic Acid (PFHxA) | |
| | PFHXS | Perfluorohexane Sulfonate (PFHxS) | |

* - This parameter is usually off, but will be reported for this group of samples!

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/06

Test Code: **PFOSALCM-W**

Worksheet Number: **5386102**

| Sample Number | Parameter Code | Parameter |
|---|---|---|
| | PFNA | Perfluorononanoic Acid (PFNA) |
| | PFOSA | Perfluorooctane Sulfonamide (PFOSA) |
| | PFPEA | Perfluoropentanoic Acid (PFPeA) |
| | PFTEDA | Perfluorotetradecanoic Acid |
| | PFTRDA | Perfluorotridecanoic Acid |
| | PFUNA | Perfluoroundecanoic Acid (PFUnA) |
| | PFDA | Perfluorodecanoic Acid (PFDA) |
| | PFDOA | Perfluorododecanoic Acid (PFDoA) |
| | PFOA | Perfluoro-n-Octanoic Acid (PFOA) |
| | PFOS | Perfluorooctane Sulfonate (PFOS) |

* - This parameter is usually off, but will be reported for this group of samples!

# WorkSheet 5386102 Instrument Sequences

| | | |
|---|---|---|
| 1. | 5386102:MTRX SPK | MTRX SPK |
| 2. | 5386102:MTRX SPK:D1 | MTRX SPK :D1 |
| 3. | 5386102:SPIKE | SPIKE |
| 4. | 5386102:BLANK | BLANK |
| 5. | 5386102:FZA801-01 | FB-OLD-012318-3 |
| 6. | 5386102:FZA802-01 | EB-WC-012318-2 |
| 7. | 5386102:FZA803-01 | EB-GW-012318-2 |
| 8. | 5386102:FZA804-01 | FB-OLD-012318-4 |
| 9. | 5386102:FZA805-01 | EB-DPT-012318-2 |
| 10. | 5386102:FZA806-01 | OLD-02-09A-0118 |
| 11. | 5386102:FZH328-01 | [redacted] |
| 12. | 5386102:FZH329-01 | [redacted] |
| 13. | 5386102:FZH330-01 | [redacted] |
| 14. | 5386102:FZH335-01 | [redacted] |
| 15. | 5386102:FZH344-01 | [redacted] |
| 16. | 5386102:FZH345-01 | [redacted] |
| 17. | 5386102:FZH346-01 | [redacted] |
| 18. | 5386102:FZH347-01 | [redacted] |
| 19. | 5386102:FZH348-01 | [redacted] |
| 20. | 5386102:FZJ934-01 | [redacted] |

# Worklist Report

Agilent Technologies

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180207_Low_A.wkl

Maxxam Analytics

**Operator Name:** ---
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\Data\PFC\20180207\WS#5386102
**Pre-Worklist Script:** ---
**Post-Worklist Script:** SCP_InstrumentStandby(){MH_Acq_Scripts.exe}
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** Column #198
MP A1: Solution# 280 (FSRE18)
MP B1: Methanol lot# SHBJ6339, Sigma

20180207

Verified by AD 2018/02/07

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P1 | |

**Worklist Table**

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Solvent | P1-A1 | PFC_Water_Low.m | WS#5386102_01.d | Sample | | As Method | - |
| 2 | STD 1 | P1-C8 | PFC_Water_Low.m | WS#5386102_02.d | Calibration | STD 1 | As Method | - |
| 3 | STD 2 | P1-C9 | PFC_Water_Low.m | WS#5386102_03.d | Calibration | STD 2 | As Method | - |
| 4 | STD 3 | P1-D1 | PFC_Water_Low.m | WS#5386102_04.d | Calibration | STD 3 | As Method | - |
| 5 | STD 4 | P1-D2 | PFC_Water_Low.m | WS#5386102_05.d | Calibration | STD 4 | As Method | - |
| 6 | STD 5 | P1-D3 | PFC_Water_Low.m | WS#5386102_06.d | Calibration | STD 5 | As Method | - |
| 7 | STD 6 | P1-D4 | PFC_Water_Low.m | WS#5386102_07.d | Calibration | STD 6 | As Method | - |

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# Worklist Report

Agilent Technologies

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 8 | IB | P1-D5 | PFC_Water_Low.m | WS#5386102_08.d | Sample | | As Method | - |
| 9 | ICV | P1-D6 | PFC_Water_Low.m | WS#5386102_09.d | QC | ICV | As Method | - |
| 10 | ISC | P1-C8 | PFC_Water_Low.m | WS#5386102_10.d | ConCal | STD 1 | As Method | - |
| 11 | 5386102:BLANK | P1-D7 | PFC_Water_Low.m | WS#5386102_11.d | Sample | | As Method | - |
| 12 | 5386102:SPIKE | P1-D8 | PFC_Water_Low.m | WS#5386102_12.d | QC | ICV | As Method | - |
| 13 | 5386102:MTRX SPK | P1-D9 | PFC_Water_Low.m | WS#5386102_13.d | QC | ICV | As Method | - |
| 14 | 5386102:MTRX SPK:D1 | P1-E1 | PFC_Water_Low.m | WS#5386102_14.d | Sample | | As Method | - |
| 15 | IB | P1-D5 | PFC_Water_Low.m | WS#5386102_15.d | Sample | | As Method | - |
| 16 | 5386102:FZA801-01 | P1-E2 | PFC_Water_Low.m | WS#5386102_16.d | Sample | | As Method | - |
| 17 | 5386102:FZA802-01 | P1-E3 | PFC_Water_Low.m | WS#5386102_17.d | Sample | | As Method | - |
| 18 | 5386102:FZA803-01 | P1-E4 | PFC_Water_Low.m | WS#5386102_18.d | Sample | | As Method | - |
| 19 | 5386102:FZA804-01 | P1-E5 | PFC_Water_Low.m | WS#5386102_19.d | Sample | | As Method | - |
| 20 | 5386102:FZA805-01 | P1-E6 | PFC_Water_Low.m | WS#5386102_20.d | Sample | | As Method | - |
| 21 | 5386102:FZA806-01 | P1-E7 | PFC_Water_Low.m | WS#5386102_21.d | Sample | | As Method | - |
| 22 | 5386102:FZH328-01 | P1-E8 | PFC_Water_Low.m | WS#5386102_22.d | Sample | | As Method | - |
| 23 | 5386102:FZH329-01 | P1-E9 | PFC_Water_Low.m | WS#5386102_23.d | Sample | | As Method | - |
| 24 | 5386102:FZH330-01 | P1-F1 | PFC_Water_Low.m | WS#5386102_24.d | Sample | | As Method | - |
| 25 | 5386102:FZH335-01 | P1-F2 | PFC_Water_Low.m | WS#5386102_25.d | Sample | | As Method | - |
| 26 | CCV | P1-D2 | PFC_Water_Low.m | WS#5386102_26.d | ConCal | STD 4 | As Method | - |
| 27 | 5386102:FZH344-01 | P1-F3 | PFC_Water_Low.m | WS#5386102_27.d | Sample | | As Method | - |
| 28 | 5386102:FZH345-01 | P1-F4 | PFC_Water_Low.m | WS#5386102_28.d | Sample | | As Method | - |
| 29 | 5386102:FZH346-01 | P1-F5 | PFC_Water_Low.m | WS#5386102_29.d | Sample | | As Method | - |
| 30 | 5386102:FZH347-01 | P1-F6 | PFC_Water_Low.m | WS#5386102_30.d | Sample | | As Method | - |

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| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 31 | 5386102:FZH348-01 | P1-F7 | PFC_Water_Low.m | WS#5386102_31.d | Sample | | As Method | - |
| 32 | 5386102:FZJ934-01 | P1-F8 | PFC_Water_Low.m | WS#5386102_32.d | Sample | | As Method | - |
| 33 | CCV | P1-D2 | PFC_Water_Low.m | WS#5386102_33.d | ConCal | STD 4 | As Method | - |

Maxxam Analytics

# Worklist Report

Agilent Technologies

Maxxam Analytics

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180207_Low_A_FOSAA.wkl

**Operator Name:** ---
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\Data\PFC\20180207\WS#5386102_FOSAA
**Pre-Worklist Script:** ---
**Post-Worklist Script:** SCP_InstrumentStandby(){MH_Acq_Scripts.exe}
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** Column #198
MP A1: Solution# 280 (FSRE18)
MP B2:Solution# 272 (FSRE18)

20180207 07 uG

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P1 | |

## Worklist Table

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Solvent | P1-A1 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_01.d | Sample | | As Method | - |
| 2 | STD 1 | P1-C8 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_02.d | Calibration | STD 1 | As Method | - |
| 3 | STD 2 | P1-C9 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_03.d | Calibration | STD 2 | As Method | - |
| 4 | STD 3 | P1-D1 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_04.d | Calibration | STD 3 | As Method | - |
| 5 | STD 4 | P1-D2 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_05.d | Calibration | STD 4 | As Method | - |
| 6 | STD 5 | P1-D3 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_06.d | Calibration | STD 5 | As Method | - |
| 7 | STD 6 | P1-D4 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_07.d | Calibration | STD 6 | As Method | - |
| 8 | IB | P1-D5 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_08.d | Sample | | As Method | - |

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# Worklist Report

Agilent Technologies

Maxxam Analytics

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 9 | ICV | P1-D6 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_09.d | QC | ICV | As Method | - |
| 10 | ISC | P1-C8 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_10.d | ConCal | STD 1 | As Method | - |
| 11 | 5386102:BLANK | P1-D7 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_11.d | Sample | | As Method | - |
| 12 | 5386102:SPIKE | P1-D8 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_12.d | QC | ICV | As Method | - |
| 13 | 5386102:MTRX SPK | P1-D9 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_13.d | QC | ICV | As Method | - |
| 14 | 5386102:MTRX SPK:D1 | P1-E1 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_14.d | Sample | | As Method | - |
| 15 | IB | P1-D5 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_15.d | Sample | | As Method | - |
| 16 | 5386102:FZA801-01 | P1-E2 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_16.d | Sample | | As Method | - |
| 17 | 5386102:FZA802-01 | P1-E3 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_17.d | Sample | | As Method | - |
| 18 | 5386102:FZA803-01 | P1-E4 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_18.d | Sample | | As Method | - |
| 19 | 5386102:FZA804-01 | P1-E5 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_19.d | Sample | | As Method | - |
| 20 | 5386102:FZA805-01 | P1-E6 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_20.d | Sample | | As Method | - |
| 21 | 5386102:FZA806-01 | P1-E7 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_21.d | Sample | | As Method | - |
| 22 | 5386102:FZH328-01 | P1-E8 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_22.d | Sample | | As Method | - |
| 23 | 5386102:FZH329-01 | P1-E9 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_23.d | Sample | | As Method | - |
| 24 | 5386102:FZH330-01 | P1-F1 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_24.d | Sample | | As Method | - |
| 25 | 5386102:FZH335-01 | P1-F2 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_25.d | Sample | | As Method | - |
| 26 | CCV | P1-D2 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_26.d | ConCal | STD 4 | As Method | - |
| 27 | 5386102:FZH344-01 | P1-F3 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_27.d | Sample | | As Method | - |
| 28 | 5386102:FZH345-01 | P1-F4 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_28.d | Sample | | As Method | - |
| 29 | 5386102:FZH346-01 | P1-F5 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_29.d | Sample | | As Method | - |
| 30 | 5386102:FZH347-01 | P1-F6 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_30.d | Sample | | As Method | - |
| 31 | 5386102:FZH348-01 | P1-F7 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_31.d | Sample | | As Method | - |
| 32 | 5386102:FZJ934-01 | P1-F8 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_32.d | Sample | | As Method | - |
| 33 | CCV | P1-D2 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_33.d | ConCal | STD 4 | As Method | - |

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## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| STD 1 | - | 2018/02/08 3:11 AM | PFC_Water_Low.m | WS#5386102_02.d | P1-C8 |
| STD 2 | - | 2018/02/08 3:16 AM | PFC_Water_Low.m | WS#5386102_03.d | P1-C9 |
| STD 3 | - | 2018/02/08 3:21 AM | PFC_Water_Low.m | WS#5386102_04.d | P1-D1 |
| STD 4 | - | 2018/02/08 3:26 AM | PFC_Water_Low.m | WS#5386102_05.d | P1-D2 |
| STD 5 | - | 2018/02/08 3:31 AM | PFC_Water_Low.m | WS#5386102_06.d | P1-D3 |
| STD 6 | - | 2018/02/08 3:36 AM | PFC_Water_Low.m | WS#5386102_07.d | P1-D4 |
| IB | - | 2018/02/08 3:41 AM | PFC_Water_Low.m | WS#5386102_08.d | P1-D5 |
| ICV | - | 2018/02/08 3:46 AM | PFC_Water_Low.m | WS#5386102_09.d | P1-D6 |
| ISC | - | 2018/02/08 3:51 AM | PFC_Water_Low.m | WS#5386102_10.d | P1-C8 |
| 5386102:BLANK | - | 2018/02/08 3:56 AM | PFC_Water_Low.m | WS#5386102_11.d | P1-D7 |
| 5386102:SPIKE | - | 2018/02/08 4:01 AM | PFC_Water_Low.m | WS#5386102_12.d | P1-D8 |
| 5386102:MTRX SPK | FZH347 | 2018/02/08 4:06 AM | PFC_Water_Low.m | WS#5386102_13.d | P1-D9 |
| 5386102:MTRX SPK:D1 | FZH347 | 2018/02/08 4:11 AM | PFC_Water_Low.m | WS#5386102_14.d | P1-E1 |
| IB | - | 2018/02/08 4:15 AM | PFC_Water_Low.m | WS#5386102_15.d | P1-D5 |
| 5386102:FZA801-01 | - | 2018/02/08 4:20 AM | PFC_Water_Low.m | WS#5386102_16.d | P1-E2 |
| 5386102:FZA802-01 | Reanalyzed due to low ext IS recovery | 2018/02/08 4:25 AM | PFC_Water_Low.m | WS#5386102_17.d | P1-E3 |
| 5386102:FZA803-01 | - | 2018/02/08 4:30 AM | PFC_Water_Low.m | WS#5386102_18.d | P1-E4 |
| 5386102:FZA804-01 | - | 2018/02/08 4:35 AM | PFC_Water_Low.m | WS#5386102_19.d | P1-E5 |
| 5386102:FZA805-01 | - | 2018/02/08 4:40 AM | PFC_Water_Low.m | WS#5386102_20.d | P1-E6 |
| 5386102:FZA806-01 | - | 2018/02/08 4:45 AM | PFC_Water_Low.m | WS#5386102_21.d | P1-E7 |
| 5386102:FZH328-01 | - | 2018/02/08 4:50 AM | PFC_Water_Low.m | WS#5386102_22.d | P1-E8 |
| 5386102:FZH329-01 | - | 2018/02/08 4:55 AM | PFC_Water_Low.m | WS#5386102_23.d | P1-E9 |
| 5386102:FZH330-01 | - | 2018/02/08 5:00 AM | PFC_Water_Low.m | WS#5386102_24.d | P1-F1 |
| 5386102:FZH335-01 | - | 2018/02/08 5:05 AM | PFC_Water_Low.m | WS#5386102_25.d | P1-F2 |
| CCV | - | 2018/02/08 5:10 AM | PFC_Water_Low.m | WS#5386102_26.d | P1-D2 |
| 5386102:FZH344-01 | - | 2018/02/08 5:15 AM | PFC_Water_Low.m | WS#5386102_27.d | P1-F3 |
| 5386102:FZH345-01 | - | 2018/02/08 5:20 AM | PFC_Water_Low.m | WS#5386102_28.d | P1-F4 |
| 5386102:FZH346-01 | - | 2018/02/08 5:25 AM | PFC_Water_Low.m | WS#5386102_29.d | P1-F5 |
| 5386102:FZH347-01 | - | 2018/02/08 5:29 AM | PFC_Water_Low.m | WS#5386102_30.d | P1-F6 |
| 5386102:FZH348-01 | - | 2018/02/08 5:34 AM | PFC_Water_Low.m | WS#5386102_31.d | P1-F7 |
| 5386102:FZJ934-01 | Reinjected to check recovery | 2018/02/08 5:39 AM | PFC_Water_Low.m | WS#5386102_32.d | P1-F8 |
| CCV | - | 2018/02/08 5:44 AM | PFC_Water_Low.m | WS#5386102_33.d | P1-D2 |
| ISC | - | 2018/02/08 3:47 PM | PFC_Water_Low.m | WS#5386102_34.d | P1-C8 |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| IB | - | 2018/02/08 3:52 PM | PFC_Water_Low.m | WS#5386102_35.d | P1-D5 |
| 5386102:FZJ934-01 | Reinjection, reported | 2018/02/08 3:57 PM | PFC_Water_Low.m | WS#5386102_36.d | P1-F8 |
| CCV | - | 2018/02/08 4:01 PM | PFC_Water_Low.m | WS#5386102_37.d | P1-D2 |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| STD 1 | - | 2018/02/08 9:36 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_02.d | P1-C8 |
| STD 2 | - | 2018/02/08 9:38 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_03.d | P1-C9 |
| STD 3 | - | 2018/02/08 9:41 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_04.d | P1-D1 |
| STD 4 | - | 2018/02/08 9:43 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_05.d | P1-D2 |
| STD 5 | - | 2018/02/08 9:46 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_06.d | P1-D3 |
| STD 6 | - | 2018/02/08 9:48 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_07.d | P1-D4 |
| IB | - | 2018/02/08 9:50 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_08.d | P1-D5 |
| ICV | - | 2018/02/08 9:53 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_09.d | P1-D6 |
| ISC | - | 2018/02/08 9:55 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_10.d | P1-C8 |
| 5386102:BLANK | - | 2018/02/08 9:58 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_11.d | P1-D7 |
| 5386102:SPIKE | - | 2018/02/08 10:00 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_12.d | P1-D8 |
| 5386102:MTRX SPK | FZH347 | 2018/02/08 10:02 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_13.d | P1-D9 |
| 5386102:MTRX SPK:D1 | FZH347 | 2018/02/08 10:05 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_14.d | P1-E1 |
| IB | - | 2018/02/08 10:07 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_15.d | P1-D5 |
| 5386102:FZA801-01 | - | 2018/02/08 10:10 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_16.d | P1-E2 |
| 5386102:FZA802-01 | - | 2018/02/08 10:12 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_17.d | P1-E3 |
| 5386102:FZA803-01 | - | 2018/02/08 10:14 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_18.d | P1-E4 |
| 5386102:FZA804-01 | - | 2018/02/08 10:17 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_19.d | P1-E5 |
| 5386102:FZA805-01 | - | 2018/02/08 10:19 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_20.d | P1-E6 |
| 5386102:FZA806-01 | - | 2018/02/08 10:22 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_21.d | P1-E7 |
| 5386102:FZH328-01 | - | 2018/02/08 10:24 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_22.d | P1-E8 |
| 5386102:FZH329-01 | - | 2018/02/08 10:27 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_23.d | P1-E9 |
| 5386102:FZH330-01 | - | 2018/02/08 10:29 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_24.d | P1-F1 |
| 5386102:FZH335-01 | - | 2018/02/08 10:31 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_25.d | P1-F2 |
| CCV | - | 2018/02/08 10:34 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_26.d | P1-D2 |
| 5386102:FZH344-01 | - | 2018/02/08 10:36 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_27.d | P1-F3 |
| 5386102:FZH345-01 | - | 2018/02/08 10:39 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_28.d | P1-F4 |
| 5386102:FZH346-01 | - | 2018/02/08 10:41 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_29.d | P1-F5 |
| 5386102:FZH347-01 | - | 2018/02/08 10:43 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_30.d | P1-F6 |
| 5386102:FZH348-01 | - | 2018/02/08 10:46 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_31.d | P1-F7 |
| 5386102:FZJ934-01 | - | 2018/02/08 10:48 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_32.d | P1-F8 |
| CCV | - | 2018/02/08 10:51 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_33.d | P1-D2 |

## *DoD Projects - Internal Data Validation Checklist*

Run date: 20181002109

Worksheet # (s): 5389177

Analysis: PFDSALCM-W

| | Primary review by the analyst - 1st 100 % analysis review | 1st 100% review yes | no | n/a | *2nd 100% review |
|---|---|---|---|---|---|
| 1 | Sample analyses meet hold time criteria | ✓ | | | ✓ |
| 2 | Analysis set-up meets method criteria | ✓ | | | ✓ |
| 3 | Tuning and correct calibration used - criteria meets method criteria | ✓ | | | ✓ |
| 4 | SQC/Control Charts updated, analysis in statistical/method control | ✓ | | | ✓ |
| 5 | Internal area counts checked (if applicable) | ✓ | | | ✓ |
| 6 | LCS, SRM are within acceptance criteria | ✓ | | | ✓ |
| 7 | Surrogate Recovery(s) is within acceptance criteria | ✓ | | | ✓ |
| 8 | Method Blank meets acceptance criteria | ✓ | | | ✓ |
| 9 | Matrix Spike recovery(s) meets acceptance criteria | | | ✓ | ✓ |
| 10 | Duplicate precision meets acceptance criteria | ✓ | | | ✓ |
| 11 | QC is documented on the run logs | ✓ | | | ✓ |
| 12 | Runs checked for carryover | ✓ | | | ✓ |
| 13 | Prep log / worksheet(s) are present, signed / dated by a prep / instrument analysts | ✓ | | | ✓ |
| 14 | Initial weights, splits, impringer volumes (where applicable) are documented | ✓ | | | ✓ |
| 15 | Standards and reagents traceable to Certificates of Analysis | ✓ | | | ✓ |
| 16 | Samples above calibration range diluted and reanalyzed | ✓ | | | ✓ |
| 17 | Dilution factors (where justified) have been checked for correctness and entered | ✓ | | | ✓ |
| 18 | Analytical observations/anomalies documented in LIMS | ✓ | | | ✓ |
| 19 | Random calculation checked and in correct units | ✓ | | | ✓ |
| 20 | If corrective actions were applied they are documented, initialed & dated | | | ✓ | ✓ |
| 21 | Manual integration – before & after data with a reason included, initialed & dated | | | ✓ | ✓ |
| 22 | Transferred data is validated in LIMS for correctness | ✓ | | | ✓ |
| 23 | Data package assembled (where required) | ✓ | | | ✓ |

Reviewed by: MG Date: 20181002109

Comments:

| | Secondary Supervisor/Qualified Data Review Staff - 2nd 100% verification review | yes | no | n/a |
|---|---|---|---|---|
| 1 | Repeats documented and referenced | | | ✓ |
| 2 | Method and sample deviations noted, anomalies described (if applicable) | | | ✓ |
| 3 | Data and QC validated in LIMS | ✓ | | |
| 4 | Random calculation checked | ✓ | | |
| 5 | Benchsheet (s) signed and dated | ✓ | | |
| 6 | Data Package (if required) checked for completeness | ✓ | | |

Reviewed by: [signature] Date: 2019/02/16

Comments:

***Note: 2nd 100% verification review documented by secondary qualified data review***
***Primary and Secondary Internal Data Review Check must be performed by a different person***

# Worksheet Data Validation Checklist - Extractable Organics

Worksheet # 5389177 Testcode: PFOSACCM-W

| Sample Preparation | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Samples extracted within hold time | ✓ | | |
| 2 | Client sample ID verified against Lab ID (waters & oils) | ✓ | | |
| 3 | Parameter list and Client comments reviewed, (Spiking solutions matched to parameter list) | ✓ | | |
| 4 | Height of sediment or if sample was decanted, recorded on worksheet | ✓ | | |
| 5 | Method required QC processed with samples, maximum batch size = 20 client samples. | ✓ | | |
| 6 | Sample, duplicate, matrix spike appear similar, initial sample as well as final extract | ✓ | | |
| 7 | Sample weight or initial volume and extract final volume, aliquot factor clearly recorded. | ✓ | | |
| 8 | If performed any additional dilution clearly recorded | ✓ | | |
| 9 | Matrix spike / Duplicate performed on IOL samples if present | | | ✓ |
| 10 | Spiking solutions valid (haven't expired), ID and volume used clearly identified on worksheet | ✓ | | |
| 11 | Spiking process witnessed and signed off | ✓ | | |
| 12 | Extraction type recorded (N3A2B = neutral, 3 x acidic, 2 x basic) | | | ✓ |
| 13 | Sample prep deviations documented within CompliantPro as a Policy Deviation | | | ✓ |
| 14 | Job Remarks reviewed on 2nd page of worksheet. | ✓ | | |
| 15 | Worksheet and reagent tracking record completed and authorized. | ✓ | | |

Reviewed by: SSV Date: 2018/02/07

Comments:

| Worksheet Approval | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Verified the position of the vials in autosampler against sequence list; signed off sequence list | | | |
| 2 | Calibration and CCV standards valid ( haven't expired) | | | |
| 3 | Initial calibration curve and DFTPP tune (if applicable) acceptable | | | |
| 4 | Continuing and Final CCV and DFTPP tune (if applicable) acceptable | | | |
| 5 | System performance check acceptable (if applicable) | | | |
| 6 | Internal standard responses acceptable | | | |
| 7 | Method blank meets acceptance criteria | | | |
| 8 | Lab Control Samples recoveries meets acceptance criteria | | | |
| 9 | Duplicate RPD meets acceptance criteria | | | |
| 10 | Matrix spike recoveries meets acceptance criteria | | | |
| 11 | Surrogate recoveries meets acceptance criteria | | | |
| 12 | Appropriate control charts updated | | | |
| 13 | Samples above calibration range diluted and reanalyzed | | | |
| 14 | Dilutions clearly documented on tracking record, inst file and verified during data upload | | | |
| 15 | Samples following high level samples checked for carryover. | | | |
| 16 | Mass spectra ion ratios acceptable for positive results, hardcopy in file. | | | |
| 17 | Analytical observations / anomalies documented | | | |
| 18 | DQW comments entered in LIMS, hardcopy in file | | | |
| 19 | Sample Prep section (above) reviewed and verified. | | | |
| 20 | WS Approval performed in LIMS | | | |

Reviewed by: Date:

Comments:

Refer to BZL-FCD-00000 20180210 SW

| Worksheet Validation | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Calibration, QC and sample results reviewed and determined acceptable | | | |
| 2 | Manual integrations verified | | | |
| 3 | Random calculation checked | | | |
| 4 | Data and QC validated in LIMS | | | |
| 5 | Comments reviewed for appropriateness | | | |
| 6 | Reworks / relogs documented in file | | | |
| 7 | Worksheet signed and dated, | | | |
| 8 | Worksheet approved and validated within LIMS | | | |

Reviewed by: Date:

Comments:

**WS# : 5389177**

Page #: 1/2

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Wednesday, February 07, 2018

Assigned to : Shivani Shivani

Test Code : PFOSALCM-W

Instrument Id:

Test Description : PFOS and PFOA in water by LC-MS/MS

| Job Number | Sample Number | D | Sample ID | F | Moisture | Wt or Vol | Final Vol | DF or AF | # Cont | Expiry Date | Test DeadLine | Criteria | Extract Date | (ng/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7-5 | SPIKE | 0 | PFOS | | 0 | 125 | 3 | 1X | | | | | 2018/02/07 | 27 |
| 7-3 | SPIKE | 1 | PFOS | | 0 | 125 | 3 | 1X | | | | | 2018/02/07 | 26 |
| 7-1 | BLANK | | | | 0 | 125 | 3 | 1X | | | | | 2018/02/07 | 25 |
| 7-7 | B818419 | *FZA807-01R | EB-WC-012418-3 | | 0 | 115 | 3 | 1X | 2 | 2018/02/07 | 2018/02/07 23:00 | DOD | 2018/02/07 | 30 |
| 7-8 | B818419 | *FZA808-01R | FB-OLD-012418-5 | | 0 | 115 | 3 | 1X | 2 | 2018/02/07 | 2018/02/07 23:00 | DOD | 2018/02/07 | 32 |
| 7-10 | B818419 | *FZA809-01R | EB-DPT-012418-3 | | 0 | 125 | 3 | 1X | 2 | 2018/02/07 | 2018/02/07 23:00 | DOD | 2018/02/07 | 31 |
| 7-11/12 | B819794 | *FZH324-01R | [redacted] | | <0.1 | 12.5/1.25 | 3 | 10X/100X | 2 | 2018/02/07 | 2018/02/09 18:00 | DOD | 2018/02/07 | 29 |
| 7-13/14 | B819794 | *FZH325-01R | [redacted] | | <0.1 | 12.5/1.25 | 3 | 10X/100X | 2 | 2018/02/07 | 2018/02/09 18:00 | DOD | 2018/02/07 | 28 |
| 7-15 | B820260 | *FZJ938-01R | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/07 | 2018/02/09 23:00 | DOD | 2018/02/07 | 27 |
| 7-17/18 | B820260 | *FZJ941-01R | [redacted] | | 0 | 12.5/12.5 | 3 | 1X/10X | 2 | 2018/02/07 | 2018/02/09 23:00 | DOD | 2018/02/07 | 26 |
| 7-20/21 | B820260 | *FZJ953-01R | [redacted] | | <0.1 | 12.5/25 | 3 | 10X/5X | 2 | 2018/02/07 | 2018/02/09 23:00 | DOD | 2018/02/07 | 25 |
| 7-23/24 | B820260 | *FZJ954-01R | [redacted] | | <0.1 | 25/5 | 3 | 5X/25X | 2 | 2018/02/07 | 2018/02/09 23:00 | DOD | 2018/02/07 | 28 |

2018/02/07 SSV

Remarks: • Carbon clean up done. Shivani 2018/02/07

Samples extracted by: Shivani Shivani

Instrumentation performed by:

Date: 2018/02/08 WE 2018/02/09

Calculations performed by:

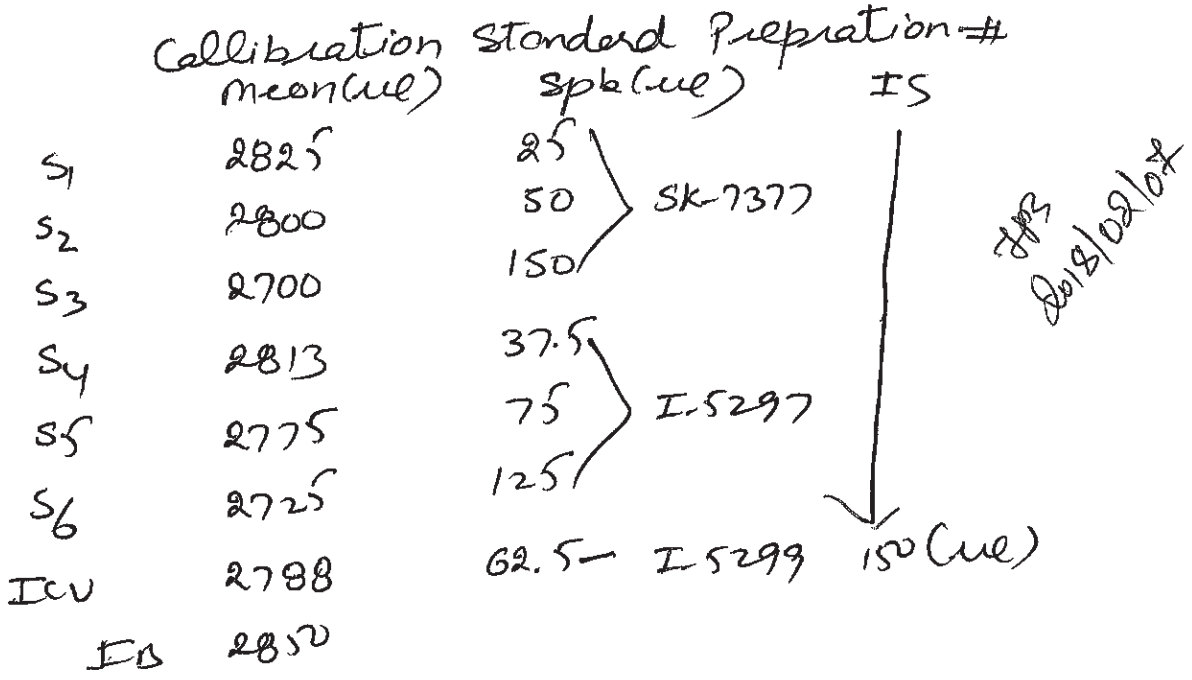
Date: 2018/02/09

Validated by:

Date: 2018/02/16

| Job No. | Rep / Client Name / Remarks | Contact | Client Tier | National |
|---|---|---|---|---|
| GB818419 | SP8 Earth Toxics Inc<br>NREG. PFOSALCM-W MS/MSD required on FZA786 Level IV Package and TetraTech EDD required Project #: JM11<br>NTC Orlando | Rick Carr | Tier 5 (Enviro.) AECOM | |
| GB819794 | [redacted] | | | |
| GB820260 | | | | |

| Job | Sample | Lab Comments |
|---|---|---|
| | SPIKE | |
| | SPIKE | |
| | BLANK | |
| B818419 | FZA807-01R | |
| B818419 | FZA808-01R | |
| B818419 | FZA809-01R | |
| B819794 | FZH324-01R | |
| B819794 | FZH325-01R | |
| B820260 | FZJ938-01R | |
| B820260 | FZJ941-01R | |
| B820260 | FZJ953-01R | |
| B820260 | FZJ954-01R | |




Folder: 2018/02/08

Worksheet Reagent Tracking Record  Worksheet # 5389177

| Surrogate/Spike solutions | √ | Solution ID # | Conc. | Volume (µL) Blk-Spk Solid | Blk-Spk Liquid | MS Solid | MS Liquid | Samples Solid | Samples Liquid |
|---|---|---|---|---|---|---|---|---|---|
| DGT Spike | | | 100 ug/mL | 60 | 30 | 60 | 30 | NA | NA |
| Diquat Dibromide | | | 50 ug/mL | NA | 350 | NA | 350 | NA | NA |
| Explosives Spiking solution A | | | 20 ug/mL | 250 | 100 | 250 | 100 | NA | NA |
| Explosives Spiking solution B | | | 20/80 ug/mL | 250 | 100 | 250 | 100 | NA | NA |
| Formaldehyde Spike | | | 100 ug/mL | 25 | 25 | 25 | 25 | NA | NA |
| Glyphosate Spike | | | 25 ug/mL | 500 | 20 | 500 | 20 | NA | NA |
| Nonylphenol Ethoxylate Spike | | | 100 ug/mL | 100 | 100 | 100 | 100 | NA | NA |
| Nonylphenol Spike | | | 10 ug/mL | 100 | 100 | 100 | 100 | NA | NA |
| Paraquat Cl Tetrahydrate | | | 20 ug/mL | NA | 125 | NA | 125 | NA | NA |
| Perchlorate Standard Spike | | | 10 ng/mL | NA | 100 | NA | 100 | NA | NA |
| Perchlorate Standard Spike | | | 500 ng/mL | 40 | NA | 40 | NA | NA | NA |
| Perchlorate O-18 Internal Standard | | | 0.10 ng/uL | 20 | 20 | 20 | 20 | 20 | 20 |
| Morpholine Second Source Working Std | | | 2500 ug/L | NA | 80 | NA | 80 | NA | NA |
| Morpholine-D8 Internal Standard | | | 10 ug/mL | NA | 50 | NA | 50 | NA | 50 |
| Steril Second Source Spiking Solution | | | NA | 20 | NA | 20 | NA | NA | NA |
| Sterilants Comp. IS Working Solution | | | 3 ug/mL | 50 | NA | 50 | NA | 50 | NA |
| Comp. PFC Working Solution A | ✓ | I-5299(1/3) | 1ug/mL | 75 | 21 62.5 | 75 | 21 62.5 | NA | NA |
| PFC Internal Standard Solution | ✓ | SI-6763(3/4) JPB | 50/125 ng/mL | 200 | 100 150 | 200 | 100 150 | 200 | 100/150 |
| PFC Injection IS | ✓ | SI-6770(1/2) JPB | ~~400~~ 100 ng/mL | 20 | 20 | 20 | 20 | 20 | 20 |
| ICV | ✓ | I-5299(1/3) | 1ug/mL | | 62.5 | | | | |

| Solvent/Reagent | √ | Lot No. | Date Opened | Solvent/Reagent | √ | Lot No. | Date Opened/ Prepared |
|---|---|---|---|---|---|---|---|
| DCM | | | | 50% NaOH | | | |
| Ottawa Sand | | | | o-Phosphoric Acid | | | |
| Methanol | ✓ | B135451 | 2018/02/07 | Borax | | | |
| 2-Propanol (IPA) | | | | Calcium Chloride | | | |
| Acetonitrile | | | | EDTA | | | |
| Sodium Sulfate | | | | Phosphate Buffer | | | |
| 70:30 Methanol: Water | | | | Sodium Thiosulphate | | | |
| 60:40 Water: Methanol | ✓ | PRUPE | 108-341 | DNPH | | | |
| DCM:Ethyl Ether (75:25) | | | | FMOC | | | |
| Hexane:IPA (98:2) | | | | 5M Acetate Buffer | | | |
| 2% Formic Acid | ✓ | PRUPE | 108-342 | 0.2% $NH_4OH$ | ✓ | PRUPE | 108-343 |
| 0.2% Formic Acid | | | | Leachate Fluid | | | |
| 0.05M KOH | | | | Reagent Water | ✓ | 57297 | 2018/02/07 |
| 0.05M HCl | | | | | | | |
| | | | | | | | |
| | | | | | | | |

*Spiked by: SSV

Spike Date SSV 2018/02/07

Spike Syringe/Pipette ID# G243906

Int. Std Syringe/Pipette ID# Internal Std# K1986SF Injection IS# G243906

*Spiking Witnessed by: JPB

Final pH

| Equipment & ID | √ | Equipment | ID# | √ | Equipment | Lot # |
|---|---|---|---|---|---|---|
| Pipettor K551916 I479876 K1986SF | ✓ | SPE Cartridge | 0034372477A | | QC Balance ID | FC-1 |
| | ✓ | Filter | | | Thermometer ID &Temp | |
| Dispenser | | Centrifuge | 42148683 | 10:00-10:05 | | |
| | | Sonicator | | | | |

| Bottle Tracking | |
|---|---|
| Bottle# | 18587 |
| Cap# | 18422 |
| Systems plus Lot# | 17/12/11 |

Comments: Encor Carb# 92806V
250ml volumetric Cylinder # 3026

* - SPIKING OF QC SAMPLES MUST BE WITNESSED AT ALL TIMES.

Worksheet Number: **5389177**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | Units | SPIKE | SPIKE Dup1 | BLANK | B818419 FZA807 | B818419 FZA808 | DL |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | ug/L | 101.80715 | 97.25684 | 0 | N/A******* | N/A******* | 0.022 |
| 8:2 Fluorotelomer sulfonate | ug/L | 105.09873 | 105.75934 | 0 | N/A******* | N/A******* | 0.022 |
| N-ethylperfluorooctane sulfonamide | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.022 |
| EtFOSAA | ug/L | 99.82537 | 101.40709 | 0 | 0 | 0 | 0.022 |
| N-ethylperfluorooctane sulfonamidoe | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.022 |
| N-methylperfluorooctane sulfonamide | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.022 |
| MeFOSAA | ug/L | 92.00553 | 90.56484 | 0 | 0 | 0 | 0.022 |
| N-methylperfluorooctanesulfonamidol | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.022 |
| Perfluorobutanoic acid | ug/L | 98.98256 | 101.59396 | 0 | N/A******* | N/A******* | 0.022 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 101.35585 | 102.21542 | 0 | 0 | 0 | 0.022 |
| Perfluorodecane Sulfonate | ug/L | 97.26271 | 91.72273 | 0 | N/A******* | N/A******* | 0.022 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 94.38391 | 95.01436 | 0 | 0 | 0 | 0.022 |
| Perfluoroheptane sulfonate | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.022 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 95.27639 | 93.55771 | 0 | 0 | 0 | 0.022 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 97.53899 | 95.54233 | 0 | 0 | 0 | 0.022 |
| Perfluorononanoic Acid (PFNA) | ug/L | 96.71681 | 102.44410 | 0 | 0 | 0 | 0.022 |
| Perfluorooctane Sulfonamide (PFOSA) | ug/L | 94.32576 | 94.92057 | 0 | N/A******* | N/A******* | 0.022 |
| Perfluoropentanoic Acid (PFPeA) | ug/L | 104.84296 | 97.89165 | 0 | N/A******* | N/A******* | 0.022 |
| Perfluorotetradecanoic Acid | ug/L | 99.95152 | 102.63101 | 0 | 0 | 0 | 0.022 |
| Perfluorotridecanoic Acid | ug/L | 103.21430 | 102.45102 | 0 | 0 | 0 | 0.022 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 97.83899 | 98.45232 | 0 | 0 | 0 | 0.022 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 100.27056 | 97.32217 | 0 | 0 | 0 | 0.022 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 98.21714 | 96.31629 | 0 | 0 | 0 | 0.022 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 101.05693 | 98.38524 | 0 | 0 | 0 | 0.022 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 96.02830 | 93.40478 | 0 | 0 | 0 | 0.022 |
| 13C2-6:2 Fluorotelomer sulfonate | ug/L | 84.2579093 | 91.1834076 | 88.5914478 | N/A******* | N/A******* | |
| 13C2-8:2 Fluorotelomer sulfonate | ug/L | 77.6822957 | 80.3026024 | 83.2478597 | N/A******* | N/A******* | |
| 13C2-perfluorotetradecanoic acid | ug/L | 77.8619602 | 76.4229416 | 79.6388689 | 79.1938918 | 71.1684513 | |
| 13C4-Perfluorobutanoic acid | ug/L | 85.6166200 | 95.4945019 | 93.8318766 | N/A******* | N/A******* | |
| D3-MeFOSAA | ug/L | 80.9965791 | 82.3685635 | 75.9548576 | 78.5883706 | 75.5661875 | |
| D5-EtFOSAA | ug/L | 76.3541647 | 77.1910162 | 71.5946155 | 77.8870648 | 74.7353765 | |
| N-methyl-d3-perfluorooctane sulfona | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | |
| N-ethyl-d5-perfluorooctane sulfonam | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | |
| 13C2-Perfluorodecanoic acid | ug/L | 86.0572668 | 90.6666485 | 79.3079824 | 86.9790659 | 90.3520047 | |
| 13C2-Perfluorododecanoic acid | ug/L | 79.7079549 | 80.4222814 | 75.5121447 | 87.7607614 | 78.4026526 | |
| 13C2-Perfluorohexanoic acid | ug/L | 86.5951556 | 98.1675626 | 92.1894303 | 93.1344289 | 95.7329591 | |
| 13C2-Perfluoroundecanoic acid | ug/L | 91.9196802 | 90.9093368 | 77.7263782 | 92.5200201 | 80.6273673 | |
| 13C4-Perfluoroheptanoic acid | ug/L | 87.2189564 | 93.7752732 | 92.6745393 | 99.3597899 | 95.7721484 | |
| 13C5-Perfluorononanoic acid | ug/L | 86.1114262 | 89.9042797 | 87.2363757 | 91.5948469 | 94.4461451 | |
| 13C4-Perfluorooctanoic acid | ug/L | 83.7392679 | 94.0137907 | 95.6961759 | 92.1639745 | 90.0889514 | |
| 13C4-Perfluorooctanesulfonate | ug/L | 82.1054936 | 89.1690305 | 86.2777091 | 92.2570241 | 89.9473927 | |
| 13C5-Perfluoropentanoic acid | ug/L | 82.2489947 | 98.9429635 | 94.9732240 | N/A******* | N/A******* | |
| 13C8-Perfluorooctane Sulfonamide | ug/L | 81.6151025 | 87.7555783 | 90.6434078 | N/A******* | N/A******* | |
| 18O2-Perfluorohexanesulfonate | ug/L | 83.8086429 | 91.0614714 | 92.8910351 | 90.3874231 | 93.3468109 | |

2018/02/09

Worksheet Number: **5389177**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | B818419 FZA809 | DL | B819794 FZH324 | DL | B819794 FZH325 | DL | B820260 FZJ938 |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | 0 |
| 8:2 Fluorotelomer sulfonate | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | 0 |
| N-ethylperfluorooctane sulfonamide | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | N/A******* |
| EtFOSAA | 0 | 0.02 | 0 | 0.2 | 0 | 0.2 | N/A******* |
| N-ethylperfluorooctane sulfonamidoe | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | N/A******* |
| N-methylperfluorooctane sulfonamide | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | N/A******* |
| MeFOSAA | 0 | 0.02 | 0 | 0.2 | 0 | 0.2 | N/A******* |
| N-methylperfluorooctanesulfonamidol | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | N/A******* |
| Perfluorobutanoic acid | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | 0 |
| Perfluorobutane Sulfonate (PFBS) | 0 | 0.02 | 0.12710653 | 0.2 | 0.19178362 | 0.2 | 0 |
| Perfluorodecane Sulfonate | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | 0 |
| Perfluoroheptanoic Acid (PFHpA) | 0 | 0.02 | 1.00024440 | 0.2 | 2.02929068 | 0.2 | 0 |
| Perfluoroheptane sulfonate | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | 0 | 0.02 | 1.33343420 | 0.2 | 2.55547512 | 0.2 | 0 |
| Perfluorohexane Sulfonate (PFHxS) | 0 | 0.02 | 2.17941727 | 0.2 | 11.7352984 | 2.0 | 0 |
| Perfluorononanoic Acid (PFNA) | 0 | 0.02 | 0.18465743 | 0.2 | 0.89610086 | 0.2 | 0 |
| Perfluorooctane Sulfonamide (PFOSA) | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | 0 |
| Perfluoropentanoic Acid (PFPeA) | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | 0 |
| Perfluorotetradecanoic Acid | 0 | 0.02 | 0 | 0.2 | 0 | 0.2 | 0 |
| Perfluorotridecanoic Acid | 0 | 0.02 | 0 | 0.2 | 0 | 0.2 | 0 |
| Perfluoroundecanoic Acid (PFUnA) | 0 | 0.02 | 0 | 0.2 | 0 | 0.2 | 0 |
| Perfluorodecanoic Acid (PFDA) | 0 | 0.02 | 0 | 0.2 | 0 | 0.2 | 0 |
| Perfluorododecanoic Acid (PFDoA) | 0 | 0.02 | 0 | 0.2 | 0.12329213 | 0.2 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0 | 0.02 | 0.99128265 | 0.2 | 1.57523688 | 0.2 | 0 |
| Perfluorooctane Sulfonate (PFOS) | 0 | 0.02 | 21.3862748 | 2.0 | 36.6776718 | 2.0 | 0 |
| 13C2-6:2 Fluorotelomer sulfonate | N/A******* | | N/A******* | | N/A******* | | 98.4288899 |
| 13C2-8:2 Fluorotelomer sulfonate | N/A******* | | N/A******* | | N/A******* | | 95.9028421 |
| 13C2-perfluorotetradecanoic acid | 83.1097274 | | 78.1644631 | | 79.7725519 | | 79.8119339 |
| 13C4-Perfluorobutanoic acid | N/A******* | | N/A******* | | N/A******* | | 105.366702 |
| D3-MeFOSAA | 86.7620362 | | 88.5879800 | | 87.1735670 | | N/A******* |
| D5-EtFOSAA | 82.9776497 | | 85.1779772 | | 84.2579715 | | N/A******* |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | | N/A******* | | N/A******* | | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | | N/A******* | | N/A******* | | N/A******* |
| 13C2-Perfluorodecanoic acid | 101.488771 | | 87.2581674 | | 83.9740926 | | 86.9311187 |
| 13C2-Perfluorododecanoic acid | 91.1675816 | | 87.5341590 | | 82.4763545 | | 85.6046715 |
| 13C2-Perfluorohexanoic acid | 100.556952 | | 104.282774 | | 91.5480588 | | 100.797580 |
| 13C2-Perfluoroundecanoic acid | 93.7296466 | | 90.7920819 | | 81.6997659 | | 84.4639171 |
| 13C4-Perfluoroheptanoic acid | 99.8684596 | | 106.412944 | | 88.9735314 | | 99.2293432 |
| 13C5-Perfluorononanoic acid | 96.5654260 | | 97.6929904 | | 85.1224857 | | 96.0227830 |
| 13C4-Perfluorooctanoic acid | 96.0506627 | | 93.5394505 | | 91.6404110 | | 98.0682319 |
| 13C4-Perfluorooctanesulfonate | 105.133320 | | 109.347422 | | 86.0014663 | | 92.4389783 |
| 13C5-Perfluoropentanoic acid | N/A******* | | N/A******* | | N/A******* | | 105.574959 |
| 13C8-Perfluorooctane Sulfonamide | N/A******* | | N/A******* | | N/A******* | | 89.8830369 |
| 18O2-Perfluorohexanesulfonate | 96.9587190 | | 89.6638138 | | 104.125730 | | 102.256757 |

Worksheet Number: **5389177**

PFOS and PFOA in water by SPE/LCMS - Water

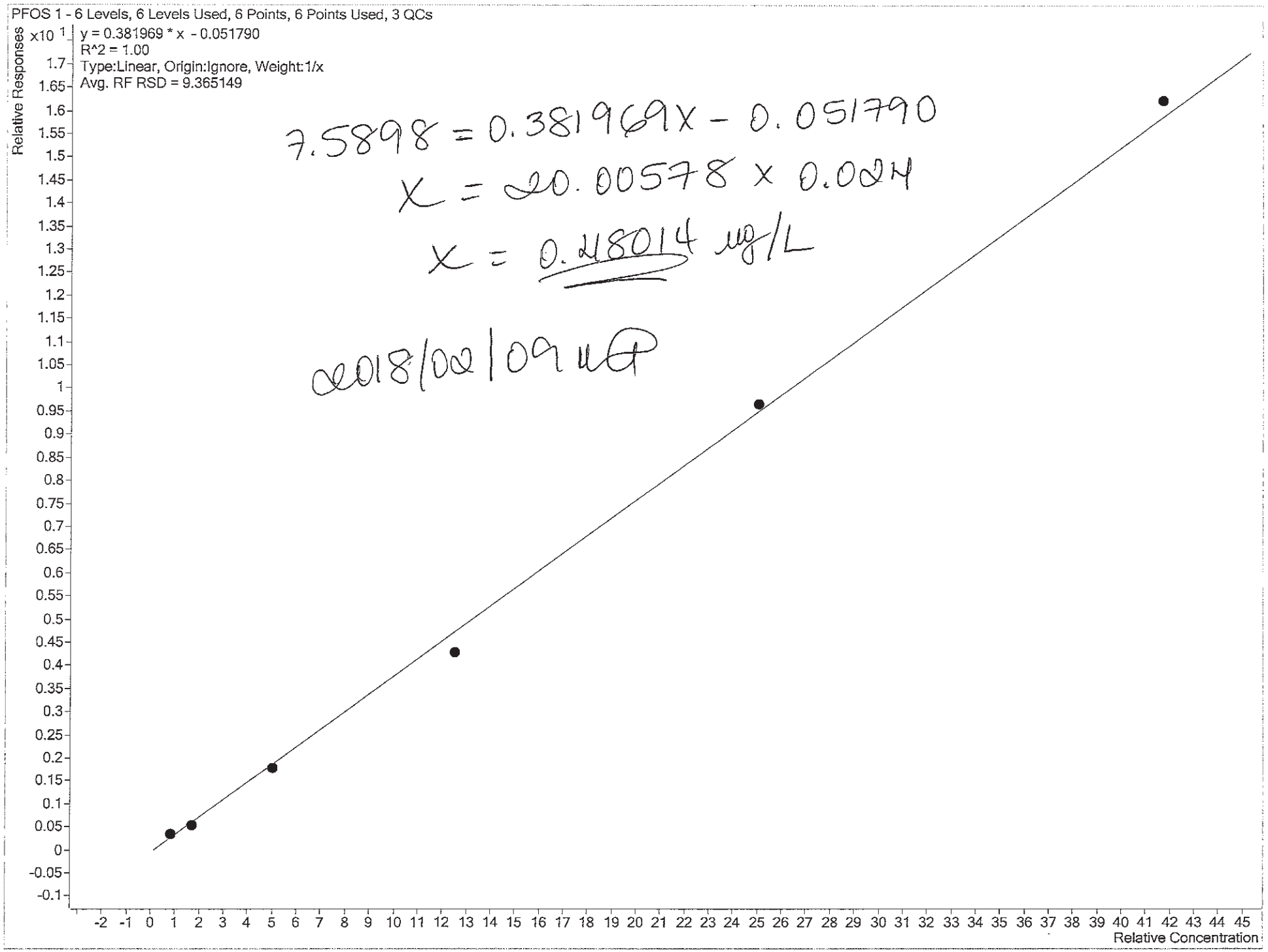
ug/L

| Parameter Name | DL | B820260 FZJ941 | DL | B820260 FZJ953 | DL | B820260 FZJ954 | DL |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0.02 | 0.64277813 | 0.2 | 0 | 0.2 | 0 | 0.1 |
| 8:2 Fluorotelomer sulfonate | 0.02 | 0 | 0.02 | 0 | 0.2 | 0 | 0.1 |
| N-ethylperfluorooctane sulfonamide | 0.02 | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.1 |
| EtFOSAA | 0.02 | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.1 |
| N-ethylperfluorooctane sulfonamidoe | 0.02 | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.1 |
| N-methylperfluorooctane sulfonamide | 0.02 | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.1 |
| MeFOSAA | 0.02 | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.1 |
| N-methylperfluorooctanesulfonamidol | 0.02 | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.1 |
| Perfluorobutanoic acid | 0.02 | 0.01789437 | 0.02 | 0 | 0.2 | 0.41201254 | 0.1 |
| Perfluorobutane Sulfonate (PFBS) | 0.02 | 0 | 0.02 | 0.08503510 | 0.2 | 0.06335875 | 0.1 |
| Perfluorodecane Sulfonate | 0.02 | 0 | 0.02 | 0 | 0.2 | 0 | 0.1 |
| Perfluoroheptanoic Acid (PFHpA) | 0.02 | 0.00943613 | 0.02 | 0.20751695 | 0.2 | 0.33398366 | 0.1 |
| Perfluoroheptane sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.1 |
| Perfluorohexanoic Acid (PFHxA) | 0.02 | 0.26703462 | 0.02 | 1.59456642 | 0.2 | 3.92541783 | 0.1 |
| Perfluorohexane Sulfonate (PFHxS) | 0.02 | 0.01131403 | 0.02 | 8.50537070 | 0.2 | 11.5441861 | 0.5 |
| Perfluorononanoic Acid (PFNA) | 0.02 | 0 | 0.02 | 0 | 0.2 | 0.05250739 | 0.1 |
| Perfluorooctane Sulfonamide (PFOSA) | 0.02 | 0.01617505 | 0.02 | 0 | 0.2 | 0 | 0.1 |
| Perfluoropentanoic Acid (PFPeA) | 0.02 | 0.01648651 | 0.02 | 0.31172276 | 0.2 | 0.78441645 | 0.1 |
| Perfluorotetradecanoic Acid | 0.02 | 0 | 0.02 | 0 | 0.2 | 0 | 0.1 |
| Perfluorotridecanoic Acid | 0.02 | 0 | 0.02 | 0 | 0.2 | 0 | 0.1 |
| Perfluoroundecanoic Acid (PFUnA) | 0.02 | 0 | 0.02 | 0 | 0.2 | 0 | 0.1 |
| Perfluorodecanoic Acid (PFDA) | 0.02 | 0 | 0.02 | 0 | 0.2 | 0 | 0.1 |
| Perfluorododecanoic Acid (PFDoA) | 0.02 | 0 | 0.02 | 0 | 0.2 | 0 | 0.1 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.02 | 0.00563552 | 0.02 | 0.88021969 | 0.2 | 2.92577126 | 0.1 |
| Perfluorooctane Sulfonate (PFOS) | 0.02 | 0.83905751 | 0.2 | 26.0520123 | 1.0 | 5.40598684 | 0.5 |
| 13C2-6:2 Fluorotelomer sulfonate | | 79.5795584 | | 93.3136458 | | 85.7303165 | |
| 13C2-8:2 Fluorotelomer sulfonate | | 87.9408829 | | 85.8833507 | | 87.4445116 | |
| 13C2-perfluorotetradecanoic acid | | 78.8231745 | | 55.2433613 | | 54.2082950 | |
| 13C4-Perfluorobutanoic acid | | 98.6046999 | | 97.2302986 | | 96.6611460 | |
| D3-MeFOSAA | | N/A******* | | N/A******* | | N/A******* | |
| D5-EtFOSAA | | N/A******* | | N/A******* | | N/A******* | |
| N-methyl-d3-perfluorooctane sulfona | | 71.7444527 | | N/A******* | | N/A******* | |
| N-ethyl-d5-perfluorooctane sulfonam | | 66.4657803 | | N/A******* | | N/A******* | |
| 13C2-Perfluorodecanoic acid | | 97.7208315 | | 92.5450972 | | 85.9661640 | |
| 13C2-Perfluorododecanoic acid | | 81.3619855 | | 78.5172803 | | 81.5215968 | |
| 13C2-Perfluorohexanoic acid | | 96.8865302 | | 102.467661 | | 104.236432 | |
| 13C2-Perfluoroundecanoic acid | | 82.4094788 | | 85.4727361 | | 86.4738408 | |
| 13C4-Perfluoroheptanoic acid | | 95.6543955 | | 87.7616279 | | 92.3044413 | |
| 13C5-Perfluorononanoic acid | | 91.4111481 | | 83.9166446 | | 90.5446618 | |
| 13C4-Perfluorooctanoic acid | | 92.8314937 | | 94.7030951 | | 95.2159699 | |
| 13C4-Perfluorooctanesulfonate | | 82.4158378 | | 93.0837522 | | 92.4213338 | |
| 13C5-Perfluoropentanoic acid | | 96.3795463 | | 93.6920871 | | 93.5649676 | |
| 13C8-Perfluorooctane Sulfonamide | | 94.1222883 | | 85.5425855 | | 87.0887821 | |
| 18O2-Perfluorohexanesulfonate | | 91.0623557 | | 90.5654177 | | 93.1582697 | |

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | RDL | MDL | IDL | | | | |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0.02 | 0.0066 | 0 | | | | |
| 8:2 Fluorotelomer sulfonate | 0.02 | 0.0066 | 0 | | | | |
| N-ethylperfluorooctane sulfonamide | 0.02 | 0.01 | 0 | | | | |
| EtFOSAA | 0.02 | 0.0033 | 0 | | | | |
| N-ethylperfluorooctane sulfonamidoe | 0.02 | 0.0079 | 0 | | | | |
| N-methylperfluorooctane sulfonamide | 0.02 | 0.013 | 0 | | | | |
| MeFOSAA | 0.02 | 0.0029 | 0 | | | | |
| N-methylperfluorooctanesulfonamidol | 0.02 | 0.012 | 0 | | | | |
| Perfluorobutanoic acid | 0.02 | 0.0055 | 0 | | | | |
| Perfluorobutane Sulfonate (PFBS) | 0.02 | 0.0054 | 0 | | | | |
| Perfluorodecane Sulfonate | 0.02 | 0.006 | 0 | | | | |
| Perfluoroheptanoic Acid (PFHpA) | 0.02 | 0.0074 | 0 | | | | |
| Perfluoroheptane sulfonate | 0.02 | 0.008 | 0 | | | | |
| Perfluorohexanoic Acid (PFHxA) | 0.02 | 0.0035 | 0 | | | | |
| Perfluorohexane Sulfonate (PFHxS) | 0.02 | 0.0056 | 0 | | | | |
| Perfluorononanoic Acid (PFNA) | 0.02 | 0.0087 | 0 | | | | |
| Perfluorooctane Sulfonamide (PFOSA) | 0.02 | 0.0034 | 0 | | | | |
| Perfluoropentanoic Acid (PFPeA) | 0.02 | 0.0075 | 0 | | | | |
| Perfluorotetradecanoic Acid | 0.02 | 0.0027 | 0 | | | | |
| Perfluorotridecanoic Acid | 0.02 | 0.0038 | 0 | | | | |
| Perfluoroundecanoic Acid (PFUnA) | 0.02 | 0.0025 | 0 | | | | |
| Perfluorodecanoic Acid (PFDA) | 0.02 | 0.0061 | 0 | | | | |
| Perfluorododecanoic Acid (PFDoA) | 0.02 | 0.005 | 0 | | | | |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.02 | 0.0033 | 0 | | | | |
| Perfluorooctane Sulfonate (PFOS) | 0.02 | 0.006 | 0 | | | | |
| 13C2-6:2 Fluorotelomer sulfonate | | | | | | | |
| 13C2-8:2 Fluorotelomer sulfonate | | | | | | | |
| 13C2-perfluorotetradecanoic acid | | | | | | | |
| 13C4-Perfluorobutanoic acid | | | | | | | |
| D3-MeFOSAA | | | | | | | |
| D5-EtFOSAA | | | | | | | |
| N-methyl-d3-perfluorooctane sulfona | | | | | | | |
| N-ethyl-d5-perfluorooctane sulfonam | | | | | | | |
| 13C2-Perfluorodecanoic acid | | | | | | | |
| 13C2-Perfluorododecanoic acid | | | | | | | |
| 13C2-Perfluorohexanoic acid | | | | | | | |
| 13C2-Perfluoroundecanoic acid | | | | | | | |
| 13C4-Perfluoroheptanoic acid | | | | | | | |
| 13C5-Perfluorononanoic acid | | | | | | | |
| 13C4-Perfluorooctanoic acid | | | | | | | |
| 13C4-Perfluorooctanesulfonate | | | | | | | |
| 13C5-Perfluoropentanoic acid | | | | | | | |
| 13C8-Perfluorooctane Sulfonamide | | | | | | | |
| 18O2-Perfluorohexanesulfonate | | | | | | | |

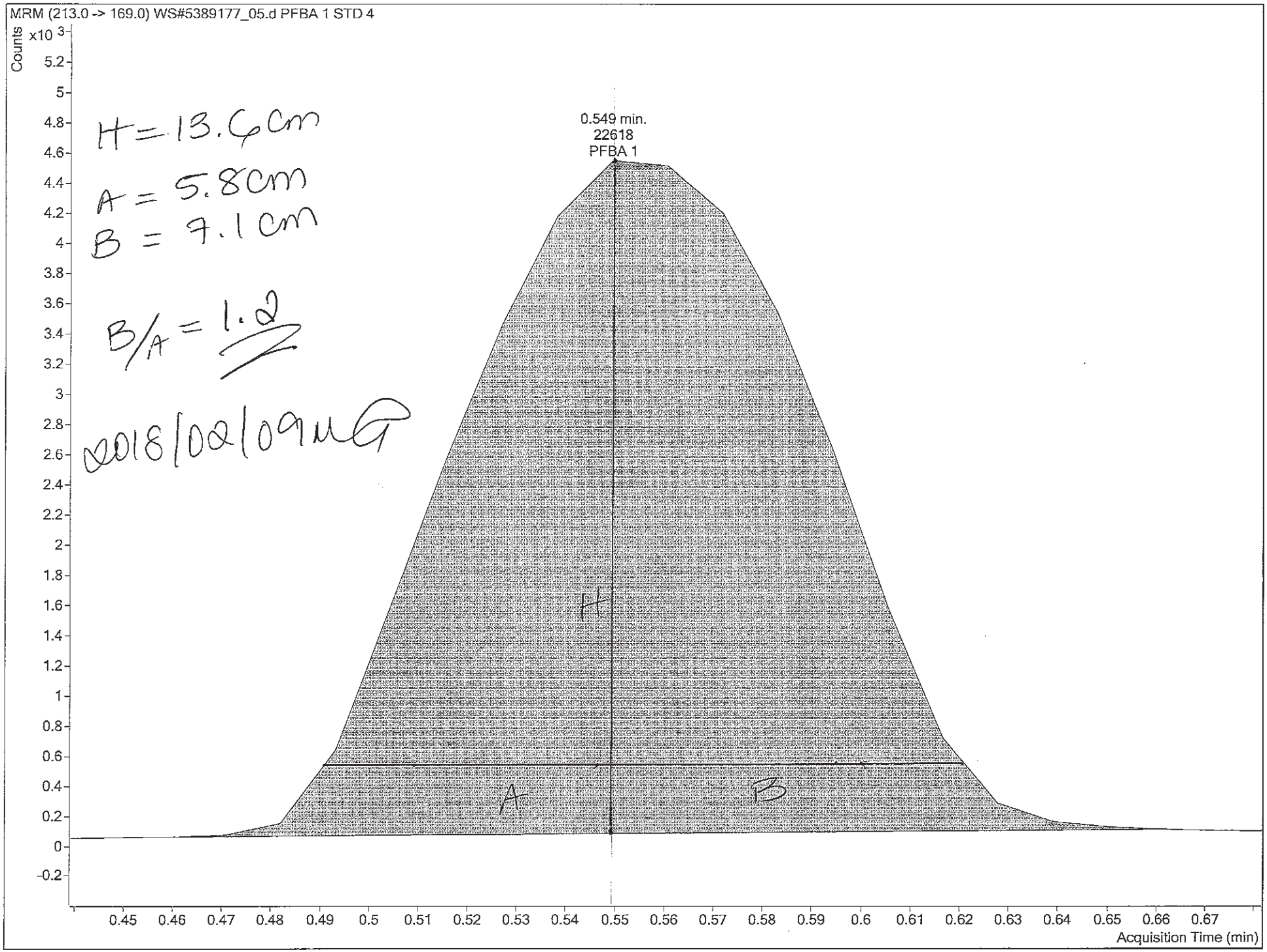


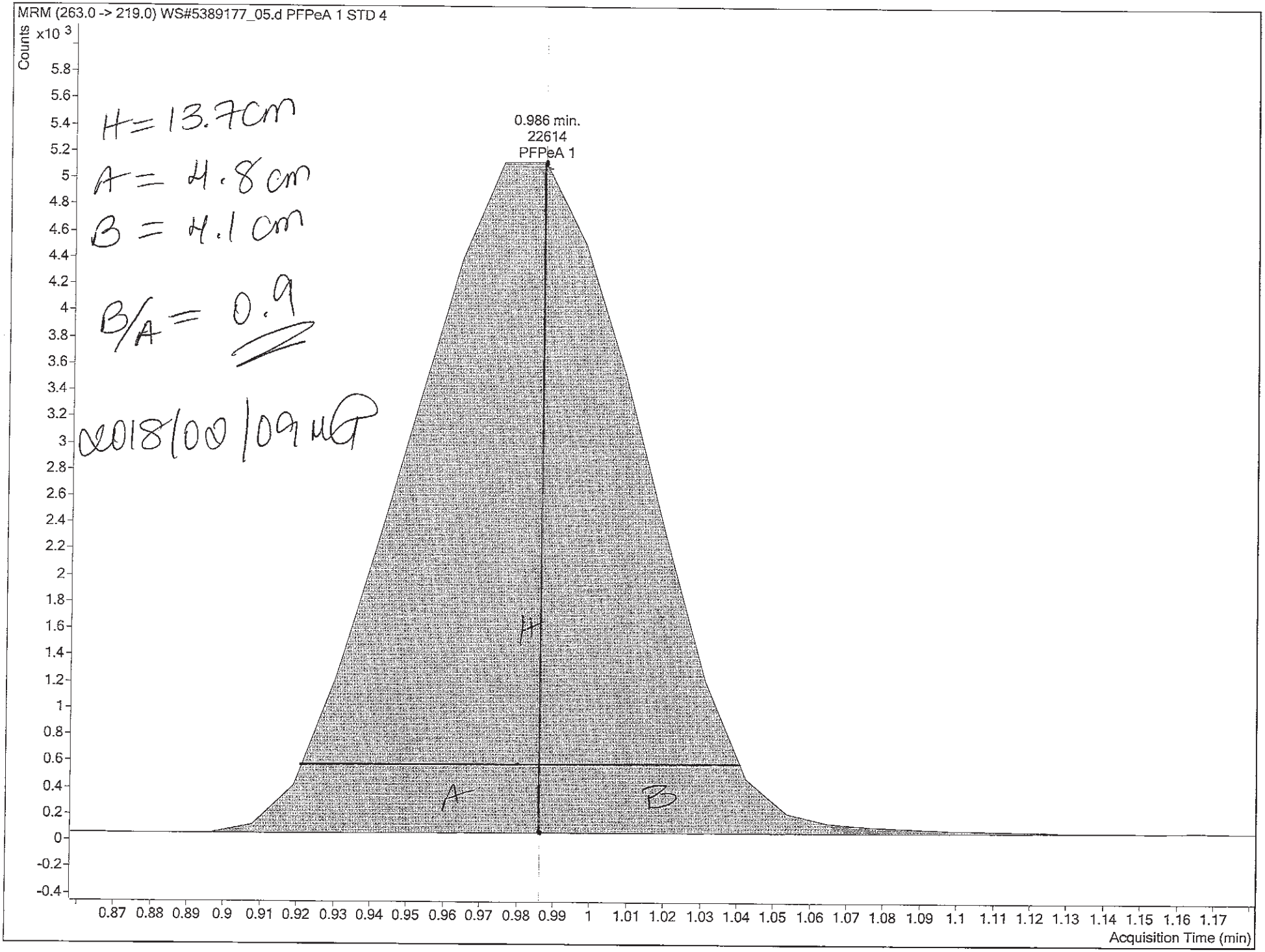

$7.5898 = 0.381969X - 0.051790$

$X = 20.00578 \times 0.024$

$X = \underline{0.48014}$ ug/L

2018/02/09 ug


MRM (213.0 -> 169.0) WS#5389177_05.d PFBA 1 STD 4
Counts
x10 3
0.549 min.
22618
PFBA 1
H=13.6cm
A=5.8cm
B=7.1cm
B/A=1.2
2018/02/09 MG
H
A
B
Acquisition Time (min)


MRM (263.0 -> 219.0) WS#5389177_05.d PFPeA 1 STD 4
Counts x10 3
0.986 min.
22614
PFPeA 1
H= 13.7cm
A= 4.8 cm
B = 4.1 cm
B/A = 0.9
0.018/0.09 ug
H
A
B
Acquisition Time (min)

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/07

Test Code: **PFOSALCM-W**

Worksheet Number: **5389177**

| Sample Number | Parameter Code | Parameter | |
|---|---|---|---|
| FZA807-01 | ETFOSAA | EtFOSAA | * |
| FZA808-01 | MEFOSAA | MeFOSAA | * |
| FZA809-01 | PFBS | Perfluorobutane Sulfonate (PFBS) | |
| FZH324-01 | PFHPA | Perfluoroheptanoic Acid (PFHpA) | |
| FZH325-01 | PFHXA | Perfluorohexanoic Acid (PFHxA) | |
| | PFHXS | Perfluorohexane Sulfonate (PFHxS) | |
| | PFNA | Perfluorononanoic Acid (PFNA) | |
| | PFTEDA | Perfluorotetradecanoic Acid | |
| | PFTRDA | Perfluorotridecanoic Acid | |
| | PFUNA | Perfluoroundecanoic Acid (PFUnA) | |
| | PFDA | Perfluorodecanoic Acid (PFDA) | |
| | PFDOA | Perfluorododecanoic Acid (PFDoA) | |
| | PFOA | Perfluoro-n-Octanoic Acid (PFOA) | |
| | PFOS | Perfluorooctane Sulfonate (PFOS) | |
| FZJ938-01 | 6:2FTS | 6:2 Fluorotelomer sulfonate | * |
| FZJ941-01 | 8:2FTS | 8:2 Fluorotelomer sulfonate | * |
| FZJ953-01 | PFBA | Perfluorobutanoic acid | |
| FZJ954-01 | PFBS | Perfluorobutane Sulfonate (PFBS) | |
| | PFDS | Perfluorodecane Sulfonate | |
| | PFHPA | Perfluoroheptanoic Acid (PFHpA) | |
| | PFHXA | Perfluorohexanoic Acid (PFHxA) | |
| | PFHXS | Perfluorohexane Sulfonate (PFHxS) | |
| | PFNA | Perfluorononanoic Acid (PFNA) | |
| | PFOSA | Perfluorooctane Sulfonamide (PFOSA) | |
| | PFPEA | Perfluoropentanoic Acid | |

* - This parameter is usually off, but will be reported for this group of samples!

# WorkSheet 5389177 Instrument Sequences

| | | |
|---|---|---|
| 1. |  5389177:SPIKE | SPIKE |
| 2. |  5389177:SPIKE:D1 | SPIKE :D1 |
| 3. |  5389177:BLANK | BLANK |
| 4. |  5389177:FZA807-01 | EB-WC-012418-3 |
| 5. |  5389177:FZA808-01 | FB-OLD-012418-5 |
| 6. |  5389177:FZA809-01 | EB-DPT-012418-3 |
| 7. |  5389177:FZH324-01 | [redacted] |
| 8. |  5389177:FZH325-01 | [redacted] |
| 9. |  5389177:FZJ938-01 | [redacted] |
| 10. |  5389177:FZJ941-01 | [redacted] |
| 11. |  5389177:FZJ953-01 | [redacted] |
| 12. |  5389177:FZJ954-01 | [redacted] |

# Worklist Report

Agilent Technologies

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180208_Low.wkl

Maxxam Analytics

**Operator Name:** ---
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\Data\PFC\20180208\WS#5389177
**Pre-Worklist Script:** ---
**Post-Worklist Script:** SCP_InstrumentStandby(){MH_Acq_Scripts.exe}
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** Column #198
MP A1: Solution# 280 (FSRE18)
MP B1: Methanol lot# SHBJ6339, Sigma

20180208

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P3 | |

**Worklist Table**

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Solvent | P3-A1 | PFC_Water_Low.m | WS#5389177_01.d | Sample | | As Method | - |
| 2 | STD 1 | P3-A2 | PFC_Water_Low.m | WS#5389177_02.d | Calibration | STD 1 | As Method | - |
| 3 | STD 2 | P3-A3 | PFC_Water_Low.m | WS#5389177_03.d | Calibration | STD 2 | As Method | - |
| 4 | STD 3 | P3-A4 | PFC_Water_Low.m | WS#5389177_04.d | Calibration | STD 3 | As Method | - |
| 5 | STD 4 | P3-A5 | PFC_Water_Low.m | WS#5389177_05.d | Calibration | STD 4 | As Method | - |
| 6 | STD 5 | P3-A6 | PFC_Water_Low.m | WS#5389177_06.d | Calibration | STD 5 | As Method | - |
| 7 | STD 6 | P3-A7 | PFC_Water_Low.m | WS#5389177_07.d | Calibration | STD 6 | As Method | - |

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23/02/18

# Worklist Report

Agilent Technologies

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 8 | IB | P3-A8 | PFC_Water_Low.m | WS#5389177_08.d | Sample | | As Method | - |
| 9 | ICV | P3-A9 | PFC_Water_Low.m | WS#5389177_09.d | QC | ICV | As Method | - |
| 10 | ISC | P3-A2 | PFC_Water_Low.m | WS#5389177_10.d | ConCal | STD 1 | As Method | - |
| 11 | 5389177:BLANK | P3-B1 | PFC_Water_Low.m | WS#5389177_11.d | Sample | | As Method | - |
| 12 | 5389177:SPIKE | P3-B2 | PFC_Water_Low.m | WS#5389177_12.d | QC | ICV | As Method | - |
| 13 | 5389177:SPIKE:D1 | P3-B3 | PFC_Water_Low.m | WS#5389177_13.d | QC | ICV | As Method | - |
| 14 | 5389177:FZA807-01 | P3-B4 | PFC_Water_Low.m | WS#5389177_14.d | Sample | | As Method | - |
| 15 | 5389177:FZA808-01 | P3-B5 | PFC_Water_Low.m | WS#5389177_15.d | Sample | | As Method | - |
| 16 | 5389177:FZA809-01 | P3-B6 | PFC_Water_Low.m | WS#5389177_16.d | Sample | | As Method | - |
| 17 | 5389177:FZH324-01:100x | P3-B7 | PFC_Water_Low.m | WS#5389177_17.d | Sample | | As Method | - |
| 18 | 5389177:FZH324-01:10x | P3-B8 | PFC_Water_Low.m | WS#5389177_18.d | Sample | | As Method | - |
| 19 | IB | P3-A8 | PFC_Water_Low.m | WS#5389177_19.d | Sample | | As Method | - |
| 20 | 5389177:FZH325-01:100x | P3-B9 | PFC_Water_Low.m | WS#5389177_20.d | Sample | | As Method | - |
| 21 | 5389177:FZH325-01:10x | P3-C1 | PFC_Water_Low.m | WS#5389177_21.d | Sample | | As Method | - |
| 22 | IB | P3-A8 | PFC_Water_Low.m | WS#5389177_22.d | Sample | | As Method | - |
| 23 | 5389177:FZJ938-01 | P3-C2 | PFC_Water_Low.m | WS#5389177_23.d | Sample | | As Method | - |
| 24 | 5389177:FZJ941-01:10x | P3-C3 | PFC_Water_Low.m | WS#5389177_24.d | Sample | | As Method | - |
| 25 | 5389177:FZJ941-01 | P3-C4 | PFC_Water_Low.m | WS#5389177_25.d | Sample | | As Method | - |
| 26 | IB | P3-A8 | PFC_Water_Low.m | WS#5389177_26.d | Sample | | As Method | - |
| 27 | CCV | P3-A5 | PFC_Water_Low.m | WS#5389177_27.d | ConCal | STD 4 | As Method | - |
| 28 | 5389177:FZJ953-01:50x | P3-C5 | PFC_Water_Low.m | WS#5389177_28.d | Sample | | As Method | - |
| 29 | 5389177:FZJ953-01:10x | P3-C6 | PFC_Water_Low.m | WS#5389177_29.d | Sample | | As Method | - |
| 30 | IB | P3-A8 | PFC_Water_Low.m | WS#5389177_30.d | Sample | | As Method | - |

Maxxam Analytics

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Maxxam Analytics

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 31 | 5389177:FZJ954-01:25x | P3-C7 | PFC_Water_Low.m | WS#5389177_31.d | Sample | | As Method | - |
| 32 | 5389177:FZJ954-01:5x | P3-C8 | PFC_Water_Low.m | WS#5389177_32.d | Sample | | As Method | - |
| 33 | IB | P3-A8 | PFC_Water_Low.m | WS#5389177_33.d | Sample | | As Method | - |
| 34 | CCV | P3-A5 | PFC_Water_Low.m | WS#5389177_34.d | ConCal | STD 4 | As Method | - |

# Worklist Report

Agilent Technologies

Maxxam Analytics

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180208_Low_FOSAA.wkl

**Operator Name:** ---
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\Data\PFC\20180208\WS#5389177_FOSAA
**Pre-Worklist Script:** ---
**Post-Worklist Script:** SCP_InstrumentStandby(){MH_Acq_Scripts.exe}
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** Column #198
MP A1: Solution# 280 (FSRE18)
MP B2: Solution# 272 (FSRE18)

20180208 MC

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P3 | |

**Worklist Table**

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Solvent | P3-A1 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_01.d | Sample | | As Method | - |
| 2 | STD 1 | P3-A2 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_02.d | Calibration | STD 1 | As Method | - |
| 3 | STD 2 | P3-A3 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_03.d | Calibration | STD 2 | As Method | - |
| 4 | STD 3 | P3-A4 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_04.d | Calibration | STD 3 | As Method | - |
| 5 | STD 4 | P3-A5 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_05.d | Calibration | STD 4 | As Method | - |
| 6 | STD 5 | P3-A6 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_06.d | Calibration | STD 5 | As Method | - |
| 7 | STD 6 | P3-A7 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_07.d | Calibration | STD 6 | As Method | - |
| 8 | IB | P3-A8 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_08.d | Sample | | As Method | - |

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2018/02/08

# Worklist Report

Agilent Technologies

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 9 | ICV | P3-A9 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_09.d | QC | ICV | As Method | - |
| 10 | ISC | P3-A2 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_10.d | ConCal | STD 1 | As Method | - |
| 11 | 5389177:BLANK | P3-B1 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_11.d | Sample | | As Method | - |
| 12 | 5389177:SPIKE | P3-B2 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_12.d | QC | ICV | As Method | - |
| 13 | 5389177:SPIKE:D1 | P3-B3 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_13.d | QC | ICV | As Method | - |
| 14 | 5389177:FZA807-01 | P3-B4 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_14.d | Sample | | As Method | - |
| 15 | 5389177:FZA808-01 | P3-B5 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_15.d | Sample | | As Method | - |
| 16 | 5389177:FZA809-01 | P3-B6 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_16.d | Sample | | As Method | - |
| 17 | 5389177:FZH324-01:100x | P3-B7 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_17.d | Sample | | As Method | - |
| 18 | 5389177:FZH324-01:10x | P3-B8 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_18.d | Sample | | As Method | - |
| 19 | IB | P3-A8 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_19.d | Sample | | As Method | - |
| 20 | 5389177:FZH325-01:100x | P3-B9 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_20.d | Sample | | As Method | - |
| 21 | 5389177:FZH325-01:10x | P3-C1 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_21.d | Sample | | As Method | - |
| 22 | IB | P3-A8 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_22.d | Sample | | As Method | - |
| 23 | 5389177:FZJ938-01 | P3-C2 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_23.d | Sample | | As Method | - |
| 24 | 5389177:FZJ941-01:10x | P3-C3 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_24.d | Sample | | As Method | - |
| 25 | 5389177:FZJ941-01 | P3-C4 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_25.d | Sample | | As Method | - |
| 26 | IB | P3-A8 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_26.d | Sample | | As Method | - |
| 27 | CCV | P3-A5 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_27.d | ConCal | STD 4 | As Method | - |
| 28 | 5389177:FZJ953-01:50x | P3-C5 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_28.d | Sample | | As Method | - |
| 29 | 5389177:FZJ953-01:10x | P3-C6 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_29.d | Sample | | As Method | - |
| 30 | IB | P3-A8 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_30.d | Sample | | As Method | - |
| 31 | 5389177:FZJ954-01:25x | P3-C7 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_31.d | Sample | | As Method | - |
| 32 | 5389177:FZJ954-01:5x | P3-C8 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_32.d | Sample | | As Method | - |
| 33 | IB | P3-A8 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_33.d | Sample | | As Method | - |
| 34 | CCV | P3-A5 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_34.d | ConCal | STD 4 | As Method | - |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| STD 1 | - | 2018/02/09 12:02 AM | PFC_Water_Low.m | WS#5389177_02.d | P3-A2 |
| STD 2 | - | 2018/02/09 12:07 AM | PFC_Water_Low.m | WS#5389177_03.d | P3-A3 |
| STD 3 | - | 2018/02/09 12:12 AM | PFC_Water_Low.m | WS#5389177_04.d | P3-A4 |
| STD 4 | - | 2018/02/09 12:17 AM | PFC_Water_Low.m | WS#5389177_05.d | P3-A5 |
| STD 5 | - | 2018/02/09 12:22 AM | PFC_Water_Low.m | WS#5389177_06.d | P3-A6 |
| STD 6 | - | 2018/02/09 12:27 AM | PFC_Water_Low.m | WS#5389177_07.d | P3-A7 |
| IB | - | 2018/02/09 12:31 AM | PFC_Water_Low.m | WS#5389177_08.d | P3-A8 |
| ICV | - | 2018/02/09 12:36 AM | PFC_Water_Low.m | WS#5389177_09.d | P3-A9 |
| ISC | - | 2018/02/09 12:41 AM | PFC_Water_Low.m | WS#5389177_10.d | P3-A2 |
| 5389177:BLANK | - | 2018/02/09 12:46 AM | PFC_Water_Low.m | WS#5389177_11.d | P3-B1 |
| 5389177:SPIKE | - | 2018/02/09 12:51 AM | PFC_Water_Low.m | WS#5389177_12.d | P3-B2 |
| 5389177:SPIKE:D1 | - | 2018/02/09 12:56 AM | PFC_Water_Low.m | WS#5389177_13.d | P3-B3 |
| 5389177:FZA807-01 | - | 2018/02/09 1:01 AM | PFC_Water_Low.m | WS#5389177_14.d | P3-B4 |
| 5389177:FZA808-01 | - | 2018/02/09 1:06 AM | PFC_Water_Low.m | WS#5389177_15.d | P3-B5 |
| 5389177:FZA809-01 | - | 2018/02/09 1:11 AM | PFC_Water_Low.m | WS#5389177_16.d | P3-B6 |
| 5389177:FZH324-01:100x | Reported for PFOS only. | 2018/02/09 1:16 AM | PFC_Water_Low.m | WS#5389177_17.d | P3-B7 |
| 5389177:FZH324-01:10x | Reported for all except PFOS. | 2018/02/09 1:21 AM | PFC_Water_Low.m | WS#5389177_18.d | P3-B8 |
| IB | - | 2018/02/09 1:26 AM | PFC_Water_Low.m | WS#5389177_19.d | P3-A8 |
| 5389177:FZH325-01:100x | Reported for PFOS, PFHxS only. | 2018/02/09 1:31 AM | PFC_Water_Low.m | WS#5389177_20.d | P3-B9 |
| 5389177:FZH325-01:10x | Reported for all except PFOS, PFHxS. | 2018/02/09 1:36 AM | PFC_Water_Low.m | WS#5389177_21.d | P3-C1 |
| IB | - | 2018/02/09 1:41 AM | PFC_Water_Low.m | WS#5389177_22.d | P3-A8 |
| 5389177:FZJ938-01 | - | 2018/02/09 1:45 AM | PFC_Water_Low.m | WS#5389177_23.d | P3-C2 |
| 5389177:FZJ941-01:10x | Reported for 6:2-FTS, PFOS only. | 2018/02/09 1:50 AM | PFC_Water_Low.m | WS#5389177_24.d | P3-C3 |
| 5389177:FZJ941-01 | Reported for all except 6:2-FTS, PFOS. | 2018/02/09 1:55 AM | PFC_Water_Low.m | WS#5389177_25.d | P3-C4 |
| IB | - | 2018/02/09 2:00 AM | PFC_Water_Low.m | WS#5389177_26.d | P3-A8 |
| CCV | - | 2018/02/09 2:05 AM | PFC_Water_Low.m | WS#5389177_27.d | P3-A5 |
| 5389177:FZJ953-01:50x | Reported for PFOS only. | 2018/02/09 2:10 AM | PFC_Water_Low.m | WS#5389177_28.d | P3-C5 |
| 5389177:FZJ953-01:10x | Reported for all except PFOS. | 2018/02/09 2:15 AM | PFC_Water_Low.m | WS#5389177_29.d | P3-C6 |
| IB | - | 2018/02/09 2:20 AM | PFC_Water_Low.m | WS#5389177_30.d | P3-A8 |
| 5389177:FZJ954-01:25x | Reported for PFOS, PFHxS only. | 2018/02/09 2:25 AM | PFC_Water_Low.m | WS#5389177_31.d | P3-C7 |
| 5389177:FZJ954-01:5x | Reported for all except PFOS, PFHxS. | 2018/02/09 2:30 AM | PFC_Water_Low.m | WS#5389177_32.d | P3-C8 |
| IB | - | 2018/02/09 2:35 AM | PFC_Water_Low.m | WS#5389177_33.d | P3-A8 |
| CCV | - | 2018/02/09 2:40 AM | PFC_Water_Low.m | WS#5389177_34.d | P3-A5 |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| STD 1 | - | 2018/02/08 6:03 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_02.d | P3-A2 |
| STD 2 | - | 2018/02/08 6:06 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_03.d | P3-A3 |
| STD 3 | - | 2018/02/08 6:08 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_04.d | P3-A4 |
| STD 4 | - | 2018/02/08 6:11 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_05.d | P3-A5 |
| STD 5 | - | 2018/02/08 6:13 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_06.d | P3-A6 |
| STD 6 | - | 2018/02/08 6:16 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_07.d | P3-A7 |
| IB | - | 2018/02/08 6:18 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_08.d | P3-A8 |
| ICV | - | 2018/02/08 6:20 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_09.d | P3-A9 |
| ISC | - | 2018/02/08 6:23 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_10.d | P3-A2 |
| 5389177:BLANK | - | 2018/02/08 6:25 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_11.d | P3-B1 |
| 5389177:SPIKE | - | 2018/02/08 6:28 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_12.d | P3-B2 |
| 5389177:SPIKE:D1 | - | 2018/02/08 6:30 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_13.d | P3-B3 |
| 5389177:FZA807-01 | - | 2018/02/08 6:32 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_14.d | P3-B4 |
| 5389177:FZA808-01 | - | 2018/02/08 6:35 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_15.d | P3-B5 |
| 5389177:FZA809-01 | - | 2018/02/08 6:37 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_16.d | P3-B6 |
| 5389177:FZH324-01:100x | Not Used | 2018/02/08 6:40 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_17.d | P3-B7 |
| 5389177:FZH324-01:10x | - | 2018/02/08 6:42 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_18.d | P3-B8 |
| IB | - | 2018/02/08 6:44 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_19.d | P3-A8 |
| 5389177:FZH325-01:100x | Not Used | 2018/02/08 6:47 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_20.d | P3-B9 |
| 5389177:FZH325-01:10x | - | 2018/02/08 6:49 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_21.d | P3-C1 |
| IB | - | 2018/02/08 6:52 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_22.d | P3-A8 |
| 5389177:FZJ938-01 | - | 2018/02/08 6:54 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_23.d | P3-C2 |
| 5389177:FZJ941-01:10x | - | 2018/02/08 6:56 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_24.d | P3-C3 |
| 5389177:FZJ941-01 | - | 2018/02/08 6:59 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_25.d | P3-C4 |
| IB | - | 2018/02/08 7:01 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_26.d | P3-A8 |
| CCV | - | 2018/02/08 7:04 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_27.d | P3-A5 |
| 5389177:FZJ953-01:50x | - | 2018/02/08 7:06 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_28.d | P3-C5 |
| 5389177:FZJ953-01:10x | - | 2018/02/08 7:08 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_29.d | P3-C6 |
| IB | - | 2018/02/08 7:11 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_30.d | P3-A8 |
| 5389177:FZJ954-01:25x | - | 2018/02/08 7:13 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_31.d | P3-C7 |
| 5389177:FZJ954-01:5x | - | 2018/02/08 7:16 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_32.d | P3-C8 |
| IB | - | 2018/02/08 7:18 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_33.d | P3-A8 |
| CCV | - | 2018/02/08 7:21 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_34.d | P3-A5 |

## DoD Projects - Internal Data Validation Checklist

Run date: 2018/02/15

Worksheet # (s): 53966699

Analysis: PFOSALCM-W

| | Primary review by the analyst - 1st 100 % analysis review | 1st 100% review yes | no | n/a | *2nd 100% review |
|---|---|---|---|---|---|
| 1 | Sample analyses meet hold time criteria 2018/02/20 MT | ✓ | ✓ | | ✓ |
| 2 | Analysis set-up meets method criteria | ✓ | | | ✓ |
| 3 | Tuning and correct calibration used - criteria meets method criteria | ✓ | | | ✓ |
| 4 | SQC/Control Charts updated, analysis in statistical/method control | ✓ | | | ✓ |
| 5 | Internal area counts checked (if applicable) | ✓ | | | ✓ |
| 6 | LCS, SRM are within acceptance criteria | ✓ | | | ✓ |
| 7 | Surrogate Recovery(s) is within acceptance criteria | ✓ | | | ✓ |
| 8 | Method Blank meets acceptance criteria | ✓ | | | ✓ |
| 9 | Matrix Spike recovery(s) meets acceptance criteria | ✓ | | | ✓ |
| 10 | Duplicate precision meets acceptance criteria | ✓ | | | ✓ |
| 11 | QC is documented on the run logs | ✓ | | | ✓ |
| 12 | Runs checked for carryover | ✓ | | | ✓ |
| 13 | Prep log / worksheet(s) are present, signed / dated by a prep / instrument analysts | ✓ | | | ✓ |
| 14 | Initial weights, splits, impringer volumes (where applicable) are documented | ✓ | | | ✓ |
| 15 | Standards and reagents traceable to Certificates of Analysis | ✓ | | | ✓ |
| 16 | Samples above calibration range diluted and reanalyzed | | | ✓ | ✓ |
| 17 | Dilution factors (where justified) have been checked for correctness and entered | ✓ | | | ✓ |
| 18 | Analytical observations/anomalies documented in LIMS | ✓ | | | ✓ |
| 19 | Random calculation checked and in correct units | ✓ | | | ✓ |
| 20 | If corrective actions were applied they are documented, initialed & dated | | | ✓ | ✓ |
| 21 | Manual integration – before & after data with a reason included, initialed & dated | | | ✓ | ✓ |
| 22 | Transferred data is validated in LIMS for correctness | ✓ | | | ✓ |
| 23 | Data package assembled (where required) | ✓ | | | ✓ |

Reviewed by: MT Date: 2018/02/16

Comments:

| | Secondary Supervisor/Qualified Data Review Staff - 2nd 100% verification review | yes | no | n/a | |
|---|---|---|---|---|---|
| 1 | Repeats documented and referenced | | | ✓ | |
| 2 | Method and sample deviations noted, anomalies described (if applicable) | | | ✓ | |
| 3 | Data and QC validated in LIMS | ✓ | | | |
| 4 | Random calculation checked | ✓ | | | |
| 5 | Benchsheet (s) signed and dated | ✓ | | | |
| 6 | Data Package (if required) checked for completeness | ✓ | | | |

Reviewed by: [illegible] Date: 2018/02/16

Comments:

***Note: 2nd 100% verification review documented by secondary qualified data review***
***Primary and Secondary Internal Data Review Check must be performed by a different person***

## Worksheet Data Validation Checklist - Extractable Organics

Worksheet # PFOSALCM-W | Testcode: 5396699

| Sample Preparation | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Samples extracted within hold time | . | ✓ | |
| 2 | Client sample ID verified against Lab ID (waters & oils) | | | ✓ |
| 3 | Parameter list and Client comments reviewed, (Spiking solutions matched to parameter list) | ✓ | | |
| 4 | Height of sediment or if sample was decanted, recorded on worksheet | ✓ | | |
| 5 | Method required QC processed with samples, maximum batch size = 20 client samples. | ✓ | | |
| 6 | Sample, duplicate, matrix spike appear similar, initial sample as well as final extract | ✓ | | |
| 7 | Sample weight or initial volume and extract final volume, aliquot factor clearly recorded. | ✓ | | |
| 8 | If performed any additional dilution clearly recorded | ✓ | | |
| 9 | Matrix spike / Duplicate performed on IOL samples if present | | | ✓ |
| 10 | Spiking solutions valid (haven't expired), ID and volume used clearly identified on worksheet | ✓ | | |
| 11 | Spiking process witnessed and signed off | ✓ | | |
| 12 | Extraction type recorded (N3A2B = neutral, 3 x acidic, 2 x basic) | | | ✓ |
| 13 | Sample prep deviations documented within CompliantPro as a Policy Deviation | | | ✓ |
| 14 | Job Remarks reviewed on 2nd page of worksheet. | ✓ | | |
| 15 | Worksheet and reagent tracking record completed and authorized. | ✓ | | |

Reviewed by: [signature] | Date: 2018/2/13

Comments:

| Worksheet Approval | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Verified the position of the vials in autosampler against sequence list; signed off sequence list | | | |
| 2 | Calibration and CCV standards valid ( haven't expired) | | | |
| 3 | Initial calibration curve and DFTPP tune (if applicable) acceptable | | | |
| 4 | Continuing and Final CCV and DFTPP tune (if applicable) acceptable | | | |
| 5 | System performance check acceptable (if applicable) | | | |
| 6 | Internal standard responses acceptable | | | |
| 7 | Method blank meets acceptance criteria | | | |
| 8 | Lab Control Samples recoveries meets acceptance criteria | | | |
| 9 | Duplicate RPD meets acceptance criteria | | | |
| 10 | Matrix spike recoveries meets acceptance criteria | | | |
| 11 | Surrogate recoveries meets acceptance criteria | | | |
| 12 | Appropriate control charts updated | | | |
| 13 | Samples above calibration range diluted and reanalyzed | | | |
| 14 | Dilutions clearly documented on tracking record, inst file and verified during data upload | | | |
| 15 | Samples following high level samples checked for carryover. | | | |
| 16 | Mass spectra ion ratios acceptable for positive results, hardcopy in file. | | | |
| 17 | Analytical observations / anomalies documented | | | |
| 18 | DQW comments entered in LIMS, hardcopy in file | | | |
| 19 | Sample Prep section (above) reviewed and verified. | | | |
| 20 | WS Approval performed in LIMS | | | |

Reviewed by: | Date:

Comments:

Refer to BRL-FCD-00002 2018/02/16 MG

| Worksheet Validation | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Calibration, QC and sample results reviewed and determined acceptable | | | |
| 2 | Manual integrations verified | | | |
| 3 | Random calculation checked | | | |
| 4 | Data and QC validated in LIMS | | | |
| 5 | Comments reviewed for appropriateness | | | |
| 6 | Reworks / relogs documented in file | | | |
| 7 | Worksheet signed and dated, | | | |
| 8 | Worksheet approved and validated within LIMS | | | |

Reviewed by: | Date:

Comments:

**WS# : 5396699**

Page #: 1/2

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Tuesday, February 13, 2018

Assigned to : Shahbaz Ahmad

Test Code : PFOSALCM-W

Instrument Id:

Test Description : PFOS and PFOA in water by LC-MS/MS

sediment

| Job Number | Sample Number | D | Sample ID | F | % Moisture | Wt or Vol | Final Vol | DF or AF | # Cont | Expiry Date | Test DeadLine | Criteria | Extract Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MTRX SPK | 0 | PFC-W FZA786-01 | | 0.2 | 125 | 3 | 1X | | | | | 2018/02/13 |
| | MTRX SPK | 1 | PFC-W FZA786-01 | | 0.2 | 125 | 3 | 1X | | | | | 2018/02/13 |
| | SPIKE | | PFC-W | | 0 | 125 | 3 | 1X | | | | | 2018/02/13 |
| | BLANK | | | | 0 | 125 | 3 | 1X | | | | | 2018/02/13 |
| B818419 | *FZA783-01R | | OLD-002-51A-0118 | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA784-01R | | OLD-002-51A-0118* | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA785-01R | | OLD-002-11A-0118 | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA786-01R | | OLD-002-03A-0118 | | 0.2 | 125 | 3 | 1X | 6 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA788-01R | | EB-GW-012218-1 | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA789-01R | | FB-OLD-012218-1 | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA790-01R | | FB-OLD-012218-2 | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA791-01R | | EB-WC-012218-1 | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA792-01R | | EB-DPT-012218-1 | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA802-01R | | EB-WC-012318-2 | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B819794 | *FZH332-01R | | [redacted] | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B819794 | *FZH334-01R | | [redacted] | | 20.1 | 125 | 3 | 10X | 6 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B819794 | *FZH336-01R | | [redacted] | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B819794 | *FZH338-01R | | [redacted] | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B819794 | *FZH339-01R | | [redacted] | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B819794 | *FZH340-01R | | [redacted] | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B819794 | *FZH341-01R | | [redacted] | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B819794 | *FZH342-01R | | [redacted] | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B819794 | *FZH343-01R | | [redacted] | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B820260 | *FZJ934-01R | | [redacted] | | 20.1 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 23:00 | DOD | 2018/02/13 |

Remarks:

Samples extracted by: Shahbaz Ahmad

Instrumentation performed by:

Date: 2018/02/15

Calculations performed by:

Date: 2018/02/16

Validated by:

Date: 2018/02/16

| Job No. | Rep / Client Name / Remarks | Contact | Client Tier | National |
|---|---|---|---|---|
| GB818419 | SP8 Earth Toxics Inc | Rick Carr | Tier 5 (Enviro.) | AECOM |
| | NREG. PFOSALCM-W MS/MSD required on FZA786, Level IV Package and TetraTech EDD required Project #: JM11 NTC Orlando | | | |
| GB819794 | [redacted] | | | |
| GB820260 | | | | |

| Job | Sample | Lab Comments |
|---|---|---|
| | MTRX SPK | |
| | MTRX SPK | |
| | SPIKE | |
| | BLANK | |
| B818419 | FZA783-01R | |
| B818419 | FZA784-01R | |
| B818419 | FZA785-01R | |
| B818419 | FZA786-01R | |
| B818419 | FZA788-01R | |
| B818419 | FZA789-01R | |
| B818419 | FZA790-01R | |
| B818419 | FZA791-01R | |
| B818419 | FZA792-01R | |
| B818419 | FZA802-01R | |
| B819794 | FZH332-01R | |
| B819794 | FZH334-01R | |
| B819794 | FZH336-01R | |
| B819794 | FZH338-01R | |
| B819794 | FZH339-01R | |
| B819794 | FZH340-01R | |
| B819794 | FZH341-01R | |
| B819794 | FZH342-01R | |
| B819794 | FZH343-01R | |
| B820260 | FZJ934-01R | |

S1 2825 25
S2 2800 50 } SK 7377 2/3
S3 2700 15
S4 2813 37.5
S5 2775 75 } I-5297 2/3
S6 2725 125
ICV 2788 62.5 — I-5299 2/3
IB 2850 —

## Worksheet Reagent Tracking Record

Worksheet # 539 6698

| Surrogate/Spike solutions | √ | Solution ID # | Conc. | Blk-Spk Volume (µL) | | MS Volume (µL) | | Samples Volume (µL) | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Solid | Liquid | Solid | Liquid | Solid | Liquid |
| DGT Spike | | | 100 ug/mL | 60 | 30 | 60 | 30 | NA | NA |
| Diquat Dibromide | | | 50 ug/mL | NA | 350 | NA | 350 | NA | NA |
| Explosives Spiking solution A | | | 20 ug/mL | 250 | 100 | 250 | 100 | NA | NA |
| Explosives Spiking solution B | | | 20/80 ug/mL | 250 | 100 | 250 | 100 | NA | NA |
| Formaldehyde Spike | | | 100 ug/mL | 25 | 25 | 25 | 25 | NA | NA |
| Glyphosate Spike | | | 25 ug/mL | 500 | 20 | 500 | 20 | NA | NA |
| Nonylphenol Ethoxylate Spike | | | 100 ug/mL | 100 | 100 | 100 | 100 | NA | NA |
| Nonylphenol Spike | | | 10 ug/mL | 100 | 100 | 100 | 100 | NA | NA |
| Paraquat Cl Tetrahydrate | | | 20 ug/mL | NA | 125 | NA | 125 | NA | NA |
| Perchlorate Standard Spike | | | 10 ng/mL | NA | 100 | NA | 100 | NA | NA |
| Perchlorate Standard Spike | | | 500 ng/mL | 40 | NA | 40 | NA | NA | NA |
| Perchlorate O-18 Internal Standard | | | 0.10 ng/uL | 20 | 20 | 20 | 20 | 20 | 20 |
| Morpholine Second Source Working Std | | | 2500 ug/L | NA | 80 | NA | 80 | NA | NA |
| Morpholine-D8 Internal Standard | | | 10 ug/mL | NA | 50 | NA | 50 | NA | 50 |
| Steril Second Source Spiking Solution | | | NA | 20 | NA | 20 | NA | NA | NA |
| Sterilants Comp. IS Working Solution | | | 3 ug/mL | 50 | NA | 50 | NA | 50 | NA |
| Comp. PFC Working Solution A | ✓ | I-5299 1/3 DM3 | 1ug/mL | 75 | 21 62.5 | 75 | 21 62.5 | NA | NA |
| PFC Internal Standard Solution | ✓ | SI 6801 1/4 DM3 | 50/125 ng/mL | 200 | 100 150 | 200 | 100 150 | 200 | 100 150 |
| PFC Injection IS | ✓ | SI 6770 1/2 | 400 ng/mL | 20 | 20 | 20 | 20 | 20 | 20 |
| ICV | ✓ | I-5299 1/3 | | | | | | | |

| Solvent/Reagent | √ | Lot No. | Date Opened | Solvent/Reagent | √ | Lot No. | Date Opened/ Prepared |
|---|---|---|---|---|---|---|---|
| DCM | | | | 50% NaOH | | | |
| Ottawa Sand | | | | o-Phosphoric Acid | | | |
| Methanol | ✓ | SHBJ5451 | 2018/2/13 | Borax | | | |
| 2-Propanol (IPA) | | | | Calcium Chloride | | | |
| Acetonitrile | | | | EDTA | | | |
| Sodium Sulfate | | | | Phosphate Buffer | | | |
| 70:30 Methanol: Water | | | | Sodium Thiosulphate | | | |
| 60:40 Water: Methanol | ✓ | PRLRE 108-348 | | DNPH | | | |
| DCM:Ethyl Ether (75:25) | | | | FMOC | | | |
| Hexane:IPA (98:2) | | | | 5M Acetate Buffer | | | |
| 2% Formic Acid | ✓ | PRLRE 108-342 | | 0.2% $NH_4OH$ | ✓ | PRLRE 108-357 | |
| 0.2% Formic Acid | | | | Leachate Fluid | | | |
| 0.05M KOH | | | | Reagent Water | ✓ | 57297 | 2018/2/13 |
| 0.05M HCl | | | | | | | |
| | | | | | | | |
| | | | | | | | |

*Spiked by: SM

Spike Date: 2018/2/13

Spike Syringe/Pipette ID#: G24390G

Int. Std Syringe/Pipette ID#: MM1011F

*Spiking Witnessed by: DM3

Final pH:

| Equipment & ID | √ | Equipment | ID# | √ | Equipment | Lot # | Bottle Tracking |
|---|---|---|---|---|---|---|---|
| Pipettor K39732F K55791G | | SPE Cartridge | | | QC Balance ID | | Bottle# 18801 |
| | | Filter | | | Thermometer ID &Temp | | Cap# 18778 |
| Dispenser | | Centrifuge | | | | | Systems plus Lot# 18-01-31 |
| | | Sonicator | | | | | |

Comments:

* - SPIKING OF QC's & SAMPLES MUST BE WITNESSED AT ALL TIMES.

Worksheet Number: **5396699**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | Units | MTRX SPK | MTRX SPK Dup1 | SPIKE | BLANK | B818419 FZA783 ReWork | B818419 FZA784 ReWork |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 8:2 Fluorotelomer sulfonate | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-ethylperfluorooctane sulfonamide | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| EtFOSAA | ug/L | 81.89152 | 86.50419 | 81.46990 | 0 | 0 | 0 |
| N-ethylperfluorooctane sulfonamidoe | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-methylperfluorooctane sulfonamide | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| MeFOSAA | ug/L | 83.77645 | 86.49321 | 81.82236 | 0 | 0 | 0 |
| N-methylperfluorooctanesulfonamidol | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorobutanoic acid | ug/L | 78.26734 | 103.01333 | 87.10518 | 0 | N/A******* | N/A******* |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 78.12860 | 77.27161 | 78.72710 | 0 | N/A******* | N/A******* |
| Perfluorodecane Sulfonate | ug/L | 76.26618 | 84.69740 | 80.33875 | 0 | N/A******* | N/A******* |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 79.13409 | 88.59966 | 78.03500 | 0 | N/A******* | N/A******* |
| Perfluoroheptane sulfonate | ug/L | 82.49752 | 93.31286 | 75.51033 | 0 | N/A******* | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 81.24347 | 83.85384 | 81.89415 | 0 | N/A******* | N/A******* |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 76.67552 | 80.40450 | 83.83048 | 0 | N/A******* | N/A******* |
| Perfluorononanoic Acid (PFNA) | ug/L | 80.81356 | 90.14536 | 84.08254 | 0 | N/A******* | N/A******* |
| Perfluorooctane Sulfonamide (PFOSA) | ug/L | 86.80263 | 93.38657 | 82.92819 | 0 | N/A******* | N/A******* |
| Perfluoropentanoic Acid (PFPeA) | ug/L | 85.39121 | 86.76922 | 81.35779 | 0 | N/A******* | N/A******* |
| Perfluorotetradecanoic Acid | ug/L | 86.09162 | 94.91401 | 75.46730 | 0 | 0 | 0 |
| Perfluorotridecanoic Acid | ug/L | 93.21887 | 100.76268 | 86.16368 | 0 | N/A******* | N/A******* |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 80.90519 | 93.00632 | 87.65415 | 0 | 0 | 0 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 85.91489 | 90.77759 | 86.05988 | 0 | N/A******* | N/A******* |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 87.89923 | 89.00862 | 88.97405 | 0 | 0 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 77.51000 | 79.68264 | 91.63664 | 0 | N/A******* | N/A******* |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 78.88293 | 92.28659 | 88.34139 | 0 | N/A******* | N/A******* |
| 13C2-6:2 Fluorotelomer sulfonate | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-8:2 Fluorotelomer sulfonate | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-perfluorotetradecanoic acid | ug/L | 103.046183 | 90.3397531 | 99.5678759 | 72.6292907 | N/A******* | N/A******* |
| 13C4-Perfluorobutanoic acid | ug/L | 125.361650 | 104.403913 | 115.446888 | 65.1426527 | N/A******* | N/A******* |
| D3-MeFOSAA | ug/L | 119.063633 | 114.503326 | 96.5012287 | 60.0697015 | 112.272968 | 104.452849 |
| D5-EtFOSAA | ug/L | 118.064890 | 110.938028 | 92.2373381 | 57.7412796 | 112.233101 | 102.901171 |
| N-methyl-d3-perfluorooctane sulfona | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-Perfluorodecanoic acid | ug/L | 118.240681 | 102.594706 | 107.799043 | 93.5404483 | N/A******* | N/A******* |
| 13C2-Perfluorododecanoic acid | ug/L | 109.471290 | 101.202650 | 94.6627859 | 69.0291760 | 106.162006 | 90.8643354 |
| 13C2-Perfluorohexanoic acid | ug/L | 119.939338 | 112.984723 | 109.935692 | 85.8754293 | N/A******* | N/A******* |
| 13C2-Perfluoroundecanoic acid | ug/L | 120.165429 | 102.823242 | 104.756638 | 78.4780291 | 104.811742 | 99.1997934 |
| 13C4-Perfluoroheptanoic acid | ug/L | 128.677245 | 111.899795 | 117.173752 | 105.346681 | N/A******* | N/A******* |
| 13C5-Perfluorononanoic acid | ug/L | 127.505332 | 115.357178 | 108.561941 | 103.363673 | N/A******* | N/A******* |
| 13C4-Perfluorooctanoic acid | ug/L | 131.923293 | 125.628386 | 105.393126 | 113.731104 | N/A******* | N/A******* |
| 13C4-Perfluorooctanesulfonate | ug/L | 130.302284 | 113.843161 | 104.337259 | 77.6255263 | N/A******* | N/A******* |
| 13C5-Perfluoropentanoic acid | ug/L | 125.935081 | 113.762432 | 117.771111 | 72.3004986 | N/A******* | N/A******* |
| 13C8-Perfluorooctane Sulfonamide | ug/L | 106.312620 | 91.1177078 | 100.357118 | 92.9518459 | N/A******* | N/A******* |
| 18O2-Perfluorohexanesulfonate | ug/L | 128.181971 | 125.624796 | 104.025069 | 53.6290853 | N/A******* | N/A******* |

2018/02/16

Worksheet Number: **5396699**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | B818419 FZA785 ReWork | B818419 FZA786 ReWork | B818419 FZA788 ReWork | B818419 FZA789 ReWork | B818419 FZA790 ReWork | B818419 FZA791 ReWork | B818419 FZA792 ReWork |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-ethylperfluorooctane sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| EtFOSAA | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N-ethylperfluorooctane sulfonamidoe | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-methylperfluorooctane sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| MeFOSAA | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N-methylperfluorooctanesulfonamidol | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorobutanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorobutane Sulfonate (PFBS) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorodecane Sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluoroheptanoic Acid (PFHpA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluoroheptane sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorohexane Sulfonate (PFHxS) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorononanoic Acid (PFNA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorooctane Sulfonamide (PFOSA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluoropentanoic Acid (PFPeA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorotetradecanoic Acid | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perfluorotridecanoic Acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluoroundecanoic Acid (PFUnA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perfluorodecanoic Acid (PFDA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorododecanoic Acid (PFDoA) | 0 | 0 | N/A******* | 0 | 0 | 0 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorooctane Sulfonate (PFOS) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-perfluorotetradecanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C4-Perfluorobutanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| D3-MeFOSAA | 107.531370 | 115.522418 | 105.837881 | 100.439078 | 123.455838 | 116.938915 | 75.8042349 |
| D5-EtFOSAA | 104.113013 | 112.664482 | 99.1097756 | 96.6985420 | 122.200455 | 117.064133 | 71.5399115 |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-Perfluorodecanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-Perfluorododecanoic acid | 93.5890020 | 93.1097997 | 89.0640359 | 94.2925682 | 110.548580 | 106.289973 | 99.9867732 |
| 13C2-Perfluorohexanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-Perfluoroundecanoic acid | 102.241785 | 98.8544832 | 97.2867603 | 96.5175337 | 117.290987 | 120.393256 | 110.039307 |
| 13C4-Perfluoroheptanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C5-Perfluorononanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C4-Perfluorooctanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C4-Perfluorooctanesulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C5-Perfluoropentanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C8-Perfluorooctane Sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 18O2-Perfluorohexanesulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |

Worksheet Number: **5396699**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | B818419 FZA802 ReWork | B819794 FZH332 ReWork | DL | B819794 FZH334 ReWork | DL | B819794 FZH336 ReWork | B819794 FZH338 ReWork |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | N/A******* |
| 8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | N/A******* |
| N-ethylperfluorooctane sulfonamide | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | N/A******* |
| EtFOSAA | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | 0 |
| N-ethylperfluorooctane sulfonamidoe | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | N/A******* |
| N-methylperfluorooctane sulfonamide | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | N/A******* |
| MeFOSAA | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | 0 |
| N-methylperfluorooctanesulfonamidol | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | N/A******* |
| Perfluorobutanoic acid | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorobutane Sulfonate (PFBS) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorodecane Sulfonate | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluoroheptanoic Acid (PFHpA) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluoroheptane sulfonate | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorohexane Sulfonate (PFHxS) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorononanoic Acid (PFNA) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorooctane Sulfonamide (PFOSA) | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluoropentanoic Acid (PFPeA) | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorotetradecanoic Acid | 0 | 0 | 0.02 | 0 | 0.2 | 0 | 0 |
| Perfluorotridecanoic Acid | 0 | 0 | 0.02 | 0 | 0.2 | 0 | N/A******* |
| Perfluoroundecanoic Acid (PFUnA) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | 0 |
| Perfluorodecanoic Acid (PFDA) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorododecanoic Acid (PFDoA) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorooctane Sulfonate (PFOS) | 0 | N/A******* | 0.02 | 0 | 0.2 | 0 | N/A******* |
| 13C2-6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | | N/A******* | | N/A******* | N/A******* |
| 13C2-8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | | N/A******* | | N/A******* | N/A******* |
| 13C2-perfluorotetradecanoic acid | 77.0240495 | 92.9612321 | | 57.4026368 | | 83.0777780 | N/A******* |
| 13C4-Perfluorobutanoic acid | N/A******* | N/A******* | | N/A******* | | 86.9854758 | N/A******* |
| D3-MeFOSAA | 90.5648970 | N/A******* | | N/A******* | | 82.0972833 | 116.170591 |
| D5-EtFOSAA | 87.6515096 | N/A******* | | N/A******* | | 77.9473926 | 115.355592 |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | N/A******* | | N/A******* | | N/A******* | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | N/A******* | | N/A******* | | N/A******* | N/A******* |
| 13C2-Perfluorodecanoic acid | 90.7447894 | N/A******* | | N/A******* | | 91.7117749 | N/A******* |
| 13C2-Perfluorododecanoic acid | 90.6698453 | N/A******* | | N/A******* | | 84.7621637 | 114.198509 |
| 13C2-Perfluorohexanoic acid | 73.1806414 | N/A******* | | N/A******* | | 107.559677 | N/A******* |
| 13C2-Perfluoroundecanoic acid | 97.2108002 | N/A******* | | N/A******* | | 93.0809511 | 106.678973 |
| 13C4-Perfluoroheptanoic acid | 80.4039093 | N/A******* | | N/A******* | | 116.718774 | N/A******* |
| 13C5-Perfluorononanoic acid | 73.8632288 | N/A******* | | N/A******* | | 118.317542 | N/A******* |
| 13C4-Perfluorooctanoic acid | 55.8349474 | N/A******* | | N/A******* | | 111.835769 | N/A******* |
| 13C4-Perfluorooctanesulfonate | 67.4932176 | N/A******* | | N/A******* | | 103.459068 | N/A******* |
| 13C5-Perfluoropentanoic acid | N/A******* | N/A******* | | N/A******* | | 97.0783475 | N/A******* |
| 13C8-Perfluorooctane Sulfonamide | N/A******* | N/A******* | | N/A******* | | 100.122646 | N/A******* |
| 18O2-Perfluorohexanesulfonate | 78.8050133 | N/A******* | | N/A******* | | 81.3020829 | N/A******* |

Worksheet Number: **5396699**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

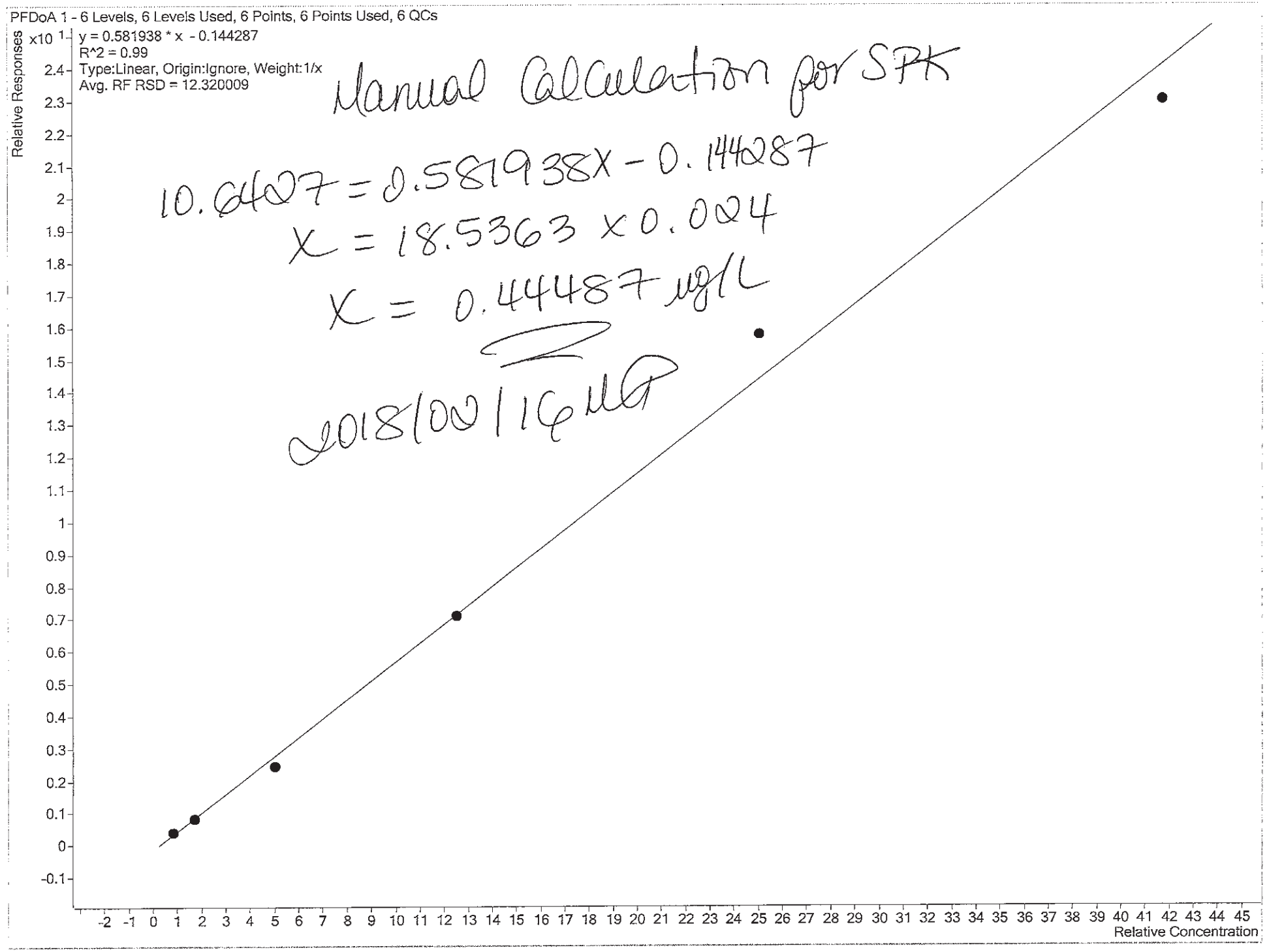
| Parameter Name | B819794 FZH339 ReWork | B819794 FZH340 ReWork | B819794 FZH341 ReWork | B819794 FZH342 ReWork | B819794 FZH343 ReWork | B820260 FZJ934 ReWork | DL |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.02 |
| 8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.02 |
| N-ethylperfluorooctane sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.02 |
| EtFOSAA | 0 | 0 | 0 | 0 | 0 | N/A******* | 0.02 |
| N-ethylperfluorooctane sulfonamidoe | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.02 |
| N-methylperfluorooctane sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.02 |
| MeFOSAA | 0 | 0 | 0 | 0 | 0 | N/A******* | 0.02 |
| N-methylperfluorooctanesulfonamidol | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorobutanoic acid | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorobutane Sulfonate (PFBS) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorodecane Sulfonate | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluoroheptanoic Acid (PFHpA) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluoroheptane sulfonate | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorohexanoic Acid (PFHxA) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorohexane Sulfonate (PFHxS) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorononanoic Acid (PFNA) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorooctane Sulfonamide (PFOSA) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | 0 | 0.02 |
| Perfluoropentanoic Acid (PFPeA) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorotetradecanoic Acid | 0 | 0 | 0 | 0 | 0 | N/A******* | 0.02 |
| Perfluorotridecanoic Acid | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluoroundecanoic Acid (PFUnA) | 0 | 0 | 0 | 0 | 0 | N/A******* | 0.02 |
| Perfluorodecanoic Acid (PFDA) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorododecanoic Acid (PFDoA) | 0 | 0 | 0 | 0 | 0 | N/A******* | 0.02 |
| Perfluoro-n-Octanoic Acid (PFOA) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorooctane Sulfonate (PFOS) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| 13C2-6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | |
| 13C2-8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | |
| 13C2-perfluorotetradecanoic acid | N/A******* | N/A******* | 102.239044 | N/A******* | N/A******* | 92.4555654 | |
| 13C4-Perfluorobutanoic acid | N/A******* | N/A******* | 93.8043979 | N/A******* | N/A******* | 88.3410084 | |
| D3-MeFOSAA | 114.001256 | 121.836584 | 97.2372780 | 123.007109 | 94.8946549 | N/A******* | |
| D5-EtFOSAA | 107.711261 | 116.757087 | 94.9652990 | 116.407122 | 92.9829425 | N/A******* | |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | |
| 13C2-Perfluorodecanoic acid | N/A******* | N/A******* | 114.604644 | N/A******* | N/A******* | N/A******* | |
| 13C2-Perfluorododecanoic acid | 103.809367 | 106.279044 | 99.9175652 | 100.802308 | 83.8402739 | N/A******* | |
| 13C2-Perfluorohexanoic acid | N/A******* | N/A******* | 112.392232 | N/A******* | N/A******* | N/A******* | |
| 13C2-Perfluoroundecanoic acid | 112.763254 | 102.896259 | 111.901055 | 107.521088 | 94.4960465 | N/A******* | |
| 13C4-Perfluoroheptanoic acid | N/A******* | N/A******* | 125.500412 | N/A******* | N/A******* | N/A******* | |
| 13C5-Perfluorononanoic acid | N/A******* | N/A******* | 136.263843 | N/A******* | N/A******* | N/A******* | |
| 13C4-Perfluorooctanoic acid | N/A******* | N/A******* | 129.782024 | N/A******* | N/A******* | N/A******* | |
| 13C4-Perfluorooctanesulfonate | N/A******* | N/A******* | 104.180629 | N/A******* | N/A******* | N/A******* | |
| 13C5-Perfluoropentanoic acid | N/A******* | N/A******* | 105.035879 | N/A******* | N/A******* | N/A******* | |
| 13C8-Perfluorooctane Sulfonamide | N/A******* | N/A******* | 112.828669 | N/A******* | N/A******* | 94.8368633 | |
| 18O2-Perfluorohexanesulfonate | N/A******* | N/A******* | 87.7307374 | N/A******* | N/A******* | N/A******* | |

Worksheet Number: **5396699**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | RDL | MDL | IDL | | | | |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0.02 | 0.0066 | 0 | | | | |
| 8:2 Fluorotelomer sulfonate | 0.02 | 0.0066 | 0 | | | | |
| N-ethylperfluorooctane sulfonamide | 0.02 | 0.01 | 0 | | | | |
| EtFOSAA | 0.02 | 0.0033 | 0 | | | | |
| N-ethylperfluorooctane sulfonamidoe | 0.02 | 0.0079 | 0 | | | | |
| N-methylperfluorooctane sulfonamide | 0.02 | 0.013 | 0 | | | | |
| MeFOSAA | 0.02 | 0.0029 | 0 | | | | |
| N-methylperfluorooctanesulfonamidol | 0.02 | 0.012 | 0 | | | | |
| Perfluorobutanoic acid | 0.02 | 0.0055 | 0 | | | | |
| Perfluorobutane Sulfonate (PFBS) | 0.02 | 0.0054 | 0 | | | | |
| Perfluorodecane Sulfonate | 0.02 | 0.006 | 0 | | | | |
| Perfluoroheptanoic Acid (PFHpA) | 0.02 | 0.0074 | 0 | | | | |
| Perfluoroheptane sulfonate | 0.02 | 0.008 | 0 | | | | |
| Perfluorohexanoic Acid (PFHxA) | 0.02 | 0.0035 | 0 | | | | |
| Perfluorohexane Sulfonate (PFHxS) | 0.02 | 0.0056 | 0 | | | | |
| Perfluorononanoic Acid (PFNA) | 0.02 | 0.0087 | 0 | | | | |
| Perfluorooctane Sulfonamide (PFOSA) | 0.02 | 0.0034 | 0 | | | | |
| Perfluoropentanoic Acid (PFPeA) | 0.02 | 0.0075 | 0 | | | | |
| Perfluorotetradecanoic Acid | 0.02 | 0.0027 | 0 | | | | |
| Perfluorotridecanoic Acid | 0.02 | 0.0038 | 0 | | | | |
| Perfluoroundecanoic Acid (PFUnA) | 0.02 | 0.0025 | 0 | | | | |
| Perfluorodecanoic Acid (PFDA) | 0.02 | 0.0061 | 0 | | | | |
| Perfluorododecanoic Acid (PFDoA) | 0.02 | 0.005 | 0 | | | | |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.02 | 0.0033 | 0 | | | | |
| Perfluorooctane Sulfonate (PFOS) | 0.02 | 0.006 | 0 | | | | |
| 13C2-6:2 Fluorotelomer sulfonate | | | | | | | |
| 13C2-8:2 Fluorotelomer sulfonate | | | | | | | |
| 13C2-perfluorotetradecanoic acid | | | | | | | |
| 13C4-Perfluorobutanoic acid | | | | | | | |
| D3-MeFOSAA | | | | | | | |
| D5-EtFOSAA | | | | | | | |
| N-methyl-d3-perfluorooctane sulfona | | | | | | | |
| N-ethyl-d5-perfluorooctane sulfonam | | | | | | | |
| 13C2-Perfluorodecanoic acid | | | | | | | |
| 13C2-Perfluorododecanoic acid | | | | | | | |
| 13C2-Perfluorohexanoic acid | | | | | | | |
| 13C2-Perfluoroundecanoic acid | | | | | | | |
| 13C4-Perfluoroheptanoic acid | | | | | | | |
| 13C5-Perfluorononanoic acid | | | | | | | |
| 13C4-Perfluorooctanoic acid | | | | | | | |
| 13C4-Perfluorooctanesulfonate | | | | | | | |
| 13C5-Perfluoropentanoic acid | | | | | | | |
| 13C8-Perfluorooctane Sulfonamide | | | | | | | |
| 18O2-Perfluorohexanesulfonate | | | | | | | |



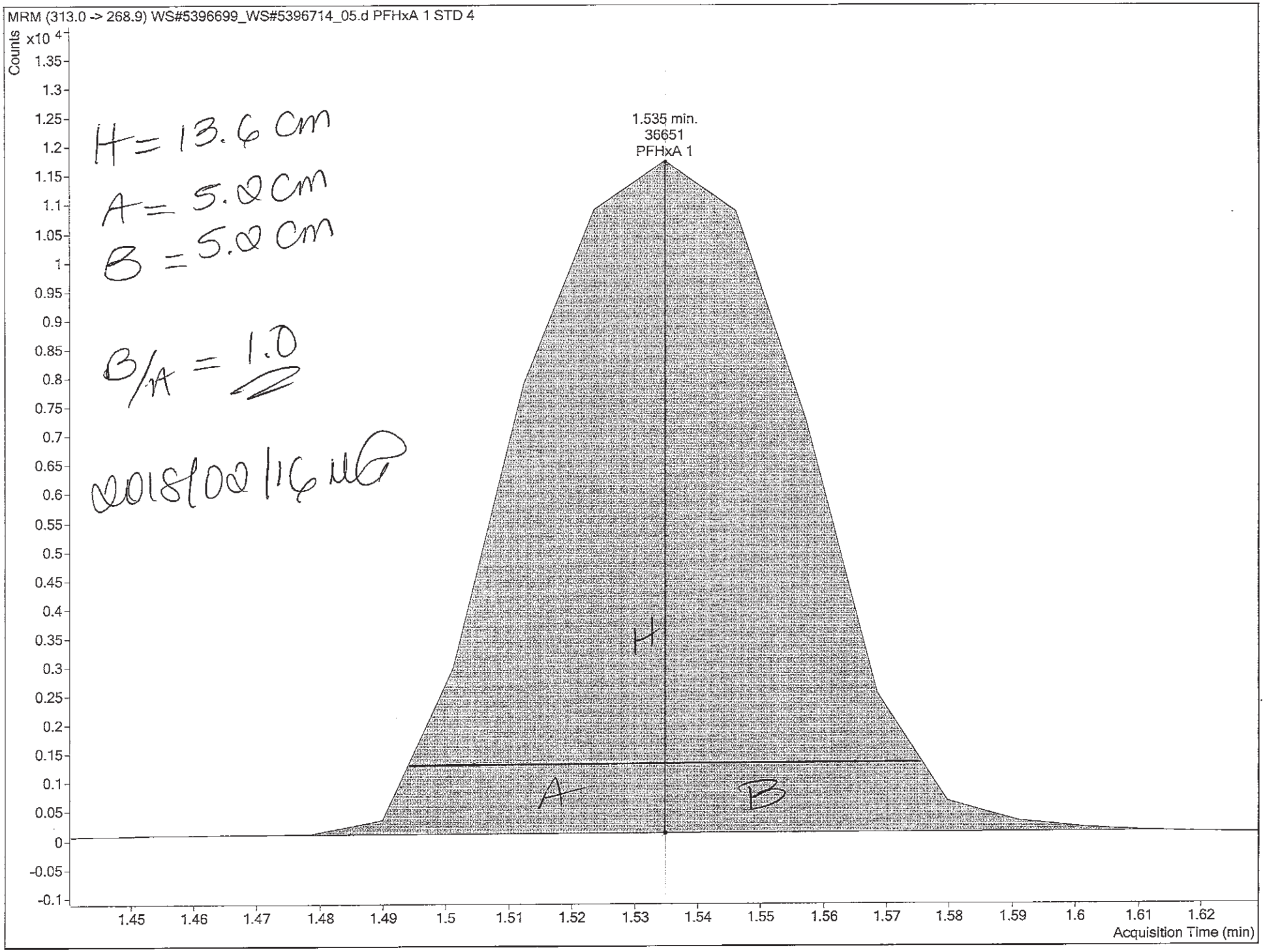

Manual Calculation for SPK

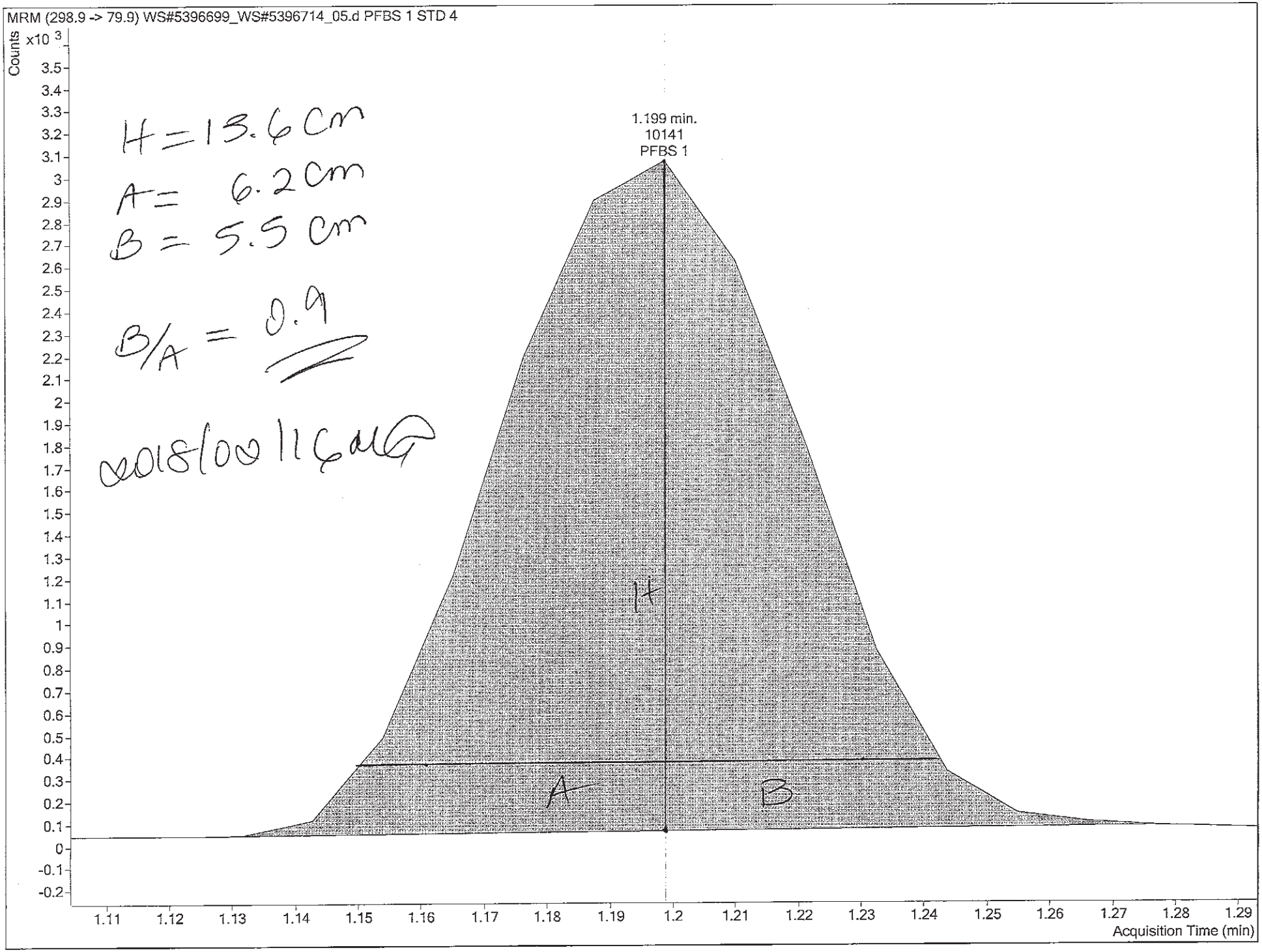
$10.6427 = 0.581938X - 0.144287$

$X = 18.5363 \times 0.024$

$X = 0.44487$ ug/L

2018/02/16 MG


MRM (313.0 -> 268.9) WS#5396699_WS#5396714_05.d PFHxA 1 STD 4
Counts
x10 4
1.535 min.
36651
PFHxA 1
H
A
B
Acquisition Time (min)
H = 13.6 cm
A = 5.2 cm
B = 5.2 cm
B/A = 1.0
2018/02/16 MG


MRM (298.9 -> 79.9) WS#5396699_WS#5396714_05.d PFBS 1 STD 4
Counts
x10 3
1.199 min.
10141
PFBS 1
H = 13.6 cm
A = 6.2 cm
B = 5.5 cm
B/A = 0.9
0.018/0.011 ng/mL
H
A
B
Acquisition Time (min)

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/13

Test Code: **PFOSALCM-W**

Worksheet Number: **5396699**

| Sample Number | Parameter Code | Parameter | |
|---|---|---|---|
| FZA783-01 | ETFOSAA | EtFOSAA | * |
| FZA784-01 | MEFOSAA | MeFOSAA | * |
| FZA785-01 | PFTEDA | Perfluorotetradecanoic Acid | |
| FZA786-01 | PFUNA | Perfluoroundecanoic Acid (PFUnA) | |
| FZA789-01 | PFDOA | Perfluorododecanoic Acid (PFDoA) | |
| FZA790-01 | | | |
| FZA791-01 | | | |
| FZA792-01 | | | |
| FZH338-01 | | | |
| FZH339-01 | | | |
| FZH340-01 | | | |
| FZH342-01 | | | |
| FZH343-01 | | | |
| FZA788-01 | ETFOSAA | EtFOSAA | * |
| | MEFOSAA | MeFOSAA | * |
| | PFTEDA | Perfluorotetradecanoic Acid | |
| | PFUNA | Perfluoroundecanoic Acid (PFUnA) | |
| FZA802-01 | ETFOSAA | EtFOSAA | * |
| | MEFOSAA | MeFOSAA | * |
| | PFBS | Perfluorobutane Sulfonate (PFBS) | |
| | PFHPA | Perfluoroheptanoic Acid (PFHpA) | |
| | PFHXA | Perfluorohexanoic Acid (PFHxA) | |
| | PFHXS | Perfluorohexane Sulfonate (PFHxS) | |
| | PFNA | Perfluorononanoic Acid (PFNA) | |
| | PFTEDA | Perfluorotetradecanoic Acid | |
| | PFTRDA | Perfluorotridecanoic Acid | |
| | PFUNA | Perfluoroundecanoic Acid (PFUnA) | |
| | PFDA | Perfluorodecanoic Acid (PFDA) | |
| | PFDOA | Perfluorododecanoic Acid | |

* - This parameter is usually off, but will be reported for this group of samples!

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/13

Test Code: **PFOSALCM-W**

Worksheet Number: **5396699**

| Sample Number | Parameter Code | Parameter |
|---|---|---|
| | | (PFDoA) |
| | PFOA | Perfluoro-n-Octanoic Acid (PFOA) |
| | PFOS | Perfluorooctane Sulfonate (PFOS) |
| FZH332-01 | PFTEDA | Perfluorotetradecanoic Acid |
| FZH334-01 | PFTRDA | Perfluorotridecanoic Acid |
| FZH336-01 | NONE | NONE |
| FZH341-01 | | |
| FZJ934-01 | PFOSA | Perfluorooctane Sulfonamide (PFOSA) |

SAS 2018/02/13

* - This parameter is usually off, but will be reported for this group of samples!

# WorkSheet 5396699 Instrument Sequences

| | | |
|---|---|---|
| 1. | 5396699:MTRX SPK | MTRX SPK |
| 2. | 5396699:MTRX SPK:D1 | MTRX SPK :D1 |
| 3. | 5396699:SPIKE | SPIKE |
| 4. | 5396699:BLANK | BLANK |
| 5. | 5396699:FZA783-01 | OLD-002-51A-0118 |
| 6. | 5396699:FZA784-01 | OLD-002-51A-0118D |
| 7. | 5396699:FZA785-01 | OLD-002-11A-0118 |
| 8. | 5396699:FZA786-01 | OLD-002-03A-0118 |
| 9. | 5396699:FZA788-01 | EB-GW-012218-1 |
| 10. | 5396699:FZA789-01 | FB-OLD-012218-1 |
| 11. | 5396699:FZA790-01 | FB-OLD-012218-2 |
| 12. | 5396699:FZA791-01 | EB-WC-012218-1 |
| 13. | 5396699:FZA792-01 | EB-DPT-012218-1 |
| 14. | 5396699:FZA802-01 | EB-WC-012318-2 |
| 15. | 5396699:FZH332-01 | [redacted] |
| 16. | 5396699:FZH334-01 | [redacted] |
| 17. | 5396699:FZH336-01 | [redacted] |
| 18. | 5396699:FZH338-01 | [redacted] |
| 19. | 5396699:FZH339-01 | [redacted] |
| 20. | 5396699:FZH340-01 | [redacted] |
| 21. | 5396699:FZH341-01 | [redacted] |
| 22. | 5396699:FZH342-01 | [redacted] |
| 23. | 5396699:FZH343-01 | [redacted] |
| 24. | 5396699:FZJ934-01 | [redacted] |

# Worklist Report

Agilent Technologies

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180215_Low.wkl

Maxxam Analytics

AD
2018/02/15

**Operator Name:** ---
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\Data\PFC\20180215\WS#5396699_WS#5396714
**Pre-Worklist Script:** ---
**Post-Worklist Script:** SCP_InstrumentStandby(){MH_Acq_Scripts.exe}
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** Column #~~198~~ 199 AD 2018/02/15
MP A1: Solution# 280 (FSRE18)
MP B: Methanol, SHBJ5451, Sigma

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P2 | |

**Worklist Table**

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Solvent | P2-A1 | PFC_Water_Low.m | WS#5396699_WS#5396714_01.d | Sample | | As Method | - |
| 2 | STD 1 | P2-A2 | PFC_Water_Low.m | WS#5396699_WS#5396714_02.d | Calibration | STD 1 | As Method | - |
| 3 | STD 2 | P2-A3 | PFC_Water_Low.m | WS#5396699_WS#5396714_03.d | Calibration | STD 2 | As Method | - |
| 4 | STD 3 | P2-A4 | PFC_Water_Low.m | WS#5396699_WS#5396714_04.d | Calibration | STD 3 | As Method | - |
| 5 | STD 4 | P2-A5 | PFC_Water_Low.m | WS#5396699_WS#5396714_05.d | Calibration | STD 4 | As Method | - |
| 6 | STD 5 | P2-A6 | PFC_Water_Low.m | WS#5396699_WS#5396714_06.d | Calibration | STD 5 | As Method | - |
| 7 | STD 6 | P2-A7 | PFC_Water_Low.m | WS#5396699_WS#5396714_07.d | Calibration | STD 6 | As Method | - |

2018/02/15

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# Worklist Report

Agilent Technologies

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 8 | IB | P2-A8 | PFC_Water_Low.m | WS#5396699_WS#5396714_08.d | Sample | | As Method | - |
| 9 | ICV | P2-A9 | PFC_Water_Low.m | WS#5396699_WS#5396714_09.d | QC | ICV | As Method | - |
| 10 | ISC | P2-A2 | PFC_Water_Low.m | WS#5396699_WS#5396714_10.d | ConCal | STD 1 | As Method | - |
| 11 | 5396699:BLANK | P2-B1 | PFC_Water_Low.m | WS#5396699_WS#5396714_11.d | Sample | | As Method | - |
| 12 | 5396699:SPIKE | P2-B2 | PFC_Water_Low.m | WS#5396699_WS#5396714_12.d | QC | ICV | As Method | - |
| 13 | 5396699:MTRX SPK | P2-B3 | PFC_Water_Low.m | WS#5396699_WS#5396714_13.d | QC | ICV | As Method | - |
| 14 | 5396699:MTRX SPK:D1 | P2-B4 | PFC_Water_Low.m | WS#5396699_WS#5396714_14.d | QC | ICV | As Method | - |
| 15 | 5396699:FZA783-01 | P2-B5 | PFC_Water_Low.m | WS#5396699_WS#5396714_15.d | Sample | | As Method | - |
| 16 | 5396699:FZA784-01 | P2-B6 | PFC_Water_Low.m | WS#5396699_WS#5396714_16.d | Sample | | As Method | - |
| 17 | 5396699:FZA785-01 | P2-B7 | PFC_Water_Low.m | WS#5396699_WS#5396714_17.d | Sample | | As Method | - |
| 18 | 5396699:FZA786-01 | P2-B8 | PFC_Water_Low.m | WS#5396699_WS#5396714_18.d | Sample | | As Method | - |
| 19 | 5396699:FZA788-01 | P2-B9 | PFC_Water_Low.m | WS#5396699_WS#5396714_19.d | Sample | | As Method | - |
| 20 | 5396699:FZA789-01 | P2-C1 | PFC_Water_Low.m | WS#5396699_WS#5396714_20.d | Sample | | As Method | - |
| 21 | 5396699:FZA790-01 | P2-C2 | PFC_Water_Low.m | WS#5396699_WS#5396714_21.d | Sample | | As Method | - |
| 22 | 5396699:FZA791-01 | P2-C3 | PFC_Water_Low.m | WS#5396699_WS#5396714_22.d | Sample | | As Method | - |
| 23 | 5396699:FZA792-01 | P2-C4 | PFC_Water_Low.m | WS#5396699_WS#5396714_23.d | Sample | | As Method | - |
| 24 | 5396699:FZA802-01 | P2-C5 | PFC_Water_Low.m | WS#5396699_WS#5396714_24.d | Sample | | As Method | - |
| 25 | CCV | P2-A5 | PFC_Water_Low.m | WS#5396699_WS#5396714_25.d | ConCal | STD 4 | As Method | - |
| 26 | 5396699:FZH332-01 | P2-C6 | PFC_Water_Low.m | WS#5396699_WS#5396714_26.d | Sample | | As Method | - |
| 27 | 5396699:FZH334-01:10x | P2-C7 | PFC_Water_Low.m | WS#5396699_WS#5396714_27.d | Sample | | As Method | - |
| 28 | 5396699:FZH336-01 | P2-C8 | PFC_Water_Low.m | WS#5396699_WS#5396714_28.d | Sample | | As Method | - |
| 29 | 5396699:FZH338-01 | P2-C9 | PFC_Water_Low.m | WS#5396699_WS#5396714_29.d | Sample | | As Method | - |
| 30 | 5396699:FZH339-01 | P2-D1 | PFC_Water_Low.m | WS#5396699_WS#5396714_30.d | Sample | | As Method | - |

Maxxam Analytics

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| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 31 | 5396699:FZH340-01 | P2-D2 | PFC_Water_Low.m | WS#5396699_WS#5396714_31.d | Sample | | As Method | - |
| 32 | 5396699:FZH341-01 | P2-D3 | PFC_Water_Low.m | WS#5396699_WS#5396714_32.d | Sample | | As Method | - |
| 33 | 5396699:FZH342-01 | P2-D4 | PFC_Water_Low.m | WS#5396699_WS#5396714_33.d | Sample | | As Method | - |
| 34 | 5396699:FZH343-01 | P2-D5 | PFC_Water_Low.m | WS#5396699_WS#5396714_34.d | Sample | | As Method | - |
| 35 | 5396699:FZJ934-01 | P2-D6 | PFC_Water_Low.m | WS#5396699_WS#5396714_35.d | Sample | | As Method | - |
| 36 | CCV | P2-A5 | PFC_Water_Low.m | WS#5396699_WS#5396714_36.d | ConCal | STD 4 | As Method | - |
| 37 | 5396714:MTRX SPK | P2-D7 | PFC_Water_Low.m | WS#5396699_WS#5396714_37.d | Sample | | As Method | - |
| 38 | 5396714:MTRX SPK:D1 | P2-D8 | PFC_Water_Low.m | WS#5396699_WS#5396714_38.d | Sample | | As Method | - |
| 39 | 5396714:FZH337-01 | P2-D9 | PFC_Water_Low.m | WS#5396699_WS#5396714_39.d | Sample | | As Method | - |
| 40 | CCV | P2-A5 | PFC_Water_Low.m | WS#5396699_WS#5396714_40.d | ConCal | STD 4 | As Method | - |

# Worklist Report

Agilent Technologies

Maxxam Analytics

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180215_Low_FOSAA.wkl

AD
2018/02/15

**Operator Name:** ---
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\Data\PFC\20180215\WS#5396699_WS#5396714_FOSAA
**Pre-Worklist Script:** ---
**Post-Worklist Script:** SCP_InstrumentStandby(){MH_Acq_Scripts.exe}
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** Column #~~198~~ 199 AD 2018/02/15
MP A1: Solution# 280 (FSRE18)
MP B2:Solution# 284 (FSRE18)

2018/02/15

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P2 | |

## Worklist Table

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Solvent | P2-A1 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_01.d | Sample | | As Method | - |
| 2 | STD 1 | P2-A2 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_02.d | Calibration | STD 1 | As Method | - |
| 3 | STD 2 | P2-A3 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_03.d | Calibration | STD 2 | As Method | - |
| 4 | STD 3 | P2-A4 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_04.d | Calibration | STD 3 | As Method | - |
| 5 | STD 4 | P2-A5 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_05.d | Calibration | STD 4 | As Method | - |
| 6 | STD 5 | P2-A6 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_06.d | Calibration | STD 5 | As Method | - |
| 7 | STD 6 | P2-A7 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_07.d | Calibration | STD 6 | As Method | - |
| 8 | IB | P2-A8 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_08.d | Sample | | As Method | - |

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# Worklist Report

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| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 9 | ICV | P2-A9 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_09.d | QC | ICV | As Method | - |
| 10 | ISC | P2-A2 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_10.d | ConCal | STD 1 | As Method | - |
| 11 | 5396699:BLANK | P2-B1 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_11.d | Sample | | As Method | - |
| 12 | 5396699:SPIKE | P2-B2 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_12.d | QC | ICV | As Method | - |
| 13 | 5396699:MTRX SPK | P2-B3 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_13.d | QC | ICV | As Method | - |
| 14 | 5396699:MTRX SPK:D1 | P2-B4 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_14.d | QC | ICV | As Method | - |
| 15 | 5396699:FZA783-01 | P2-B5 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_15.d | Sample | | As Method | - |
| 16 | 5396699:FZA784-01 | P2-B6 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_16.d | Sample | | As Method | - |
| 17 | 5396699:FZA785-01 | P2-B7 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_17.d | Sample | | As Method | - |
| 18 | 5396699:FZA786-01 | P2-B8 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_18.d | Sample | | As Method | - |
| 19 | 5396699:FZA788-01 | P2-B9 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_19.d | Sample | | As Method | - |
| 20 | 5396699:FZA789-01 | P2-C1 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_20.d | Sample | | As Method | - |
| 21 | 5396699:FZA790-01 | P2-C2 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_21.d | Sample | | As Method | - |
| 22 | 5396699:FZA791-01 | P2-C3 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_22.d | Sample | | As Method | - |
| 23 | 5396699:FZA792-01 | P2-C4 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_23.d | Sample | | As Method | - |
| 24 | 5396699:FZA802-01 | P2-C5 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_24.d | Sample | | As Method | - |
| 25 | CCV | P2-A5 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_25.d | ConCal | STD 4 | As Method | - |
| 26 | 5396699:FZH332-01 | P2-C6 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_26.d | Sample | | As Method | - |
| 27 | 5396699:FZH334-01:10x | P2-C7 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_27.d | Sample | | As Method | - |
| 28 | 5396699:FZH336-01 | P2-C8 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_28.d | Sample | | As Method | - |
| 29 | 5396699:FZH338-01 | P2-C9 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_29.d | Sample | | As Method | - |
| 30 | 5396699:FZH339-01 | P2-D1 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_30.d | Sample | | As Method | - |
| 31 | 5396699:FZH340-01 | P2-D2 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_31.d | Sample | | As Method | - |
| 32 | 5396699:FZH341-01 | P2-D3 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_32.d | Sample | | As Method | - |
| 33 | 5396699:FZH342-01 | P2-D4 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_33.d | Sample | | As Method | - |
| 34 | 5396699:FZH343-01 | P2-D5 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_34.d | Sample | | As Method | - |

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| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 35 | 5396699:FZJ934-01 | P2-D6 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_35.d | Sample | | As Method | - |
| 36 | CCV | P2-A5 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_36.d | ConCal | STD 4 | As Method | - |
| 37 | 5396714:MTRX SPK | P2-D7 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_37.d | Sample | | As Method | - |
| 38 | 5396714:MTRX SPK:D1 | P2-D8 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_38.d | Sample | | As Method | - |
| 39 | 5396714:FZH337-01 | P2-D9 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_39.d | Sample | | As Method | - |
| 40 | CCV | P2-A5 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_40.d | ConCal | STD 4 | As Method | - |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| STD 1 | - | 2018/02/15 4:15 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_02.d | P2-A2 |
| STD 2 | - | 2018/02/15 4:20 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_03.d | P2-A3 |
| STD 3 | - | 2018/02/15 4:25 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_04.d | P2-A4 |
| STD 4 | - | 2018/02/15 4:30 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_05.d | P2-A5 |
| STD 5 | - | 2018/02/15 4:35 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_06.d | P2-A6 |
| STD 6 | - | 2018/02/15 4:40 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_07.d | P2-A7 |
| IB | - | 2018/02/15 4:45 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_08.d | P2-A8 |
| ICV | - | 2018/02/15 4:50 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_09.d | P2-A9 |
| ISC | - | 2018/02/15 4:55 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_10.d | P2-A2 |
| 5396699:BLANK | - | 2018/02/15 5:00 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_11.d | P2-B1 |
| 5396699:SPIKE | - | 2018/02/15 5:05 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_12.d | P2-B2 |
| 5396699:MTRX SPK | FZA786 | 2018/02/15 5:10 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_13.d | P2-B3 |
| 5396699:MTRX SPK:D1 | FZA786 | 2018/02/15 5:15 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_14.d | P2-B4 |
| 5396699:FZA783-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 5:19 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_15.d | P2-B5 |
| 5396699:FZA784-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 5:24 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_16.d | P2-B6 |
| 5396699:FZA785-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 5:29 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_17.d | P2-B7 |
| 5396699:FZA786-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 5:34 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_18.d | P2-B8 |
| 5396699:FZA788-01 | Reported for PFUnA , PFTeDA only. | 2018/02/15 5:39 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_19.d | P2-B9 |
| 5396699:FZA789-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 5:44 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_20.d | P2-C1 |
| 5396699:FZA790-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 5:49 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_21.d | P2-C2 |
| 5396699:FZA791-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 5:54 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_22.d | P2-C3 |
| 5396699:FZA792-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 5:59 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_23.d | P2-C4 |
| 5396699:FZA802-01 | Reinjected due to low ext IS recovery- Reporte | 2018/02/15 6:04 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_24.d | P2-C5 |
| CCV | - | 2018/02/15 6:09 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_25.d | P2-A5 |
| 5396699:FZH332-01 | Reported for PFTrDA , PFTeDA only. | 2018/02/15 6:14 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_26.d | P2-C6 |
| 5396699:FZH334-01:10x | Reported for PFTrDA , PFTeDA only. | 2018/02/15 6:19 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_27.d | P2-C7 |
| 5396699:FZH336-01 | - | 2018/02/15 6:24 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_28.d | P2-C8 |
| 5396699:FZH338-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 6:29 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_29.d | P2-C9 |
| 5396699:FZH339-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 6:33 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_30.d | P2-D1 |
| 5396699:FZH340-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 6:38 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_31.d | P2-D2 |
| 5396699:FZH341-01 | - | 2018/02/15 6:43 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_32.d | P2-D3 |
| 5396699:FZH342-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 6:48 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_33.d | P2-D4 |
| 5396699:FZH343-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 6:53 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_34.d | P2-D5 |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| 5396699:FZJ934-01 | Reported for PFOSA only. | 2018/02/15 6:58 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_35.d | P2-D6 |
| CCV | - | 2018/02/15 7:03 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_36.d | P2-A5 |
| CCV | - | 2018/02/15 7:23 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_40.d | P2-A5 |
| ISC | - | 2018/02/16 8:47 AM | PFC_Water_Low.m | WS#5396699_WS#5396714_r_43.d | P2-A2 |
| 5396699:FZA802-01:R | Reported for PFOA | 2018/02/16 8:52 AM | PFC_Water_Low.m | WS#5396699_WS#5396714_r_44.d | P2-C5 |
| CCV | - | 2018/02/16 8:57 AM | PFC_Water_Low.m | WS#5396699_WS#5396714_r_45.d | P2-A5 |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| STD 1 | - | 2018/02/15 10:39 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_02.d | P2-A2 |
| STD 2 | - | 2018/02/15 10:41 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_03.d | P2-A3 |
| STD 3 | - | 2018/02/15 10:44 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_04.d | P2-A4 |
| STD 4 | - | 2018/02/15 10:46 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_05.d | P2-A5 |
| STD 5 | - | 2018/02/15 10:48 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_06.d | P2-A6 |
| STD 6 | - | 2018/02/15 10:51 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_07.d | P2-A7 |
| IB | - | 2018/02/15 10:53 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_08.d | P2-A8 |
| ICV | - | 2018/02/15 10:56 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_09.d | P2-A9 |
| ISC | - | 2018/02/15 10:58 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_10.d | P2-A2 |
| 5396699:BLANK | - | 2018/02/15 11:00 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_11.d | P2-B1 |
| 5396699:SPIKE | - | 2018/02/15 11:03 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_12.d | P2-B2 |
| 5396699:MTRX SPK | FZA786 | 2018/02/15 11:05 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_13.d | P2-B3 |
| 5396699:MTRX SPK:D1 | FZA786 | 2018/02/15 11:08 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_14.d | P2-B4 |
| 5396699:FZA783-01 | - | 2018/02/15 11:10 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_15.d | P2-B5 |
| 5396699:FZA784-01 | - | 2018/02/15 11:12 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_16.d | P2-B6 |
| 5396699:FZA785-01 | - | 2018/02/15 11:15 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_17.d | P2-B7 |
| 5396699:FZA786-01 | - | 2018/02/15 11:17 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_18.d | P2-B8 |
| 5396699:FZA788-01 | - | 2018/02/15 11:20 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_19.d | P2-B9 |
| 5396699:FZA789-01 | - | 2018/02/15 11:22 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_20.d | P2-C1 |
| 5396699:FZA790-01 | - | 2018/02/15 11:25 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_21.d | P2-C2 |
| 5396699:FZA791-01 | - | 2018/02/15 11:27 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_22.d | P2-C3 |
| 5396699:FZA792-01 | - | 2018/02/15 11:29 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_23.d | P2-C4 |
| 5396699:FZA802-01 | - | 2018/02/15 11:32 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_24.d | P2-C5 |
| CCV | - | 2018/02/15 11:34 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_25.d | P2-A5 |
| 5396699:FZH332-01 | - | 2018/02/15 11:37 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_26.d | P2-C6 |
| 5396699:FZH334-01:10x | Not Used | 2018/02/15 11:39 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_27.d | P2-C7 |
| 5396699:FZH336-01 | - | 2018/02/15 11:41 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_28.d | P2-C8 |
| 5396699:FZH338-01 | - | 2018/02/15 11:44 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_29.d | P2-C9 |
| 5396699:FZH339-01 | - | 2018/02/15 11:46 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_30.d | P2-D1 |
| 5396699:FZH340-01 | - | 2018/02/15 11:49 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_31.d | P2-D2 |
| 5396699:FZH341-01 | - | 2018/02/15 11:51 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_32.d | P2-D3 |
| 5396699:FZH342-01 | - | 2018/02/15 11:53 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_33.d | P2-D4 |
| 5396699:FZH343-01 | - | 2018/02/15 11:56 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_34.d | P2-D5 |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| 5396699:FZJ934-01 | - | 2018/02/15 11:58 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_35.d | P2-D6 |
| CCV | - | 2018/02/15 12:01 PM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_36.d | P2-A5 |

## INJECTION INTERNAL STANDARD PEAK AREAS

| Sample Name | Analyte | 13C6-PFHxA | 13C9-PFDA |
|---|---|---|---|
| | Mass labeled IS | STD 4 | STD 4 |
| | IS Area | 28147 | 35314 |
| | | IS Peak Area | IS Peak Area |
| STD 1 | | 25741 | 34399 |
| STD 2 | | 27981 | 35531 |
| STD 3 | | 29424 | 36955 |
| STD 4 | | 28147 | 35314 |
| STD 5 | | 29859 | 36873 |
| STD 6 | | 29422 | 35570 |
| IB | | 29106 | 37296 |
| ICV | | 28001 | 33648 |
| ISC | | 26497 | 34805 |
| 5383466:BLANK | | 29859 | 39886 |
| 5383466:SPIKE | | 29307 | 37003 |
| 5383466:MTRX SPK | | 27642 | 37506 |
| 5383466:MTRX SPK:D1 | | 25480 | 33966 |
| IB | | 26939 | 38248 |
| 5383466:FZA783-01 | | 25882 | 34758 |
| 5383466:FZA784-01 | | 24676 | 33994 |
| 5383466:FZA785-01 | | 27247 | 34955 |
| 5383466:FZA786-01 | | 26008 | 35273 |
| 5383466:FZA788-01 | | 25728 | 33925 |
| 5383466:FZA789-01 | | 26172 | 36609 |
| 5383466:FZA790-01 | | 28289 | 37505 |
| 5383466:FZA791-01 | | 28121 | 36445 |
| 5383466:FZA792-01 | | 28688 | 38079 |
| CCV | | 26693 | 36124 |
| 5383466:FZH336-01 | | 27884 | 37923 |
| 5383466:FZH338-01 | | 26448 | 34863 |
| 5383466:FZH339-01 | | 25164 | 30767 |
| 5383466:FZH340-01 | | 28111 | 36130 |
| 5383466:FZH341-01 | | 27813 | 36173 |
| 5383466:FZH342-01 | | 27752 | 36036 |
| 5383466:FZH343-01 | | 27164 | 36234 |
| CCV | | 27441 | 35024 |

## INJECTION INTERNAL STANDARD PEAK AREAS

| Sample Name | Analyte | 13C9-PFDA |
|---|---|---|
| | Mass labeled IS | STD 4 |
| | IS Area | 28326 |
| | | IS Peak Area |
| STD 1 | | 26183 |
| STD 2 | | 28851 |
| STD 3 | | 29289 |
| STD 4 | | 28326 |
| STD 5 | | 28590 |
| STD 6 | | 27901 |
| IB | | 28656 |
| ICV | | 27331 |
| ISC | | 25738 |
| 5383466:BLANK | | 30305 |
| 5383466:SPIKE | | 29691 |
| 5383466:MTRX SPK | | 29366 |
| 5383466:MTRX SPK:D1 | | 27872 |
| IB | | 28486 |
| 5383466:FZA783-01 | | 28289 |
| 5383466:FZA784-01 | | 26622 |
| 5383466:FZA785-01 | | 27990 |
| 5383466:FZA786-01 | | 27719 |
| 5383466:FZA788-01 | | 27328 |
| 5383466:FZA789-01 | | 28684 |
| 5383466:FZA790-01 | | 29109 |
| 5383466:FZA791-01 | | 29148 |
| 5383466:FZA792-01 | | 29407 |
| CCV | | 28134 |
| 5383466:FZH336-01 | | 29109 |
| 5383466:FZH338-01 | | 27615 |
| 5383466:FZH339-01 | | 25195 |
| 5383466:FZH340-01 | | 27688 |
| 5383466:FZH341-01 | | 29013 |
| 5383466:FZH342-01 | | 28807 |
| 5383466:FZH343-01 | | 28498 |
| CCV | | 28351 |
| CCV | | 28872 |
| 5383466:SPIKE:R | | 30309 |
| CCV | | 29023 |

## INJECTION INTERNAL STANDARD PEAK AREAS

| Sample Name | Analyte | 13C6-PFHxA | 13C6-PFHxA | 13C9-PFDA | 13C9-PFDA |
|---|---|---|---|---|---|
| | Mass labeled IS | STD 4 | ISC/CCV | STD 4 | ISC/CCV |
| | IS Area | 32806 | 34491 | 41938 | 43455 |
| | | IS Peak Area | IS Peak Area | IS Peak Area | IS Peak Area |
| STD 1 | | 31547 | | 40575 | |
| STD 2 | | 31482 | | 42308 | |
| STD 3 | | 31926 | | 40767 | |
| STD 4 | | 32806 | | 41938 | |
| STD 5 | | 31504 | | 39393 | |
| STD 6 | | 31071 | | 38348 | |
| IB | | 29753 | | 39820 | |
| ICV | | 32370 | | 43532 | |
| ISC | | 32150 | | 41525 | |
| 5386102:BLANK | | 32505 | | 40494 | |
| 5386102:SPIKE | | 32560 | | 42455 | |
| 5386102:MTRX SPK | | 29803 | | 37721 | |
| 5386102:MTRX SPK:D1 | | 29149 | | 36576 | |
| IB | | 32514 | | 42276 | |
| 5386102:FZA801-01 | | 31765 | | 42246 | |
| 5386102:FZA802-01 | | 41475 | | 49869 | |
| 5386102:FZA803-01 | | 35436 | | 45046 | |
| 5386102:FZA804-01 | | 32197 | | 40725 | |
| 5386102:FZA805-01 | | 31057 | | 40745 | |
| 5386102:FZA806-01 | | 29544 | | 38435 | |
| 5386102:FZH328-01 | | 30996 | | 38972 | |
| 5386102:FZH329-01 | | 28126 | | 38227 | |
| 5386102:FZH330-01 | | 32627 | | 40871 | |
| 5386102:FZH335-01 | | 30264 | | 38485 | |
| CCV | | 33413 | | 42329 | |
| 5386102:FZH344-01 | | 30203 | | 38903 | |
| 5386102:FZH345-01 | | 31004 | | 38786 | |
| 5386102:FZH346-01 | | 30546 | | 40067 | |
| 5386102:FZH347-01 | | 30143 | | 39310 | |
| 5386102:FZH348-01 | | 29953 | | 38951 | |
| 5386102:FZJ934-01 | | 30902 | | 40936 | |
| CCV | | 32937 | | 44706 | |
| **ISC** | | | 34491 | | 43455 |
| IB | | | 33420 | | 42585 |
| 5386102:FZJ934-01 | | | 32849 | | 45154 |
| CCV | | | 35453 | | 44102 |

## INJECTION INTERNAL STANDARD PEAK AREAS

| Sample Name | Analyte | 13C9-PFDA |
|---|---|---|
| | Mass labeled IS | STD 4 |
| | IS Area | 34558 |
| | | IS Peak Area |
| STD 1 | | 33632 |
| STD 2 | | 34091 |
| STD 3 | | 33520 |
| STD 4 | | 34558 |
| STD 5 | | 32642 |
| STD 6 | | 32000 |
| IB | | 32617 |
| ICV | | 35298 |
| ISC | | 34350 |
| 5386102:BLANK | | 33885 |
| 5386102:SPIKE | | 33412 |
| 5386102:MTRX SPK | | 31685 |
| 5386102:MTRX SPK:D1 | | 31716 |
| IB | | 32431 |
| 5386102:FZA801-01 | | 32722 |
| 5386102:FZA802-01 | | 45409 |
| 5386102:FZA803-01 | | 37497 |
| 5386102:FZA804-01 | | 33884 |
| 5386102:FZA805-01 | | 32429 |
| 5386102:FZA806-01 | | 29837 |
| 5386102:FZH328-01 | | 31315 |
| 5386102:FZH329-01 | | 30665 |
| 5386102:FZH330-01 | | 31697 |
| 5386102:FZH335-01 | | 30947 |
| CCV | | 35131 |
| 5386102:FZH344-01 | | 31668 |
| 5386102:FZH345-01 | | 33239 |
| 5386102:FZH346-01 | | 32946 |
| 5386102:FZH347-01 | | 32447 |
| 5386102:FZH348-01 | | 31093 |
| 5386102:FZJ934-01 | | 34319 |
| CCV | | 35154 |

## INJECTION INTERNAL STANDARD PEAK AREAS

| Sample Name | Analyte | 13C6-PFHxA | 13C9-PFDA |
|---|---|---|---|
| | Mass labeled IS | STD 4 | STD 4 |
| | IS Area | 21649 | 28437 |
| | | IS Peak Area | IS Peak Area |
| STD 1 | | 21986 | 30410 |
| STD 2 | | 20032 | 26332 |
| STD 3 | | 22277 | 30779 |
| STD 4 | | 21649 | 28437 |
| STD 5 | | 20825 | 26760 |
| STD 6 | | 21682 | 28751 |
| IB | | 22297 | 29387 |
| ICV | | 22492 | 30514 |
| ISC | | 24034 | 32777 |
| 5389177:BLANK | | 22966 | 30416 |
| 5389177:SPIKE | | 23803 | 30268 |
| 5389177:SPIKE:D1 | | 22196 | 28195 |
| 5389177:FZA807-01 | | 22530 | 29719 |
| 5389177:FZA808-01 | | 22142 | 29462 |
| 5389177:FZA809-01 | | 21360 | 26718 |
| 5389177:FZH324-01:100x | | 22416 | 30180 |
| 5389177:FZH324-01:10x | | 21770 | 29401 |
| IB | | 22580 | 27966 |
| 5389177:FZH325-01:100x | | 22961 | 30341 |
| 5389177:FZH325-01:10x | | 22336 | 29662 |
| IB | | 22526 | 29513 |
| 5389177:FZJ938-01 | | 20849 | 28242 |
| 5389177:FZJ941-01:10x | | 23138 | 29182 |
| 5389177:FZJ941-01 | | 22287 | 28837 |
| IB | | 23136 | 29942 |
| CCV | | 22921 | 30245 |
| 5389177:FZJ953-01:50x | | 22621 | 30273 |
| 5389177:FZJ953-01:10x | | 22180 | 30261 |
| IB | | 22158 | 29196 |
| 5389177:FZJ954-01:25x | | 22380 | 29980 |
| 5389177:FZJ954-01:5x | | 22050 | 29672 |
| IB | | 23315 | 30723 |
| CCV | | 23371 | 30394 |

## INJECTION INTERNAL STANDARD PEAK AREAS

| Sample Name | Analyte | 13C9-PFDA |
|---|---|---|
| | Mass labeled IS | STD 4 |
| | IS Area | 22636 |
| | | IS Peak Area |
| STD 1 | | 24326 |
| STD 2 | | 21526 |
| STD 3 | | 23563 |
| STD 4 | | 22636 |
| STD 5 | | 21784 |
| STD 6 | | 20928 |
| IB | | 22354 |
| ICV | | 21894 |
| ISC | | 24330 |
| 5389177:BLANK | | 22583 |
| 5389177:SPIKE | | 22763 |
| 5389177:SPIKE:D1 | | 21014 |
| 5389177:FZA807-01 | | 22315 |
| 5389177:FZA808-01 | | 22445 |
| 5389177:FZA809-01 | | 20946 |
| 5389177:FZH324-01:100x | | 21763 |
| 5389177:FZH324-01:10x | | 21395 |
| IB | | 22275 |
| 5389177:FZH325-01:100x | | 22516 |
| 5389177:FZH325-01:10x | | 22348 |
| IB | | 21982 |
| 5389177:FZJ938-01 | | 21039 |
| 5389177:FZJ941-01:10x | | 22106 |
| 5389177:FZJ941-01 | | 21225 |
| IB | | 22490 |
| CCV | | 22437 |
| 5389177:FZJ953-01:50x | | 22335 |
| 5389177:FZJ953-01:10x | | 22112 |
| IB | | 22057 |
| 5389177:FZJ954-01:25x | | 22837 |
| 5389177:FZJ954-01:5x | | 22412 |
| IB | | 22271 |
| CCV | | 22407 |

## INJECTION INTERNAL STANDARD PEAK AREAS

| Sample Name | Analyte | 13C6-PFHxA | 13C6-PFHxA | 13C9-PFDA | 13C9-PFDA |
|---|---|---|---|---|---|
| | Mass labeled IS | STD 4 | ISC/CCV | STD 4 | ISC/CCV |
| | IS Area | 22891 | 28040 | 22554 | 32416 |
| | | IS Peak Area | IS Peak Area | IS Peak Area | IS Peak Area |
| STD 1 | | 25716 | | 25927 | |
| STD 2 | | 25017 | | 24969 | |
| STD 3 | | 25568 | | 25417 | |
| STD 4 | | 22891 | | 22554 | |
| STD 5 | | 23972 | | 22966 | |
| STD 6 | | 23959 | | 24246 | |
| IB | | 25225 | | 26065 | |
| ICV | | 25213 | | 25421 | |
| ISC | | 25284 | | 26238 | |
| 5396699:BLANK | | 23672 | | 24303 | |
| 5396699:SPIKE | | 24933 | | 24971 | |
| 5396699:MTRX SPK | | 21172 | | 23199 | |
| 5396699:MTRX SPK:D1 | | 21284 | | 23790 | |
| 5396699:FZA783-01 | | 19505 | | 20364 | |
| 5396699:FZA784-01 | | 20959 | | 21739 | |
| 5396699:FZA785-01 | | 24872 | | 24437 | |
| 5396699:FZA786-01 | | 20657 | | 23166 | |
| 5396699:FZA788-01 | | 24625 | | 26438 | |
| 5396699:FZA789-01 | | 25529 | | 26327 | |
| 5396699:FZA790-01 | | 23783 | | 23035 | |
| 5396699:FZA791-01 | | 25766 | | 26734 | |
| 5396699:FZA792-01 | | 26857 | | 27684 | |
| 5396699:FZA802-01 | | 24222 | | 25076 | |
| CCV | | 23327 | | 24750 | |
| 5396699:FZH332-01 | | 24693 | | 26857 | |
| 5396699:FZH334-01:10x | | 22182 | | 23286 | |
| 5396699:FZH336-01 | | 24643 | | 26577 | |
| 5396699:FZH338-01 | | 21697 | | 22356 | |
| 5396699:FZH339-01 | | 21949 | | 22519 | |
| 5396699:FZH340-01 | | 23038 | | 23244 | |
| 5396699:FZH341-01 | | 25204 | | 27193 | |
| 5396699:FZH342-01 | | 22023 | | 23878 | |
| 5396699:FZH343-01 | | 23186 | | 24293 | |
| 5396699:FZJ934-01 | | 26090 | | 26756 | |
| CCV | | 23287 | | 24591 | |
| CCV | | 22514 | | 24736 | |
| **ISC** | | | 28040 | | 32416 |
| 5396699:FZA802-01:R | | | 25069 | | 28934 |
| CCV | | | 24438 | | 28392 |

## INJECTION INTERNAL STANDARD PEAK AREAS

| Sample Name | Analyte | 13C9-PFDA |
|---|---|---|
| | Mass labeled IS | STD 4 |
| | IS Area | 25796 |
| | | IS Peak Area |
| STD 1 | | 27678 |
| STD 2 | | 27671 |
| STD 3 | | 27255 |
| STD 4 | | 25796 |
| STD 5 | | 26388 |
| STD 6 | | 27400 |
| IB | | 27800 |
| ICV | | 28101 |
| ISC | | 28624 |
| 5396699:BLANK | | 27095 |
| 5396699:SPIKE | | 28179 |
| 5396699:MTRX SPK | | 26043 |
| 5396699:MTRX SPK:D1 | | 26287 |
| 5396699:FZA783-01 | | 23363 |
| 5396699:FZA784-01 | | 23860 |
| 5396699:FZA785-01 | | 27890 |
| 5396699:FZA786-01 | | 25662 |
| 5396699:FZA788-01 | | 27993 |
| 5396699:FZA789-01 | | 28087 |
| 5396699:FZA790-01 | | 26220 |
| 5396699:FZA791-01 | | 29188 |
| 5396699:FZA792-01 | | 30529 |
| 5396699:FZA802-01 | | 27559 |
| CCV | | 26628 |
| 5396699:FZH332-01 | | 29100 |
| 5396699:FZH334-01:10x | | 25375 |
| 5396699:FZH336-01 | | 28742 |
| 5396699:FZH338-01 | | 25425 |
| 5396699:FZH339-01 | | 25622 |
| 5396699:FZH340-01 | | 25495 |
| 5396699:FZH341-01 | | 28358 |
| 5396699:FZH342-01 | | 26611 |
| 5396699:FZH343-01 | | 26091 |
| 5396699:FZJ934-01 | | 28945 |
| CCV | | 26549 |

SIGMA-ALDRICH®

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%

| | |
|---|---|
| **Product Number:** | **34860** |
| **Batch Number:** | **SHBJ5451** |
| Brand: | SIGALD |
| CAS Number: | 67-56-1 |
| MDL Number: | MFCD00004595 |
| Formula: | CH4O |
| Formula Weight: | 32.04 g/mol |
| Quality Release Date: | 27 SEP 2017 |
| Expiration Date: | SEP 2022 |

$CH_3OH$

Rec'd: 2
2017/11/20
4 x 4 L
LC grade

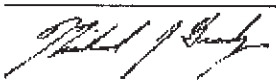
| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless | Colorless |
| Appearance (Form) | Liquid | Liquid |
| UV Absorbance 400nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 280nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 260nm | ≤ 0.04 | < 0.01 |
| UV Absorbance 240nm | ≤ 0.10 | 0.02 |
| UV Absorbance 235nm | ≤ 0.10 | 0.03 |
| UV Absorbance 230nm | ≤ 0.20 | 0.05 |
| UV Absorbance 220nm | ≤ 0.30 | 0.11 |
| UV Absorbance 210nm | ≤ 0.60 | 0.28 |
| UV Absorbance 205nm | ≤ 1.00 | 0.65 |
| Fluorescence 254nm | ≤ 1.0 ppb | < 0.1 ppb |
| Fluorescence 365nm | ≤ 1.0 ppb | 0.1 ppb |
| Purity (GC) | ≥ 99.90 % | 100.00 % |
| Color Test | ≤ 10 APHA | < 10 APHA |
| Water (by Karl Fischer) | ≤ 0.03 % | < 0.01 % |
| Residue on Evaporation | ≤ 0.0005 % | 0.0001 % |
| Expiration Date Period 1800 Days | ---------- | ---------- |

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

**Product Number:** **34860**
**Batch Number:** **SHBJ5451**



Michael Grady, Manager
Quality Control
Sheboygan Falls, WI US

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Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%

Rec'd: 2017/12/28
By: [illegible]
HPLC - M.L.
8 x 4 L

$CH_3OH$

| | |
|---|---|
| Product Number: | 34860 |
| Batch Number: | SHBJ0339 |
| Brand: | SIGALD |
| CAS Number: | 67-56-1 |
| MDL Number: | MFCD00004595 |
| Formula: | CH4O |
| Formula Weight: | 32.04 g/mol |
| Quality Release Date: | 30 OCT 2017 |
| Expiration Date: | OCT 2022 |

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless | Colorless |
| Appearance (Form) | Liquid | Liquid |
| UV Absorbance 400nm | ≤ 0.01 | 0.01 |
| UV Absorbance 280nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 260nm | ≤ 0.04 | < 0.01 |
| UV Absorbance 240nm | ≤ 0.10 | 0.03 |
| UV Absorbance 235nm | ≤ 0.10 | 0.04 |
| UV Absorbance 230nm | ≤ 0.20 | 0.07 |
| UV Absorbance 220nm | ≤ 0.30 | 0.14 |
| UV Absorbance 210nm | ≤ 0.60 | 0.33 |
| UV Absorbance 205nm | ≤ 1.00 | 0.68 |
| Fluorescence 254nm | ≤ 1.0 ppb | < 0.1 ppb |
| Fluorescence 365nm | ≤ 1.0 ppb | < 0.1 ppb |
| Purity (GC) | ≥ 99.90 % | 100.00 % |
| Color Test | ≤ 10 APHA | < 5 APHA |
| Water (by Karl Fischer) | ≤ 0.03 % | < 0.01 % |
| Residue on Evaporation | ≤ 0.0005 % | < 0.0001 % |
| Expiration Date Period 1800 Days | | |

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information tained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact hnical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%

$CH_3OH$

| | |
|---|---|
| Product Number: | 34860 |
| Batch Number: | SHBJ7527 |
| Brand: | SIGALD |
| CAS Number: | 67-56-1 |
| MDL Number: | MFCD00004595 |
| Formula: | CH4O |
| Formula Weight: | 32.04 g/mol |
| Quality Release Date: | 18 DEC 2017 |
| Expiration Date: | NOV 2022 |

HPLC
3Bottles
2018 10 1 21
E. G

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless | Colorless |
| Appearance (Form) | Liquid | Liquid |
| UV Absorbance 400nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 280nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 260nm | ≤ 0.04 | 0.01 |
| UV Absorbance 240nm | ≤ 0.10 | 0.03 |
| UV Absorbance 235nm | ≤ 0.10 | 0.05 |
| UV Absorbance 230nm | ≤ 0.20 | 0.07 |
| UV Absorbance 220nm | ≤ 0.30 | 0.14 |
| UV Absorbance 210nm | ≤ 0.60 | 0.33 |
| UV Absorbance 205nm | ≤ 1.00 | 0.64 |
| Fluorescence 254nm | ≤ 1.0 ppb | < 0.1 ppb |
| Fluorescence 365nm | ≤ 1.0 ppb | < 0.1 ppb |
| Purity (GC) | ≥ 99.90 % | 99.94 % |
| Color Test | ≤ 10 APHA | < 5 APHA |
| Water (by Karl Fischer) | ≤ 0.03 % | < 0.01 % |
| Residue on Evaporation | ≤ 0.0005 % | 0.0001 % |
| Expiration Date Period 1800 Days | | |

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Version Number: 1

# REAGENT PREPARATION FORM

eagent # 175 Replaced Reagent # 173 Analyst: TRW

eagent Name: 0.2% NH4OH Preparation date: 2017/11/30 Expiry date: Daily

nal Volume: 500mL Oven No. : — Temp. : — Final Conc.: 0.2:99.8 v/v

alance ID: — Pipette/Syringe/Cylinder ID: N31477F 5553 Storage: shelf

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| NH4OH | 1mL | 2016/12/14 | 2017/04/03 | Fisher | 158310 | 2021/04/30 |
| MeOH | 499mL | 2017/11/27 | 2017/11/30 | Sigma | SHBJ5451 | 2022/09/30 |
| | | | | | | |
| | | | | | | |
| | TRW 2017/11/30 | | | | | |

NOTES:

Reagent # 176 Replaced Reagent # 160 Analyst: GSZ

Reagent Name: 0.3% NH4OH in MeOH Preparation date: 2017/11/30 Expiry date: Daily

Final Volume: 250 mL Oven No. : — Temp. : — Final Conc.: 0.3 : 99.7 v/v

Balance ID: — Pipette/Syringe/Cylinder ID: N31477F Storage: —

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| NH4OH | 0.75 mL | 2016/12/16 | 2017/04/03 | Fisher | 158310 | 2021/04/30 |
| MeOH | 249.25 mL | 2017/11/27 | 2017/11/30 | Sigma | SHBJ5451 | 2022/09/30 |
| | | | 2017/11/30 | | | |
| | | GSZ | | | | |
| | | | | | | |

NOTES: 250mL Class A Vol. Cylinder (3026)



DO NOT WRITE BENEATH ANY INSERTS OR PLACE ANY INSERTS ON TOP OF ANY RAW DATA ENTERED ON THIS PAGE. INITIAL AND DATE ALL ENTRIES, CORRECTIONS AND INSERTS. INCLUDE ALL RELEVANT TRACEABLE REFERENCES ON ALL INSERTS.

Fisher Scientific

1 Reagent Lane
Fair Lawn, NJ 07410
201 796-7100 tel
201 796-1626 fax

# Certificate of Analysis

Fisher Chemicals Quality System are been found to be in conformance with the requirements of ISO 9001:2008 standard by NQA (Registration Number: 0077 - QM/EN)

This is to certify that material for the product listed above was found to comply with the specifications in effect when tested by QM at the Fisher Scientific facility listed above. Fisher assumes no responsibility for the use of this material for purposes or in manners not specified by Fisher. Fisher's sole liability for material proven not to meet specifications is limited to replacement of the material or refund of the purchase price. Fisher disclaims all other warranties, express or implied, including warranties of merchantability and fitness for a particular purpose. This product is not intended for use as a food, drug, or medical device as defined by the Federal Food, Drug and Cosmetic Act (21 CFR) or Canadian Food and Drug Act (C.R.C., c. 870). This product may be subject to regulatory requirements in your country. Please contact your local Fisher Scientific office for more information.

| | | | |
|---|---|---|---|
| Catalog Number | A645 | Quality Test / Release Date | 4/01/16 |
| Lot Number | 160315 | | |
| Description | AMMONIUM HYDROXIDE, CERTIFIED A.C.S. PLUS | | |
| Country of Origin | United States | * Suggested Retest Date | Apr-2021 |
| Chemical Origin | Inorganic-non-mineral | | |
| BSE/TSE Comment | This product does not contain and is not manufactured with any material of animal origin. | | |
| Chemical Comment | This product is free from genetically modified substances and irradiation. | | |

Rec'd: 2016/12/28
# bottles - BB

| Result name | Units | Specification | Test Value |
|---|---|---|---|
| APPEARANCE | | REPORT | COLORLESS AND FREE FROM SUSPENDED MATTER |
| ALUMINUM | ppm | <= 0.5 | 0.001 |
| ARSENIC AND ANTIMONY | ppm | <= 0.05 | <0.050 |
| ASSAY | (w/w) % | Inclusive Between 28.0 - 30.0 | 30.0 |
| BORON (B) | ppm | <= 0.1 | 0.001 |
| CALCIUM (Ca) | ppm | <= 0.5 | 0.001 |
| CARBON DIOXIDE | % | <= 0.002 | <0.0030 |
| CHLORIDE | ppm | <= 0.5 | <0.001 |
| COBALT (Co) | ppm | <= 0.2 | 0.001 |
| COPPER (Cu) | ppm | <= 0.1 | 0.001 |
| GOLD (Au) | ppm | <= 0.2 | 0.001 |
| HEAVY METALS (as Pb) | ppm | <= 0.5 | <0.5 |
| IDENTIFICATION | PASS/FAIL | = PASS TEST | PASS TEST |
| IRON (Fe) | ppm | <= 0.1 | 0.001 |
| LEAD (Pb) | ppm | <= 0.2 | 0.001 |
| LITHIUM (Li) | ppm | <= 0.2 | 0.001 |
| MANGANESE (Mn) | ppm | <= 0.2 | 0.001 |
| NICKEL (Ni) | ppm | <= 0.1 | 0.001 |
| NITRATE (NO3) | ppm | <= 2 | <2.0 |
| PHOSPHATE (PO4) | ppm | <= 0.5 | <0.50 |
| POTASSIUM (K) | ppm | <= 0.5 | 0.001 |
| RESIDUE AFTER IGNITION | ppm | <= 5 | <5.00 |
| SODIUM (Na) | ppm | = PASS | 0.002 |
| SUBSTANCES REDUCING KMnO4 | PASS/FAIL | = PASS TEST | PASS TEST |
| ZINC (Zn) | ppm | <= 0.2 | 0.001 |
| TIN (Sn) | ppm | <= 0.2 | 0.001 |
| TITANIUM (Ti) | ppm | <= 0.1 | 0.001 |
| ZINC (Zn) | ppm | <= 0.3 | 0.001 |

(Approved) by

Quality Control Manager SPF

Note: This data sheet is valid for the above batch only. For any comments or questions about this product, please contact your local Fisher Scientific office or call 1-800-766-7000.
Visit us on the web at www.fishersci.com

Received: 2016/12/10 1x500mL MMN
Received: 2016/12/14 1x500mL MMN
Received: 2016/12/16 1x500mL MMN

SIGMA-ALDRICH®

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3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%

| | |
|---|---|
| **Product Number:** | **34860** |
| **Batch Number:** | **SHBJ5451** |
| Brand: | SIGALD |
| CAS Number: | 67-56-1 |
| MDL Number: | MFCD00004595 |
| Formula: | CH4O |
| Formula Weight: | 32.04 g/mol |
| Quality Release Date: | 27 SEP 2017 |
| Expiration Date: | SEP 2022 |

$CH_3OH$

Recd: j
2017/11/20
4 x 4 L
LC group

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless | Colorless |
| Appearance (Form) | Liquid | Liquid |
| UV Absorbance 400nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 280nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 260nm | ≤ 0.04 | < 0.01 |
| UV Absorbance 240nm | ≤ 0.10 | 0.02 |
| UV Absorbance 235nm | ≤ 0.10 | 0.03 |
| UV Absorbance 230nm | ≤ 0.20 | 0.05 |
| UV Absorbance 220nm | ≤ 0.30 | 0.11 |
| UV Absorbance 210nm | ≤ 0.60 | 0.28 |
| UV Absorbance 205nm | ≤ 1.00 | 0.65 |
| Fluorescence 254nm | ≤ 1.0 ppb | < 0.1 ppb |
| Fluorescence 365nm | ≤ 1.0 ppb | 0.1 ppb |
| Purity (GC) | ≥ 99.90 % | 100.00 % |
| Color Test | ≤ 10 APHA | < 10 APHA |
| Water (by Karl Fischer) | ≤ 0.03 % | < 0.01 % |
| Residue on Evaporation | ≤ 0.0005 % | 0.0001 % |
| Expiration Date Period 1800 Days | ---------- | ---------- |

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

**Product Number:** 34860
**Batch Number:** SHBJ5451

Michael Grady, Manager
Quality Control
Sheboygan Falls, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



Date Received: 2017/11/27 4x4 L

# REAGENT PREPARATION FORM

Reagent # 277 Replaced Reagent # 266 Analyst: la

Reagent Name: DNPH Solution Preparation date: 2018/01/10 Expiry date: Daily

Final Volume: 10 ml Oven No. : — Temp. : — Final Conc.: —

Balance ID: FC-1 Pipette/Syringe/Cylinder ID: K 551916 Storage: Shelf

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| DNPH | 0.050 g | 2016/07/15 | 2016/07/15 | Spectar | ZEK0212 | 2022/05/31 |
| ACN | 10 ml | 2017/09/20 | 2018/01/09 | Fisher | 172966 | 2024/05/31 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

2018/01/10 la

NOTES:

Reagent # 278 Replaced Reagent # 274 Analyst: GSZ

Reagent Name: 0.3% NH4OH in MeOH Preparation date: 2018/01/10 Expiry date: Daily

Final Volume: 250ml Oven No. : — Temp. : — Final Conc.: 0.3 : 99.7 v/v

Balance ID: — Pipette/Syringe/Cylinder ID: N31477F Storage: —

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| NH4OH | 0.75 ml | 2017/08/15 ~~2018/12/16~~ | 2017/12/22 | Fisher | 166631 | 2020/01/31 |
| MeOH | 249.25 ml | GSZ 2018/01/10 2018/01/09 | 2018/01/10 | Sigma | SHBJ5451 | 2022/09/30 |
| | | | | | | |
| | | GSZ 2018/01/10 | | | | |
| | | | | | | |

NOTES: 250ml Class A Vol. Cylinder (3026)



DO NOT WRITE BENEATH ANY INSERTS OR PLACE ANY INSERTS ON TOP OF ANY RAW DATA ENTERED ON THIS PAGE. INITIAL AND DATE ALL ENTRIES, CORRECTIONS AND INSERTS. INCLUDE ALL RELEVANT TRACEABLE REFERENCES ON ALL INSERTS.
ONLY CLASS A GLASSWARE IS USED FOR THE PREPARATION OF REAGENTS WHEN APPLICABLE.

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

# Certificate of Analysis

Fisher Scientific's Quality System has been found to conform to Quality Management System standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0000019

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not utilize regulatory oversight under 21 CFR nor maintain DMF's with the FDA. The following are the actual analytical results obtained.

| | | | |
|---|---|---|---|
| Catalog Number | A563 | Quality Test / Release Date | 1/17/2017 |
| Lot Number | 166551 | Expiration Date | Jan/20 |
| Description | AMMONIUM HYDROXIDE, CERTIFIED A.C.S. PLUS | | |
| Country of Origin | United States | | |
| Chemical Origin | Inorganic-non animal | | |
| BSE/TSE Comment | This product does not contain and is not manufactured with raw material ingredients derived from any animal products, including countries where Bovine Spongiform Encephalopathy (BSE) is known to exist. | | |
| Chemical Comment | This product is free from genetically modified substances and is gluten free. | | |

| Result name | Units | Specifications | Test Value |
|---|---|---|---|
| APPEARANCE | | REPORT | Colorless and free from suspended matter |
| ALUMINUM | ppm | <= 0.3 | 0.012 |
| ARSENIC AND ANTIMONY | ppm | <= 0.05 | <0.050 |
| ASSAY | w/w % | Inclusive Between 28.0 - 30.0 | 29.5 |
| BORON (B) | ppm | <= 0.1 | 0.001 |
| CALCIUM (Ca) | ppm | <= 0.3 | 0.006 |
| CARBON DIOXIDE | % | <= 0.002 | 0.0020 |
| CHLORIDE | ppm | <= 0.5 | <0.50 |
| CHROMIUM (Cr) | ppm | <= 0.2 | 0.001 |
| COPPER (Cu) | ppm | <= 0.1 | 0.001 |
| GOLD (Au) | ppm | <= 0.3 | 0.001 |
| HEAVY METALS (as Pb) | ppm | <= 0.5 | <0.5 |
| IDENTIFICATION | PASS/FAIL | = PASS TEST | PASS TEST |
| IRON (Fe) | ppm | <= 0.1 | 0.001 |
| LEAD (Pb) | ppm | <= 0.2 | 0.001 |
| MAGNESIUM (Mg) | ppm | <= 0.3 | 0.044 |
| MANGANESE (Mn) | ppm | <= 0.2 | 0.001 |
| NICKEL (Ni) | ppm | <= 0.1 | 0.001 |
| NITRATE (NO3) | ppm | <= 2 | <2.0 |
| PHOSPHATE (PO4) | ppm | <= 0.4 | <0.40 |
| POTASSIUM (K) | ppm | <= 0.3 | 0.002 |
| RESIDUE AFTER IGNITION | ppm | <= 3 | 3.00 |
| SODIUM (Na) | ppm | = Report | 0.015 |
| SUBSTANCES REDUCING KMNO4 | PASS/FAIL | = PASS TEST | PASS TEST |
| SULFATE (SO4) | ppm | <= 2 | <2.0 |
| TIN (Sn) | ppm | <= 0.3 | 0.001 |
| TITANIUM (Ti) | ppm | <= 0.3 | 0.001 |
| ZINC (Zn) | ppm | <= 0.3 | 0.003 |



CERTIFIED BY



Quality Assurance Specialist - Certificate of Analysis BPF

Note: The date listed is valid for all package sizes of this lot of this product, expressed as a extension of the catalog number listed above. If there are any questions with this certificate, please call Chemical Services at (800) 227-8701.
*Based on suggested storage conditions.

Date Received: 2017.08.15 - 1 bottle -HPLC

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Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%

$CH_3OH$

| | |
|---|---|
| **Product Number:** | **34860** |
| **Batch Number:** | **SHBJ5451** |
| Brand: | SIGALD |
| CAS Number: | 67-56-1 |
| MDL Number: | MFCD00004595 |
| Formula: | CH4O |
| Formula Weight: | 32.04 g/mol |
| Quality Release Date: | 27 SEP 2017 |
| Expiration Date: | SEP 2022 |

Rec'd: 2
2017/11/20
4 x 4 L
LC supply

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless | Colorless |
| Appearance (Form) | Liquid | Liquid |
| UV Absorbance 400nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 280nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 260nm | ≤ 0.04 | < 0.01 |
| UV Absorbance 240nm | ≤ 0.10 | 0.02 |
| UV Absorbance 236nm | ≤ 0.10 | 0.03 |
| UV Absorbance 230nm | ≤ 0.20 | 0.05 |
| UV Absorbance 220nm | ≤ 0.30 | 0.11 |
| UV Absorbance 210nm | ≤ 0.60 | 0.28 |
| UV Absorbance 205nm | ≤ 1.00 | 0.65 |
| Fluorescence 254nm | ≤ 1.0 ppb | < 0.1 ppb |
| Fluorescence 365nm | ≤ 1.0 ppb | 0.1 ppb |
| Purity (GC) | ≥ 99.80 % | 100.00 % |
| Color Test | ≤ 10 APHA | < 10 APHA |
| Water (by Karl Fischer) | ≤ 0.03 % | < 0.01 % |
| Residue on Evaporation | ≤ 0.0005 % | 0.0001 % |
| Expiration Date Period 1800 Days | ---------- | ---------- |

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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Website: www.sigmaaldrich.com
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Outside USA: eurtechserv@sial.com

# Certificate of Analysis

**Product Number:** 34860
**Batch Number:** SHBJ5451

Michael Grady, Manager
Quality Control
Sheboygan Falls, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



Date Received: 2017/11/10 4x4L
Date Received: 2017/11/27 4x4L
Date Received: 2017/12/01 4x4L
Date Received: 2017/12/04 4x4L
Date Received: 2017/12/07 4x4L
Date Received: 2017/12/09 4x4L
Date Received: 2017/12/12 4x4L
Date Received: 2017/12/16 4x4L
Date Received: 2017/12/17 4x4L
Date Received: 2017/12/19 4x4L
Date Received: 2018/01/04 4x4L
Date Received: 2018/01/09 4x4L
Date Received: 2018/01/19 4x4L

# REAGENT PREPARATION FORM

Reagent # 287 Replaced Reagent # 280 Analyst: GSZ

Reagent Name: 0.3% $NH_4OH$ in MeOH Preparation date: 2018/01/12 Expiry date: Daily

Final Volume: 250mL Oven No. : — Temp. : — Final Conc.: 0.3 : 99.7 v/v

Balance ID: — Pipette/Syringe/Cylinder ID: N31477F Storage: —

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| $NH_4OH$ | 0.75 mL | 2017/08/15 | 2017/12/22 | Fisher | 166631 | 2020/01/31 |
| MeOH | 249.25mL | 2018/01/09 | 2018/01/12 | Sigma | SHBJ5451 | 2022/09/30 |
| | | | | | | |
| | | GSZ 2018/01/12 | | | | |
| | | | | | | |

NOTES: 250mL Class A Vol. Cylinder (3026)

Reagent # 288 Replaced Reagent # 279 Analyst: SSV

Reagent Name: 0.2% $NH_4OH$ in MeOH Preparation date: 2018/01/12 Expiry date: Daily

Final Volume: 250mL Oven No. : — Temp. : — Final Conc.: 0.2 : 99.8 v/v

Balance ID: — Pipette/Syringe/Cylinder ID: N31477F Storage: —

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| $NH_4OH$ | 0.5mL | 2017/08/15 | 2017/12/22 | Fisher | 166631 | 2020/01/31 |
| MeOH | 249.5mL | 2018/01/09 | 2018/01/12 | Sigma | SHBJ 5451 | 2022/09/30 |
| | | | | | | |
| | | | | | | |
| | | | SSV 2018/01/12 | | | |

NOTES: 250 mL class A vol. cylinder # 3026

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ONLY CLASS A GLASSWARE IS USED FOR THE PREPARATION OF REAGENTS WHEN APPLICABLE.

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

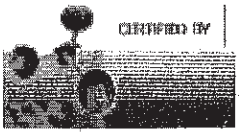
# Certificate of Analysis

Fisher Scientific Quality System has been found to conform to Quality Management System standard ISO 9001:2008 issued by SAI Global Certificate Number CERT - 0000618

This is to certify that each of the lot number listed was tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not claim regulatory coverage under 21 CFR nor maintain DMFs with the FDA. The following are the actual analytical results obtained.

| | | | |
|---|---|---|---|
| Catalog Number | A669 | Quality Test / Release Date | 1/17/2017 |
| Lot Number | 166631 | Expiration Date | Jan/20 |
| Description | AMMONIUM HYDROXIDE, CERTIFIED A.C.S. PLUS | | |
| Country of Origin | United States | | |
| Chemical Origin | Inorganic-non animal | | |
| B&E/T&E Comment | This product does not contain and is not manufactured with raw material ingredients derived from any animal products, including countries where Bovine Spongiform Encephalopathy (BSE) is known to exist. | | |
| Chemical Comment | This product is free from genetically modified substances and is gluten free. | | |

| Result Name | Units | Specifications | Test Value |
|---|---|---|---|
| APPEARANCE | | REPORT | Colorless and free from suspended matter |
| ALUMINUM | ppm | <= 0.3 | 0.012 |
| ARSENIC AND ANTIMONY | ppm | <= 0.05 | <0.050 |
| ASSAY | w/w % | Inclusive Between 28.0 - 30.0 | 29.5 |
| BORON (B) | ppm | <= 0.1 | 0.001 |
| CALCIUM (Ca) | ppm | <= 0.3 | 0.008 |
| CARBON DIOXIDE | % | <= 0.002 | 0.0020 |
| CHLORIDE | ppm | <= 0.5 | <0.50 |
| CHROMIUM (Cr) | ppm | <= 0.2 | 0.001 |
| COPPER (Cu) | ppm | <= 0.1 | 0.001 |
| GOLD (Au) | ppm | <= 0.3 | 0.001 |
| HEAVY METALS (as Pb) | ppm | <= 0.5 | <0.5 |
| IDENTIFICATION | PASS/FAIL | = PASS TEST | PASS TEST |
| IRON (Fe) | ppm | <= 0.1 | 0.001 |
| LEAD (Pb) | ppm | <= 0.2 | 0.001 |
| MAGNESIUM (Mg) | ppm | <= 0.3 | 0.044 |
| MANGANESE (Mn) | ppm | <= 0.2 | 0.001 |
| NICKEL (Ni) | ppm | <= 0.1 | 0.001 |
| NITRATE (NO3) | ppm | <= 2 | <2.0 |
| PHOSPHATE (PO4) | ppm | <= 0.4 | <0.40 |
| POTASSIUM (K) | ppm | <= 0.3 | 0.002 |
| RESIDUE AFTER IGNITION | ppm | <= 3 | 3.00 |
| SODIUM (Na) | ppm | = Report | 0.015 |
| SUBSTANCES REDUCING KMNO4 | PASS/FAIL | = PASS TEST | PASS TEST |
| SULFATE (SO4) | ppm | <= 2 | <2.0 |
| TIN (Sn) | ppm | <= 0.3 | 0.001 |
| TITANIUM (Ti) | ppm | <= 0.3 | 0.001 |
| ZINC (Zn) | ppm | <= 0.3 | 0.003 |



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Quality Assurance Specialist - Certificate of Analysis BPF

Note: The data listed is valid for all package sizes of the lot of this product, expressed as a extension of the catalog number listed above. If there are any questions with this certificate, please call Chemical Services at (800) 227-4701.
*Based on suggested storage condition.

Date Received: 2017.08.15 - 1 bottle -HPLC

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Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%

$CH_3OH$

| | |
|---|---|
| Product Number: | 34860 |
| Batch Number: | SHBJ5451 |
| Brand: | SIGALD |
| CAS Number: | 67-56-1 |
| MDL Number: | MFCD00004695 |
| Formula: | CH4O |
| Formula Weight: | 32.04 g/mol |
| Quality Release Date: | 27 SEP 2017 |
| Expiration Date: | SEP 2022 |

Rec'd: 2/
2017/11/20
4 x 4 L
LC pump

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless | Colorless |
| Appearance (Form) | Liquid | Liquid |
| UV Absorbance 400nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 280nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 260nm | ≤ 0.04 | < 0.01 |
| UV Absorbance 240nm | ≤ 0.10 | 0.02 |
| UV Absorbance 235nm | ≤ 0.10 | 0.03 |
| UV Absorbance 230nm | ≤ 0.20 | 0.05 |
| UV Absorbance 220nm | ≤ 0.30 | 0.11 |
| UV Absorbance 210nm | ≤ 0.60 | 0.28 |
| UV Absorbance 205nm | ≤ 1.00 | 0.65 |
| Fluorescence 254nm | ≤ 1.0 ppb | < 0.1 ppb |
| Fluorescence 365nm | ≤ 1.0 ppb | 0.1 ppb |
| Purity (GC) | ≥ 99.90 % | 100.00 % |
| Color Test | ≤ 10 APHA | < 10 APHA |
| Water (by Karl Fischer) | ≤ 0.03 % | < 0.01 % |
| Residue on Evaporation | ≤ 0.0005 % | 0.0001 % |
| Expiration Date Period 1800 Days | | |

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Version Number: 1

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Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

## Certificate of Analysis

Product Number: 34886
Batch Number: SHBJ5451

Michael Gredy, Manager
Quality Control
Sheboygan Falls, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Version Number: 1



Date Received: 2017/11/10 4x4L
Date Received: 2017/11/27 4x4L
Date Received: 2017/12/01 4x4L
Date Received: 2017/12/04 4x4L
Date Received: 2017/12/07 4x4L
Date Received: 2017/12/09 4x4L
Date Received: 2017/12/12 4x4L
Date Received: 2017/12/16 4x4L
Date Received: 2017/12/17 4x4L
Date Received: 2017/12/19 4x4L
Date Received: 2018/01/04 4x4L
Date Received: 2018/01/06 4x4L
Date Received: 2018/01/09 4x4L
Date Received: 2018/01/19 4x4L
Date Received: 2018/02/07 4x4L

# REAGENT PREPARATION FORM

Reagent # 327 Replaced Reagent # 287 Analyst: LR

Reagent Name: 0.3% NH4OH in MeOH Preparation date: 2018/01/30 Expiry date: Daily

Final Volume: 100 ml Oven No. : — Temp. : — Final Conc.: 0.3-99.7 v/v

Balance ID: — Pipette/Syringe/Cylinder ID: J4343461 Storage: Shelf

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| NH4OH | 0.3 ml | 2018/01/09 | 2018/01/25 | Fisher | 172996 | 2020/08/31 |
| MeOH | 99.7 ml | 2018/01/19 | 2018/01/30 | Sigma | SHBJ5451 | 2022/09/30 |
| | | | | | | |
| | | | | 2018/01/30 LR | | |
| | | | | | | |

NOTES: Cylinder # 6394

Reagent # 328 Replaced Reagent # 323 Analyst: DMB

Reagent Name: 0.2% NH4OH in MeOH Preparation date: 2018/01/30 Expiry date: Daily

Final Volume: 1L Oven No. : — Temp. : — Final Conc.: 0.2: 99.8 v/v

Balance ID: — Pipette/Syringe/Cylinder ID: N3M77F Storage: —

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| NH4OH | 2ml | 2018/01/09 | 2018/01/25 | Fisher | 172996 | 2020/08/31 |
| MeOH | 998mL | 2018/01/19 | 2018/01/30 | Sigma | SHBJ5451 | 2022/09/30 |
| | | | | | | |
| | | | | | | |
| | 2018/01/30 | | | | | |

NOTES: 1L cylinder # 5553



DO NOT WRITE BENEATH ANY INSERTS OR PLACE ANY INSERTS ON TOP OF ANY RAW DATA ENTERED ON THIS PAGE. INITIAL AND DATE ALL ENTRIES, CORRECTIONS AND INSERTS. INCLUDE ALL RELEVANT TRACEABLE REFERENCES ON ALL INSERTS

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

# Certificate of Analysis

Fisher Scientific Quality System has been found to conform to Quality Management System Standard ISO/IEC 9001:2008 standard by SAI Global Certification Number QMS 11000116

This is to certify that units of this lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (ASTM, CAP/ACR, Reagent, Primary Standard, etc.) are sold for one method, study or product. Fisher does not control reasonable coverage above 21 CFR Part 58/GLP's with this COA. The Scientific and clinical analytical results released

| | | | |
|---|---|---|---|
| Catalog Number | A669 | Quality Test / Release Date | 6/24/2017 |
| Lot Number | 172396 | Expiration Date | Aug/2020 |
| Description | AMMONIUM HYDROXIDE, CERTIFIED A.C.S. PLUS | | |
| Country of Origin | United States | | |
| Chemical Origin | Inorganic-non animal | | |

| | |
|---|---|
| BSE/TSE Comment | This product does not contain and is not manufactured with raw material ingredients derived from any animal products, including countries where Bovine Spongiform Encephalopathy (BSE) is known to exist. |
| Chemical Comment | This product is free from genetically modified substances and is gluten free. |

| Test Name | Units | Specifications | Test Value |
|---|---|---|---|
| APPEARANCE | | REPORT | COLORLESS AND FREE FROM SUSPENDED MATTER |
| ALUMINUM | ppm | -= 5.3 | 0.002 |
| ARSENIC AND ANTIMONY | ppm | -= 5.05 | <0.050 |
| ASSAY | w/w % | Inclusive Between 28.0 - 30.0 | 29.2 |
| BORON (B) | ppm | -= 5.1 | 0.001 |
| CALCIUM (Ca) | ppm | -= 5.3 | 0.008 |
| CARBON DIOXIDE | % | -= 5.052 | <0.0021 |
| CHLORIDE | ppm | -= 5.5 | <0.50 |
| CHROMIUM (Cr) | ppm | -= 5.2 | 0.001 |
| COPPER (Cu) | ppm | -= 5.1 | 0.001 |
| GOLD (Au) | ppm | -= 5.3 | 0.001 |
| HEAVY METALS (as Pb) | ppm | -= 5.5 | <0.5 |
| IRON (Fe) | ppm | -= 5.1 | 0.001 |
| LEAD (Pb) | ppm | -= 5.2 | 0.001 |
| MAGNESIUM (Mg) | ppm | -= 5.3 | 0.001 |
| MANGANESE (Mn) | ppm | -= 5.2 | 0.001 |
| NICKEL (Ni) | ppm | -= 5.1 | 0.001 |
| NITRATE (NO3) | ppm | -= 2 | <2.0 |
| PHOSPHATE (PO4) | ppm | -= 5.4 | <5.40 |
| POTASSIUM (K) | ppm | -= 5.3 | 0.002 |
| RESIDUE AFTER IGNITION | ppm | -= 3 | <3.00 |
| SODIUM (Na) | ppm | = Report | 0.005 |
| SUBSTANCES REDUCING KMNO4 | PASS/FAIL | = PASS TEST | PASS TEST |
| SULFATE (SO4) | ppm | -= 2 | <2.0 |
| TIN (Sn) | ppm | -= 5.3 | 0.001 |
| TITANIUM (Ti) | ppm | -= 5.3 | 0.001 |
| ZINC (Zn) | ppm | -= 5.3 | 0.003 |

Quality Assurance Specialist - Certificate of Analysis EPF

Note: The data listed is valid for all package sizes of this lot of this product, unless noted as a subdivision of the catalog number listed above. If there are any questions with this certificate, please see Chemical Services at (800) 926-6161 Revised lot supported always considered

Date Received: 2017/12/28-RAZ-P2B
Date Received: 2018/01/09-lov-HPLC 1X500ml

SIGMA-ALDRICH®

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%

| | |
|---|---|
| **Product Number:** | **34860** |
| **Batch Number:** | **SHBJ5451** |
| Brand: | SIGALD |
| CAS Number: | 67-56-1 |
| MDL Number: | MFCD00004595 |
| Formula: | CH4O |
| Formula Weight: | 32.04 g/mol |
| Quality Release Date: | 27 SEP 2017 |
| Expiration Date: | SEP 2022 |

$CH_3OH$

Rec'd: 9
2017/11/20
4 x 4 L
LC samp

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless | Colorless |
| Appearance (Form) | Liquid | Liquid |
| UV Absorbance 400nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 280nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 260nm | ≤ 0.04 | < 0.01 |
| UV Absorbance 240nm | ≤ 0.10 | 0.02 |
| UV Absorbance 235nm | ≤ 0.10 | 0.03 |
| UV Absorbance 230nm | ≤ 0.20 | 0.05 |
| UV Absorbance 220nm | ≤ 0.30 | 0.11 |
| UV Absorbance 210nm | ≤ 0.60 | 0.28 |
| UV Absorbance 205nm | ≤ 1.00 | 0.65 |
| Fluorescence 254nm | ≤ 1.0 ppb | < 0.1 ppb |
| Fluorescence 365nm | ≤ 1.0 ppb | 0.1 ppb |
| Purity (GC) | ≥ 99.90 % | **100.00 %** |
| Color Test | ≤ 10 APHA | < 10 APHA |
| Water (by Karl Fischer) | ≤ 0.03 % | < 0.01 % |
| Residue on Evaporation | ≤ 0.0005 % | **0.0001 %** |
| Expiration Date Period 1800 Days | ---------- | ---------- |

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Version Number: 1

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sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Number: 34860
Batch Number: SHBJ5451

Michael Grady, Manager
Quality Control
Sheboygan Falls, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



Date Received: 2017/11/10 4x4L
Date Received: 2017/11/27 4x4L
Date Received: 2017/12/01 4x4L
Date Received: 2017/12/04 4x4L
Date Received: 2017/12/07 4x4L
Date Received: 2017/12/09 4x4L
Date Received: 2017/12/12 4x4L
Date Received: 2017/12/16 4x4L
Date Received: 2017/12/17 4x4L
Date Received: 2017/12/19 4x4L
Date Received: 2018/01/04 4x4L
Date Received: 2018/01/06 4x4L
Date Received: 2018/01/09 4x4L
Date Received: 2018/01/19 4x4L

# REAGENT PREPARATION FORM

Reagent # 331 Replaced Reagent # 327 Analyst: GSZ

Reagent Name: 0.3% $NH_4OH$ in MeOH Preparation date: 2018/01/31 Expiry date: Daily

Final Volume: 100ml Oven No. : — Temp. : — Final Conc.: 0.3 : 99.7 v/v

Balance ID: — Pipette/Syringe/Cylinder ID: V434346 Storage: —

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| $NH_4OH$ | 0.3 ml | 2018/01/09 | 2018/01/25 | Fisher | 172996 | 2020/08/31 |
| MeOH | 99.7 ml | 2018/01/19 | 2018/01/30 | Sigma | SHBJ5451 | 2022/09/30 |
| | | GSZ, 2018/01/31 | | | | |
| | | | | | | |
| | | | | | | |

NOTES: 100ml Class A Vol. Cylinder (6394)

Reagent # 332 Replaced Reagent # 325 Analyst: SSV

Reagent Name: FMOC Preparation date: 2018/01/31 Expiry date: Daily

Final Volume: ~~25ml~~ 50ml Oven No. : SSV 2018/01/31 Temp. : Final Conc.:

Balance ID: FC-1 Pipette/Syringe/Cylinder ID: 0603 Storage: Shelf

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| FMOC | 0.0752g | 2017/04/06 | 2018/01/09 | Aldrich | WXBC3138V | 2022/04/06 |
| ACN | 50ml | 2017/09/20 | 2018/01/09 | Fisher | 172966 | 2022/05/31 |
| | | | | | | |
| | | | | | | |
| | | SSV | 2018/01/31 | | | |

NOTES:

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Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

# Certificate of Analysis

Fisher Scientific Quality System has been found to conform to Quality Management System Standard ISO/IEC 9001:2008 standards by SAI Global Certificate Number CL001 - 000818

This is to certify that units of the lot number below were tested and found to comply with the specifications of this grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (specifically CLIA waived kits) are sold for use in clinical, waived, or medical testing manufactured by Fisher does not assume responsibility for usage under CLIA or medicare/MD's with the FDA. This Warranty and the stated analytical results contained

| | | | |
|---|---|---|---|
| Catalog Number | A669 | Quality Test / Release Date | 6/24/2017 |
| Lot Number | 172396 | Expiration Date | Aug/2020 |
| Description | AMMONIUM HYDROXIDE, CERTIFIED A.C.S. PLUS | | |
| Country of Origin | United States | | |
| Chemical Origin | Inorganic-non animal | | |
| BSE/TSE Comment | This product does not contain and is not manufactured with raw material ingredients derived from any animal products, including countries where Bovine Spongiform Encephalopathy (BSE) is known to exist. | | |
| Chemical Comment | This product is free from genetically modified substances and is gluten free. | | |

| Specification | Units | Specifications | Test Value |
|---|---|---|---|
| APPEARANCE | | REPORT | COLORLESS AND FREE FROM SUSPENDED MATTER |
| ALUMINUM | ppm | -= 5.3 | 0.002 |
| ARSENIC AND ANTIMONY | ppm | -= 5.05 | -0.050 |
| ASSAY | w/w % | Inclusive Between 25.0 - 30.0 | 29.2 |
| BORON (B) | ppm | -= 5.1 | 0.001 |
| CALCIUM (Ca) | ppm | -= 5.3 | 0.003 |
| CARBON DIOXIDE | % | -= 5.002 | -0.0123 |
| CHLORIDE | ppm | -= 5.5 | -5.53 |
| CHROMIUM (Cr) | ppm | -= 5.2 | 0.001 |
| COPPER (Cu) | ppm | -= 5.1 | 0.001 |
| GOLD (Au) | ppm | -= 5.3 | 0.001 |
| HEAVY METALS (as Pb) | ppm | -= 5.5 | -0.5 |
| IRON (Fe) | ppm | -= 5.1 | 0.001 |
| LEAD (Pb) | ppm | -= 5.2 | 0.001 |
| MAGNESIUM (Mg) | ppm | -= 5.3 | 0.001 |
| MANGANESE (Mn) | ppm | -= 5.2 | 0.001 |
| NICKEL (Ni) | ppm | -= 5.1 | 0.001 |
| NITRATE (NO3) | ppm | -= 2 | -2.0 |
| PHOSPHATE (PO4) | ppm | -= 5.4 | -0.40 |
| POTASSIUM (K) | ppm | -= 5.3 | 0.002 |
| RESIDUE AFTER IGNITION | ppm | -= 3 | -3.00 |
| SODIUM (Na) | ppm | = Report | 0.005 |
| SUBSTANCES REDUCING KMNO4 | PASS/FAIL | = PASS TEST | PASS TEST |
| SULFATE (SO4) | ppm | -= 2 | -2.0 |
| TIN (Sn) | ppm | -= 5.3 | 0.001 |
| TITANIUM (Ti) | ppm | -= 5.3 | 0.001 |
| ZINC (Zn) | ppm | -= 5.3 | 0.003 |



Quality Assurance Specialist - Certificate of Analysis EPF

Note: The data listed is valid for all package sizes of this lot of this product, unless noted on a subsequent or the catalog number listed above. If there are any questions with this certificate, please call Customer Service at (800) 926-4161.
Toward full supported storage conditions

Date Received: 2017/12/28-RAZ-P2B
Date Received: 2018/01/09-lov-HPLC 1X500ml

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Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%

$CH_3OH$

| | |
|---|---|
| Product Number: | 34860 |
| Batch Number: | SHBJ5451 |
| Brand: | SIGALD |
| CAS Number: | 67-56-1 |
| MDL Number: | MFCD00004595 |
| Formula: | CH4O |
| Formula Weight: | 32.04 g/mol |
| Quality Release Date: | 27 SEP 2017 |
| Expiration Date: | SEP 2022 |

Rec'd: 9
2017/11/20
4 x 4 L
LC pump

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless | Colorless |
| Appearance (Form) | Liquid | Liquid |
| UV Absorbance 400nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 280nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 260nm | ≤ 0.04 | < 0.01 |
| UV Absorbance 240nm | ≤ 0.10 | 0.02 |
| UV Absorbance 235nm | ≤ 0.10 | 0.03 |
| UV Absorbance 230nm | ≤ 0.20 | 0.05 |
| UV Absorbance 220nm | ≤ 0.30 | 0.11 |
| UV Absorbance 210nm | ≤ 0.60 | 0.28 |
| UV Absorbance 205nm | ≤ 1.00 | 0.65 |
| Fluorescence 254nm | ≤ 1.0 ppb | < 0.1 ppb |
| Fluorescence 365nm | ≤ 1.0 ppb | 0.1 ppb |
| Purity (GC) | ≥ 99.90 % | 100.00 % |
| Color Test | ≤ 10 APHA | < 10 APHA |
| Water (by Karl Fischer) | ≤ 0.03 % | < 0.01 % |
| Residue on Evaporation | ≤ 0.0005 % | 0.0001 % |
| Expiration Date Period 1300 Days | | |

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Version Number: 1

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# Certificate of Analysis

Product Number: 34860
Batch Number: SHBJ5451

Michael Grady, Manager
Quality Control
Sheboygan Falls, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Version Number: 1



Date Received: 2017/11/10 4x4L
Date Received: 2017/11/27 4x4L
Date Received: 2017/12/01 4x4L
Date Received: 2017/12/04 4x4L
Date Received: 2017/12/07 4x4L
Date Received: 2017/12/09 4x4L
Date Received: 2017/12/12 4x4L
Date Received: 2017/12/16 4x4L
Date Received: 2017/12/17 4x4L
Date Received: 2017/12/19 4x4L
Date Received: 2018/01/04 4x4L
Date Received: 2018/01/06 4x4L
Date Received: 2018/01/09 4x4L
Date Received: 2018/01/19 4x4L

# REAGENT PREPARATION FORM

Reagent # 333 Replaced Reagent # 329 Analyst: TAC

Reagent Name: 0.2% NH4OH Preparation date: 2018/02/01 Expiry date: daily

Final Volume: 1Lt Oven No. : — Temp. : — Final Conc.: 0.2 : 99.8

Balance ID: — Pipette/Syringe/Cylinder ID: K39876F Storage: Shelf

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| NH4OH | 2 ml | 2018/01/01 | 2018/01/05 | Fisher | 172996 | 2020/08/31 |
| MeOH | 998ml | 2018/01/19 | 2018/01/31 | Sigma | SHBJ5451 | 2022/09/30 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

TAC 2018/02/01

NOTES: 1L cylinder #5553

Reagent # 334 Replaced Reagent # 317 Analyst: TAC

Reagent Name: 2% Formic acid Preparation date: 2018/02/01 Expiry date: 2018/04/01

Final Volume: 1L Oven No. : — Temp. : — Final Conc.: 2% v/v

Balance ID: — Pipette/Syringe/Cylinder ID: K551916 Storage: shelf

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| Formic acid | 20 ml | 2017/08/30 | 2017/09/29 | SIGMA | SHBJ1624 | 2018/05/31 |
| LCMS H2O | 980 | 2018/01/31 | 2018/01/31 | Omni | 57297 | 2018/10/31 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

NOTES: 1L cylinder #5553



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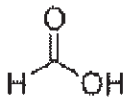
Outside USA. eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Formic acid - reagent grade, ≥95%

| | |
|---|---|
| Product Number: | F0507 |
| Batch Number: | SHBJ1624 |
| Brand: | SIGALD |
| CAS Number: | 64-18-6 |
| MDL Number: | MFCD00003297 |
| Formula: | CH2O2 |
| Formula Weight: | 46.03 g/mol |
| Quality Release Date: | 24 MAY 2017 |
| Expiration Date: | MAY 2018 |



| Test | Specification | Result |
|---|---|---|
| Appearance (Turbidity) | Clear | Clear |
| Appearance (Color) | Colorless to Very Faint Yellow | Very Faint Yellow |
| Appearance (Form) | Liquid | Liquid |
| Proton NMR Spectrum | Conforms to Structure | Conforms |
| Solvent Content | ≤ 10 % | < 0.1 % |
| Acetic Acid by NMR | | |
| Water (by Karl Fischer) | 2.0 - 2.6 % | 2.1 % |
| Titration with NaOH | ≥ 95.0 % | 97.2 % |
| Expiration Date Period | ---------- | ---------- |
| 1 Year | | |

Michael Grady, Manager
Quality Control
Sheboygan Falls, WI US

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Date Received:2017/08/11-SSB-1 bottle-P2A
Date Received:2017/08/25 -SSB-1 bottle-P2A
Date Received:2017/08/29-SSB-1 bottle-P2A
Date Received:2017/12/07-SSB-1 bottle-P2A

## Certificate of Analysis

MilliporeSigma

Date of Release: 10/27/2017

Name: Water
OmniSolv®: For LC/MS

Item No: WX0001-1, WX0001-6, WX0001-901

Lot / Batch No: 57297

Country of Origin: USA

| Characteristic | Requirement | | Results | Units |
|---|---|---|---|---|
| | Min. | Max. | | |
| Expiration date | | | 31-OCT-2019 | |
| Evaporation residue | | 1 | < 0.5 | ppm |
| Filtered through 0.2 µm filter | | | Passes test | |
| Fluorescence as quinine at 254 nm | | 1 | < 1 | ppb |
| Fluorescence as quinine at 365 nm | | 1 | < 1 | ppb |
| Gradient at 210 nm | | 2 | 0.22 | mAU |
| Gradient at 254 nm | | 0.5 | 0.09 | mAU |
| LC/MS Purity (n-octanesulfonic) | | 50 | <50 | ppb |
| LC/MS Purity (octanoic) | | 50 | <50 | ppb |
| Meets criteria for LC/MS | | | Conforms | |
| UV Abs. at 205 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 210 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 220 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 230 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 240 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 250 nm | | 0.005 | < 0.001 | AU |
| UV Abs. at 270 nm | | 0.005 | < 0.001 | AU |
| UV Abs. at 400–210 nm | | 0.005 | < 0.001 | AU |
| UV Cut-off | | 190 | < 190 | nm |

Dr. Oliver Schramel
Quality Control Manager
This document has been produced electronically and is valid without a signature.

EMD Millipore Corporation, an affiliate of Merck KGaA, Darmstadt, Germany
290 Concord Road
Billerica, MA 01821
U.S.A.
The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.

Date Received: 2017/12/01 1 x 4L LCMS
Date Received: 2017/12/04 4 x 4L LCMS
Date Received: 2017/12/06 4 x 4L LCMS
Date Received: 2017/12/07 4 x 4L LCMS
Date Received: 2017/12/10 4 x 4L LCMS
Date Received: 2017/12/19 4 x 4L LCMS
Date Received: 2017.12.28 - 8 x 4L - HPLC
Date Received: 2017.12.29 - 8 x 4L - HPLC
Date Received: 2018.01.04 - 8 x 4L - HPLC
Date Received: 2018.01.19 - 8 x 4L - HPLC
Date Received: 2018.01.31 - 8 x 4L - HPLC

# REAGENT PREPARATION FORM

Reagent # 337 Replaced Reagent # 335 Analyst: SHD

Reagent Name: 0.2% NH4OH Preparation date: 2018/02/03 Expiry date: Daily

Final Volume: 1L Oven No. : — Temp. : — Final Conc.: 0.2%

Balance ID: — Pipette/Syringe/Cylinder ID: K39876 F Storage: Shelf

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| MeOH | 998 | 2018/01/18 | 2018/02/01 | Sigma | SHBJ5451 | 2022/9/30 |
| NH4OH | 2ml | 2017/08/15 | 2017/12/22 | Fisher | 166631 | 2020/01/31 |
| | | | | | | |
| | | | | | | |
| | | SHD | | | | |

NOTES:

Reagent # 338 Replaced Reagent # 331 Analyst: [signature]

Reagent Name: 0.3% NH4OH in MeOH Preparation date: 2018/02/05 Expiry date: Daily

Final Volume: 100ml Oven No. : — Temp. : — Final Conc.: 0.3:99.7 v/v

Balance ID: — Pipette/Syringe/Cylinder ID: J43434G Storage: —

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE. |
|---|---|---|---|---|---|---|
| NH4OH | 0.3ml | 2018/01/09 | 2018/01/25 | Fisher | 172996 | 2020/08/31 |
| MeOH | 99.7ml | 2018/01/31 | 2018/02/05 | Sigma | SHBJ 7527 | 2022/11/30 |
| | | | | | | |
| | | | | | | |
| | | | [signature] 2018/02/05 | | | |

NOTES:



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Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%

$CH_3OH$

| | |
|---|---|
| **Product Number:** | **34860** |
| **Batch Number:** | **SHBJ5451** |
| Brand: | SIGALD |
| CAS Number: | 67-56-1 |
| MDL Number: | MFCD00004595 |
| Formula: | CH4O |
| Formula Weight: | 32.04 g/mol |
| Quality Release Date: | 27 SEP 2017 |
| Expiration Date: | SEP 2022 |

Rec'd: 9
2017/11/20
4 x 4 L
LC sump

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless | Colorless |
| Appearance (Form) | Liquid | Liquid |
| UV Absorbance 400nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 280nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 260nm | ≤ 0.04 | < 0.01 |
| UV Absorbance 240nm | ≤ 0.10 | 0.02 |
| UV Absorbance 235nm | ≤ 0.10 | 0.03 |
| UV Absorbance 230nm | ≤ 0.20 | 0.05 |
| UV Absorbance 220nm | ≤ 0.30 | 0.11 |
| UV Absorbance 210nm | ≤ 0.60 | 0.28 |
| UV Absorbance 205nm | ≤ 1.00 | 0.65 |
| Fluorescence 254nm | ≤ 1.0 ppb | < 0.1 ppb |
| Fluorescence 365nm | ≤ 1.0 ppb | 0.1 ppb |
| Purity (GC) | ≥ 99.90 % | 100.00 % |
| Color Test | ≤ 10 APHA | < 10 APHA |
| Water (by Karl Fischer) | ≤ 0.03 % | < 0.01 % |
| Residue on Evaporation | ≤ 0.0005 % | 0.0001 % |
| Expiration Date Period 1800 Days | | |

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Version Number: 1

SIGMA-ALDRICH®

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Number: 34860
Batch Number: SHBJ5451

Michael Grady, Manager
Quality Control
Sheboygan Falls, WI US

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Date Received: 2017/11/10 4x4L
Date Received: 2017/11/27 4x4L
Date Received: 2017/12/01 4x4L
Date Received: 2017/12/04 4x4L
Date Received: 2017/12/07 4x4L
Date Received: 2017/12/09 4x4L
Date Received: 2017/12/12 4x4L
Date Received: 2017/12/16 4x4L
Date Received: 2017/12/17 4x4L
Date Received: 2017/12/19 4x4L
Date Received: 2018/01/04 4x4L
Date Received: 2018/01/06 4x4L
Date Received: 2018/01/09 4x4L
Date Received: 2018/01/19 4x4L

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

# Certificate of Analysis

Fisher Scientific Quality System has been found to conform to Quality Management System Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0000019

This is to certify that units of the lot number listed below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not claim regulatory coverage under 21 CFR nor maintain DMF's with the FDA. The following are the actual analytical results obtained.

| | | | |
|---|---|---|---|
| Catalog Number | A669 | Quality Test / Release Date | 1/17/2017 |
| Lot Number | 166631 | Expiration Date | Jan/20 |
| Description | AMMONIUM HYDROXIDE, CERTIFIED A.C.S. PLUS | | |
| Country of Origin | United States | | |
| Chemical Origin | Inorganic-non animal | | |
| BSE/TSE Comment | This product does not contain and is not manufactured with raw material ingredients derived from any animal products, including countries where Bovine Spongiform Encephalopathy (BSE) is known to exist. | | |
| Chemical Comment | This product is free from genetically modified substances and is gluten free. | | |

| Result name | Units | Specifications | Test Value |
|---|---|---|---|
| APPEARANCE | | REPORT | Colorless and free from suspended matter |
| ALUMINUM | ppm | <= 0.3 | 0.012 |
| ARSENIC AND ANTIMONY | ppm | <= 0.05 | <0.050 |
| ASSAY | w/w % | Inclusive Between 28.0 - 30.0 | 29.6 |
| BORON (B) | ppm | <= 0.1 | 0.001 |
| CALCIUM (Ca) | ppm | <= 0.3 | 0.008 |
| CARBON DIOXIDE | % | <= 0.002 | 0.0020 |
| CHLORIDE | ppm | <= 0.5 | <0.50 |
| CHROMIUM (Cr) | ppm | <= 0.2 | 0.001 |
| COPPER (Cu) | ppm | <= 0.1 | 0.001 |
| GOLD (Au) | ppm | <= 0.3 | 0.001 |
| HEAVY METALS (as Pb) | ppm | <= 0.5 | <0.5 |
| IDENTIFICATION | PASS/FAIL | = PASS TEST | PASS TEST |
| IRON (Fe) | ppm | <= 0.1 | 0.001 |
| LEAD (Pb) | ppm | <= 0.2 | 0.001 |
| MAGNESIUM (Mg) | ppm | <= 0.3 | 0.044 |
| MANGANESE (Mn) | ppm | <= 0.2 | 0.001 |
| NICKEL (Ni) | ppm | <= 0.1 | 0.001 |
| NITRATE (NO3) | ppm | <= 2 | <2.0 |
| PHOSPHATE (PO4) | ppm | <= 0.4 | <0.40 |
| POTASSIUM (K) | ppm | <= 0.3 | 0.002 |
| RESIDUE AFTER IGNITION | ppm | <= 3 | 3.00 |
| SODIUM (Na) | ppm | = Report | 0.015 |
| SUBSTANCES REDUCING KMNO4 | PASS/FAIL | = PASS TEST | PASS TEST |
| SULFATE (SO4) | ppm | <= 2 | <2.0 |
| TIN (Sn) | ppm | <= 0.3 | 0.001 |
| TITANIUM (Ti) | ppm | <= 0.3 | 0.001 |
| ZINC (Zn) | ppm | <= 0.3 | 0.003 |



CERTIFIED BY



Quality Assurance Specialist - Certificate of Analysis BPF

Note: The data listed is valid for all package sizes of this lot of this product, expressed as a subsection of this catalog number listed above. If there are any questions with this Certificate, please call Chemical Services at (800) 237-6703.
*Based on suggested storage conditions.

Date Received: 2017.08.15 - 1 bottle -HPLC

# REAGENT PREPARATION FORM

Reagent # 339 Replaced Reagent # 335 Analyst: SSV

Reagent Name: 0.2% NH4OH Preparation date: 2018/02/05 Expiry date: Daily

Final Volume: 1L Oven No. : — Temp. : — Final Conc.: 0.2% (0.2:99.8)

Balance ID: _____ Pipette/Syringe/Cylinder ID: 043434G Storage: —

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| NH4OH | ~~2ml~~ SSV 2018/02/05 ~~998ml~~ | 2018/01/09 | 2018/1/25 | Fisher | 172996 | 2020/08/31 |
| M-OH | ~~2ml~~ 998ml SSV 2018/02/05 | 2018/01/19 | 2018/02/02 | Sigma | SHBJ 5451 | 2022/09/30 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

2018/02/05 SSV.

NOTES: 1L cylinder # 5553

Reagent # 340 Replaced Reagent # 339 Analyst: DMZ

Reagent Name: 0.2% NH4OH Preparation date: 2018/02/06 Expiry date: Daily

Final Volume: 1L Oven No. : — Temp. : — Final Conc.: 0.2% 0.2:99.8 V/V

Balance ID: — Pipette/Syringe/Cylinder ID: 043434G Storage: Shelf

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| NH4OH | 2 ml | 2017/08/15 | 2017/12/22 | Fisher | 166631 | 2020/01/31 |
| M-OH | 998 | 2018/01/31 | 2018/02/06 | Sigma | SHBJ7527 | 2022/11/30 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

2018/02/06

NOTES: 1L cylinder # 5553

DO NOT WRITE BENEATH ANY INSERTS OR PLACE ANY INSERTS ON TOP OF ANY RAW DATA ENTERED ON THIS PAGE. INITIAL AND DATE ALL ENTRIES, CORRECTIONS AND INSERTS. INCLUDE ALL RELEVANT TRACEABLE REFERENCES ON ALL INSERTS.
ONLY CLASS A GLASSWARE IS USED FOR THE PREPARATION OF REAGENTS WHEN APPLICABLE.

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

# Certificate of Analysis

Fisher Scientific Quality System has been found to conform to Quality Management Systems Standard ISO9001:2008 standard by SAI Global Certifonia Number CERT - 0000018

This is to certify that units of the lot number listed were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (BP/FCC/NF/ASTM/USP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not claim regulatory coverage under 21 CFR nor maintain DMF's with the FDA. The following are the actual analytical results obtained.

| | | | |
|---|---|---|---|
| Catalog Number | A669 | Quality Test / Release Date | 1/17/2017 |
| Lot Number | 166831 | Expiration Date | Jan/20 |
| Description | AMMONIUM HYDROXIDE, CERTIFIED A.C.S. PLUS | | |
| Country of Origin | United States | | |
| Chemical Origin | Inorganic-non animal | | |
| BSE/TSE Comment | This product does not contain and is not manufactured with raw material ingredients derived from any animal products, including countries where Bovine Spongiform Encephalopathy (BSE) is known to exist. | | |
| Chemical Comment | This product is free from genetically modified substances and is gluten free. | | |

| Result name | Units | Specifications | Test Value |
|---|---|---|---|
| APPEARANCE | | REPORT | Colorless and free from suspended matter |
| ALUMINUM | ppm | <= 0.3 | 0.012 |
| ARSENIC AND ANTIMONY | ppm | <= 0.05 | <0.050 |
| ASSAY | w/w % | Inclusive Between 28.0 - 30.0 | 29.6 |
| BORON (B) | ppm | <= 0.1 | 0.001 |
| CALCIUM (Ca) | ppm | <= 0.3 | 0.008 |
| CARBON DIOXIDE | % | <= 0.002 | 0.0020 |
| CHLORIDE | ppm | <= 0.5 | <0.50 |
| CHROMIUM (Cr) | ppm | <= 0.2 | 0.001 |
| COPPER (Cu) | ppm | <= 0.1 | 0.001 |
| GOLD (Au) | ppm | <= 0.3 | 0.001 |
| HEAVY METALS (as Pb) | ppm | <= 0.5 | <0.5 |
| IDENTIFICATION | PASS/FAIL | = PASS TEST | PASS TEST |
| IRON (Fe) | ppm | <= 0.1 | 0.001 |
| LEAD (Pb) | ppm | <= 0.2 | 0.001 |
| MAGNESIUM (Mg) | ppm | <= 0.3 | 0.044 |
| MANGANESE (Mn) | ppm | <= 0.2 | 0.001 |
| NICKEL (Ni) | ppm | <= 0.1 | 0.001 |
| NITRATE (NO3) | ppm | <= 2 | <2.0 |
| PHOSPHATE (PO4) | ppm | <= 0.4 | <0.40 |
| POTASSIUM (K) | ppm | <= 0.3 | 0.002 |
| RESIDUE AFTER IGNITION | ppm | <= 3 | 3.00 |
| SODIUM (Na) | ppm | = Report | 0.015 |
| SUBSTANCES REDUCING KMNO4 | PASS/FAIL | = PASS TEST | PASS TEST |
| SULFATE (SO4) | ppm | <= 2 | <2.0 |
| TIN (Sn) | ppm | <= 0.3 | 0.001 |
| TITANIUM (Ti) | ppm | <= 0.3 | 0.001 |
| ZINC (Zn) | ppm | <= 0.3 | 0.003 |



Certified By



Quality Assurance Specialist - Certificate of Analysis BPF

Note: The date listed is valid for all package sizes of this lot of this product, expressed as a extension of the catalog number listed above. If there are any questions with this certificate, please call Chemical Services at (800) 227-4701.
*Based on suggested storage condition.

Date Received: 2017.08.15 - 1 bottle -HPLC

SIGMA-ALDRICH

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: ourtechserv@sial.com

# Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%

| | |
|---|---|
| Product Number: | 34860 |
| Batch Number: | SHBJ7527 |
| Brand: | SIGALD |
| CAS Number: | 67-56-1 |
| MDL Number: | MFCD00004595 |
| Formula: | $CH_4O$ |
| Formula Weight: | 32.04 g/mol |
| Quality Release Date: | 18 DEC 2017 |
| Expiration Date: | NOV 2022 |

$CH_3OH$

HPLC
3Bottles
2018 10 1 21
E. G

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless | Colorless |
| Appearance (Form) | Liquid | Liquid |
| UV Absorbance 400nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 280nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 260nm | ≤ 0.04 | 0.01 |
| UV Absorbance 240nm | ≤ 0.10 | 0.03 |
| UV Absorbance 235nm | ≤ 0.10 | 0.05 |
| UV Absorbance 230nm | ≤ 0.20 | 0.07 |
| UV Absorbance 220nm | ≤ 0.30 | 0.14 |
| UV Absorbance 210nm | ≤ 0.60 | 0.33 |
| UV Absorbance 205nm | ≤ 1.00 | 0.64 |
| Fluorescence 254nm | 1.0 ppb | < 0.1 ppb |
| Fluorescence 365nm | 1.0 ppb | < 0.1 ppb |
| Purity (GC) | 99.90 % | 99.94 % |
| Color Test | 10 APHA | < 5 APHA |
| Water (by Karl Fischer) | 0.03 % | < 0.01 % |
| Residue on Evaporation | 0.0005 % | 0.0001 % |
| Expiration Date Period 1800 Days | | |

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Version Number: 1

# REAGENT PREPARATION FORM

Reagent # 341 Replaced Reagent # 339 Analyst: DM3

Reagent Name: 60:40 $H_2O$:MeOH Preparation date: 2018/02/06 Expiry date: 2018/04/06

Final Volume: 1L Oven No. : — Temp. : — Final Conc.: 60:40 V/V

Balance ID: — Pipette/Syringe/Cylinder ID: 5553 Storage: shelf

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| $H_2O$ 2018/02/06 600 ml DM3 | 600mL | 2018/01/31 | 2018/02/05 | Omni | 57297 | 2018/04/31 |
| MeOH | 400mL | 2018/01/31 | 2018/02/06 | sigma | SHBJ7527 | 2022/11/30 |
| | | | | | | |
| | | 2018/02/06 | | | | |
| | | | | | | |

NOTES: 1L cylinder # 5553

Reagent # 342 Replaced Reagent # 334 Analyst: DM3

Reagent Name: 2% Formic acid Preparation date: 2018/02/06 Expiry date: 2018/04/06

Final Volume: 1L Oven No. : — Temp. : — Final Conc.: 2%

Balance ID: — Pipette/Syringe/Cylinder ID: K551916 Storage: shelf

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| Formic Acid | 20ml | 2018/01/30 | 2018/02/06 | sigma | SHBJ 2924 | 2018/07/31 |
| LCMS $H_2O$ | 980ml | 2018/01/31 | 2018/02/05 | omni | 57297 | 2018/04/31 |
| | | | | | | |
| | | 2018/02/06 | | | | |
| | | | | | | |

NOTES: 1L cylinder # 5553



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## Certificate of Analysis

MilliporeSigma

Date of Release: 10/27/2017

Name: Water
OmniSolvent For LC/MS

Item No: WX0001-1, WX0001-6, WX0001-901

Lot / Batch No: 57297

Country of Origin: USA

| Characteristic | Requirement | | Results | Units |
|---|---|---|---|---|
| | Min. | Max. | | |
| #Expiration date | | | 31-OCT-2018 | |
| Evaporation residue | | 1 | < 0.5 | ppm |
| Filtered through 0.2 µm filter | | | Passes test | |
| Fluorescence as quinine at 254 nm | | 1 | < 1 | ppb |
| Fluorescence as quinine at 365 nm | | 1 | < 1 | ppb |
| Gradient at 210 nm | | 2 | 0.22 | mAU |
| Gradient at 254 nm | | 0.5 | 0.09 | mAU |
| LC/MS Purity (n-nitrophenol) | | 50 | <50 | ppb |
| LC/MS Purity (reserpine) | | 50 | <50 | ppb |
| Metals, suitable for LC/MS | | | Conforms | |
| UV Abs. at 200 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 210 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 220 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 230 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 240 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 250 nm | | 0.005 | < 0.001 | AU |
| UV Abs. at 270 nm | | 0.005 | < 0.001 | AU |
| UV Abs. at 400-250 nm | | 0.005 | < 0.001 | AU |
| UV Cut-off | | 190 | < 190 | nm |

Dr. Oliver Schramm
Quality Control Manager
This document has been produced electronically and is valid without a signature.

EMD Millipore Corporation, an affiliate of Merck KGaA, Darmstadt, Germany
290 Concord Road
Billerica, MA 01821
U.S.A.
The Ma science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.

Date Received: 2017/12/01 1 x 4L LCMS
Date Received: 2017/12/04 4 x 4L LCMS
Date Received: 2017/12/06 4 x 4L LCMS
Date Received: 2017/12/07 4 x 4L LCMS
Date Received: 2017/12/10 4 x 4L LCMS
Date Received: 2017/12/19 4 x 4L LCMS
Date Received: 2017.12.28 - 8 x 4L - HPLC
Date Received: 2017.12.29 - 8 x 4L - HPLC
Date Received: 2018.01.04 - 8 x 4L - HPLC
Date Received: 2018.01.19 - 8 x 4L - HPLC
Date Received: 2018.01.31 - 8 x 4L - HPLC

SIGMA-ALDRICH

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3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%

$CH_3OH$

| | |
|---|---|
| Product Number: | 34860 |
| Batch Number: | SHBJ7527 |
| Brand: | SIGALD |
| CAS Number: | 67-56-1 |
| MDL Number: | MFCD00004595 |
| Formula: | CH4O |
| Formula Weight: | 32.04 g/mol |
| Quality Release Date: | 18 DEC 2017 |
| Expiration Date: | NOV 2022 |

HPLC
3Bottles
2018 10 1 31
E. G

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless | Colorless |
| Appearance (Form) | Liquid | Liquid |
| UV Absorbance 400nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 280nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 260nm | ≤ 0.04 | 0.01 |
| UV Absorbance 240nm | ≤ 0.10 | 0.03 |
| UV Absorbance 235nm | ≤ 0.10 | 0.05 |
| UV Absorbance 230nm | ≤ 0.20 | 0.07 |
| UV Absorbance 220nm | ≤ 0.30 | 0.14 |
| UV Absorbance 210nm | ≤ 0.60 | 0.39 |
| UV Absorbance 205nm | ≤ 1.00 | 0.64 |
| Fluorescence 254nm | ≤ 1.0 ppb | < 0.1 ppb |
| Fluorescence 365nm | ≤ 1.0 ppb | < 0.1 ppb |
| Purity (GC) | ≥ 99.90 % | 99.96 % |
| Color Test | ≤ 10 APHA | < 5 APHA |
| Water (by Karl Fischer) | ≤ 0.03 % | < 0.01 % |
| Residue on Evaporation | ≤ 0.0005 % | 0.0001 % |
| Expiration Date Period 1800 Days | | |

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Version Number: 1

# REAGENT PREPARATION FORM

Reagent # 341 Replaced Reagent # 339 Analyst: DM3

Reagent Name: 60:40 $H_2O$:MeOH Preparation date: 2018/02/06 Expiry date: 2018/04/06

Final Volume: 1L Oven No. : — Temp. : — Final Conc.: 60:40 V/V

Balance ID: — Pipette/Syringe/Cylinder ID: 5553 Storage: shelf

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| $H_2O$ 2018/02/06 600ml DM3 | 600mL | 2018/01/31 | 2018/02/05 | Omni | 57297 | 2018/10/31 |
| MeOH | 400mL | 2018/01/31 | 2018/02/06 | Sig | SHBS7527 | 2022/11/30 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

2018/02/06

NOTES: 1L cylinder # 5553

Reagent # 342 Replaced Reagent # 334 Analyst: DM3

Reagent Name: 2% Formic acid Preparation date: 2018/02/06 Expiry date: 2018/04/06

Final Volume: 1L Oven No. : — Temp. : — Final Conc.: 2%

Balance ID: — Pipette/Syringe/Cylinder ID: K551916 Storage: shelf

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| Formic Acid | 20ml | 2018/01/30 | 2018/02/06 | Sigma | SHBJ2924 | 2018/07/31 |
| LCMS $H_2O$ | 980mL | 2018/01/31 | 2018/02/05 | Omni | 57297 | 2018/10/31 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

2018/02/06

NOTES: 1L cylinder # 5553



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ONLY CLASS A GLASSWARE IS USED FOR THE PREPARATION OF REAGENTS WHEN APPLICABLE.

SIGMA-ALDRICH®

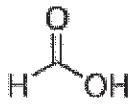
sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Formic acid - reagent grade, ≥95%

| | |
|---|---|
| Product Number: | F0507 |
| Batch Number: | SHBJ2924 |
| Brand: | SIGALD |
| CAS Number: | 64-18-6 |
| MDL Number: | MFCD00003297 |
| Formula: | CH2O2 |
| Formula Weight: | 46.03 g/mol |
| Quality Release Date: | 17 JUL 2017 |
| Expiration Date: | JUL 2018 |



| Test | Specification | Result |
|---|---|---|
| Appearance (Turbidity) | Clear | Clear |
| Appearance (Color) | Colorless to Very Faint Yellow | Colorless |
| Appearance (Form) | Liquid | Liquid |
| Proton NMR Spectrum | Conforms to Structure | Conforms |
| Solvent Content | ≤ 1.0 % | < 0.1 % |
| Acetic Acid by NMR | | |
| Water (by Karl Fischer) | 2.0 - 2.5 % | 2.1 % |
| Titration with NaOH | ≥ 95.0 % | 97.6 % |
| Expiration Date Period | | |
| 1 Year | | |

Michael Grady, Manager
Quality Control
Sheboygan Falls, WI US

Rec'd:
9 2017/09/22
1X, 100 mL
LC grade

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Version Number: 1



Date Received: 2017/11/29-SSB- 1(500ml)-P2A
Date Received: 2018.01.30 - 2 bottles - HPLC

## Certificate of Analysis

MilliporeSigma

Date of Release: 10/27/2017

Name: Water
OmniSolv®, For LC/MS

Item No: WX0001-1, WX0001-8, WX0001-901

Lot / Batch No: 57297

Country of Origin: USA

| Characteristic | Requirement | | Results | Units |
|---|---|---|---|---|
| | Min. | Max. | | |
| #Expiration date | | | 31-OCT-2018 | |
| Evaporation residue | | 1 | < 0.5 | ppm |
| Filtered through 0.2 µm filter | | | Passes test | |
| Fluorescence as quinine at 254 nm | | 1 | < 1 | ppb |
| Fluorescence as quinine at 365 nm | | 1 | < 1 | ppb |
| Gradient at 210 nm | | 2 | 0.22 | mAU |
| Gradient at 254 nm | | 0.5 | 0.09 | mAU |
| LC/MS Purity (n-Butylbenzene) | | 50 | >50 | ppb |
| LC/MS Purity (Reserpine) | | 50 | >50 | ppb |
| Metals, suitable for LC/MS | | | Conforms | |
| UV Abs. at 200 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 210 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 220 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 230 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 240 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 250 nm | | 0.005 | < 0.001 | AU |
| UV Abs. at 270 nm | | 0.005 | < 0.001 | AU |
| UV Abs. at 400–280 nm | | 0.005 | < 0.001 | AU |
| UV Cut-off | | 190 | <190 | nm |

Dr. Oliver Schramel
Quality Control Manager
This document has been produced electronically and is valid without a signature.

EMD Millipore Corporation, an affiliate of Merck KGaA, Darmstadt, Germany
290 Concord Road
Billerica, MA 01821
USA
The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.

Date Received: 2017/12/01 1 x 4L LCMS
Date Received: 2017/12/04 4 x 4L LCMS
Date Received: 2017/12/06 4 x 4L LCMS
Date Received: 2017/12/07 4 x 4L LCMS
Date Received: 2017/12/10 4 x 4L LCMS
Date Received: 2017/12/19 4 x 4L LCMS
Date Received: 2017.12.28 - 8 x 4L - HPLC
Date Received: 2017.12.29 - 8 x 4L - HPLC
Date Received: 2018.01.04 - 8 x 4L - HPLC
Date Received: 2018.01.19 - 8 x 4L - HPLC
Date Received: 2018.01.31 - 8 x 4L - HPLC
Date Received: 2018.02.07 - 4 x 4L - HPLC
Date Received: 2018.02.07 - 4 x 4L - HPLC

# REAGENT PREPARATION FORM

Reagent # 343 Replaced Reagent # 340 Analyst: DMZ

Reagent Name: 0.2% NH4OH Preparation date: 2018/02/07 Expiry date: daily

Final Volume: 1L Oven No. : — Temp. : — Final Conc.: 0.2:99.8

Balance ID: — Pipette/Syringe/Cylinder ID: N314777P Storage: —

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| NH4OH | 2mL | 2017/08/15 | 2017/12/22 | Fisher | 166631 | 2020/01/31 |
| MeOH | 998mL | 2018/01/31 | 2018/02/01 | Sigma | SHBJ7527 | 2022/11/30 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

2018/02/07 DMZ

NOTES:

1L cylinder #5553

Reagent # 344 Replaced Reagent # 310 Analyst: LR

Reagent Name: 70:30 (MeOH:H2O) Preparation date: 2018/02/04 Expiry date: 2018/04/07

Final Volume: 1L Oven No. : — Temp. : — Final Conc.: 70:30 v/v

Balance ID: — Pipette/Syringe/Cylinder ID: 5553 Storage: Shelf

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| MeOH | 700 mL | 2018/01/31 | 2018/02/06 | Sigma | SHBJ 7527 | 2022/01/30 |
| LCMS H2O | 300mL | 2018/01/31 | 2018/02/06 | omni | 57297 | 2018/10/31 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

LR 2018/02/07 LR

NOTES:



DO NOT WRITE BENEATH ANY INSERTS OR PLACE ANY INSERTS ON TOP OF ANY RAW DATA ENTERED ON THIS PAGE. INITIAL AND DATE ALL ENTRIES, CORRECTIONS AND INSERTS. INCLUDE ALL RELEVANT TRACEABLE REFERENCES ON ALL INSERTS.
ONLY CLASS A GLASSWARE IS USED FOR THE PREPARATION OF REAGENTS WHEN APPLICABLE.

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

# Certificate of Analysis

Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0000018

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data here have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not claim regulatory coverage under 21 CFR nor maintain DMF's with the FDA. The following are the actual analytical results obtained.

| | | | |
|---|---|---|---|
| Catalog Number | A669 | Quality Test / Release Date | 1/17/2017 |
| Lot Number | 166531 | Expiration Date | Jan20 |
| Description | AMMONIUM HYDROXIDE, CERTIFIED A.C.S. PLUS | | |
| Country of Origin | United States | | |
| Chemical Origin | Inorganic-non animal | | |
| BSE/TSE Comment | This product does not contain and is not manufactured with raw material ingredients derived from any animal products, including countries where Bovine Spongiform Encephalopathy (BSE) is known to exist. | | |
| Chemical Comment | This product is free from genetically modified substances and is gluten free. | | |

| Result name | Units | Specifications | Test Value |
|---|---|---|---|
| APPEARANCE | | REPORT | Colorless and free from suspended matter |
| ALUMINUM | ppm | <= 0.3 | 0.012 |
| ARSENIC AND ANTIMONY | ppm | <= 0.05 | <0.050 |
| ASSAY | w/w % | Inclusive Between 28.0 - 30.0 | 29.6 |
| BORON (B) | ppm | <= 0.1 | 0.001 |
| CALCIUM (Ca) | ppm | <= 0.3 | 0.005 |
| CARBON DIOXIDE | % | <= 0.002 | 0.0020 |
| CHLORIDE | ppm | <= 0.5 | <0.50 |
| CHROMIUM (Cr) | ppm | <= 0.2 | 0.001 |
| COPPER (Cu) | ppm | <= 0.1 | 0.001 |
| GOLD (Au) | ppm | <= 0.3 | 0.001 |
| HEAVY METALS (as Pb) | ppm | <= 0.5 | <0.5 |
| IDENTIFICATION | PASS/FAIL | = PASS TEST | PASS TEST |
| IRON (Fe) | ppm | <= 0.1 | 0.001 |
| LEAD (Pb) | ppm | <= 0.2 | 0.001 |
| MAGNESIUM (Mg) | ppm | <= 0.3 | 0.044 |
| MANGANESE (Mn) | ppm | <= 0.2 | 0.001 |
| NICKEL (Ni) | ppm | <= 0.1 | 0.001 |
| NITRATE (NO3) | ppm | <= 2 | <2.0 |
| PHOSPHATE (PO4) | ppm | <= 0.4 | <0.40 |
| POTASSIUM (K) | ppm | <= 0.3 | 0.002 |
| RESIDUE AFTER IGNITION | ppm | <= 3 | 3.00 |
| SODIUM (Na) | ppm | = Report | 0.015 |
| SUBSTANCES REDUCING KMNO4 | PASS/FAIL | = PASS TEST | PASS TEST |
| SULFATE (SO4) | ppm | <= 2 | <2.0 |
| TIN (Sn) | ppm | <= 0.3 | 0.001 |
| TITANIUM (Ti) | ppm | <= 0.3 | 0.001 |
| ZINC (Zn) | ppm | <= 0.3 | 0.003 |






Quality Assurance Specialist - Certificate of Analysis BPF

Note: The date listed is valid for all package sizes of this lot of this product, expressed as a extension of the catalog number listed above. If there are any questions with this certificate, please call Chemical Services at (800) 227-4701.
*Based on suggested storage conditions.

Date Received: 2017.08.15 - 1 bottle -HPLC

SIGMA-ALDRICH
sigma-aldrich.com
3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%

| | |
|---|---|
| Product Number: | 34860 |
| Batch Number: | SHBJ7527 |
| Brand: | SIGALD |
| CAS Number: | 67-56-1 |
| MDL Number: | MFCD00004595 |
| Formula: | $CH_4O$ |
| Formula Weight: | 32.04 g/mol |
| Quality Release Date: | 18 DEC 2017 |
| Expiration Date: | NOV 2022 |

$CH_3OH$

HPLC
3 Bottles
2018 10 1 121
E. G

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless | Colorless |
| Appearance (Form) | Liquid | Liquid |
| UV Absorbance 400nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 280nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 260nm | ≤ 0.04 | 0.01 |
| UV Absorbance 240nm | ≤ 0.10 | 0.03 |
| UV Absorbance 235nm | ≤ 0.10 | 0.05 |
| UV Absorbance 230nm | ≤ 0.20 | 0.07 |
| UV Absorbance 220nm | ≤ 0.30 | 0.14 |
| UV Absorbance 210nm | ≤ 0.60 | 0.33 |
| UV Absorbance 205nm | ≤ 1.00 | 0.64 |
| Fluorescence 254nm | ≤ 1.0 ppb | < 0.1 ppb |
| Fluorescence 305nm | ≤ 1.0 ppb | < 0.1 ppb |
| Purity (GC) | ≥ 99.90 % | 99.94 % |
| Color Test | ≤ 10 APHA | < 5 APHA |
| Water (by Karl Fischer) | ≤ 0.03 % | < 0.01 % |
| Residue on Evaporation | ≤ 0.0005 % | 0.0001 % |
| Expiration Date Period 1800 Days | | |

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Version Number: 1

# REAGENT PREPARATION FORM

Reagent # 347 Replaced Reagent # 346 Analyst: SAD

Reagent Name: 0.4% NH4OH Preparation date: 2018/02/08 Expiry date: Daily

Final Volume: 1L Oven No. : — Temp. : — Final Conc.: 0.2%

Balance ID: — Pipette/Syringe/Cylinder ID: N314771 Storage: —

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| NH4OH | 1 mL | 2018/01/08 | 2018/01/25 | Fisher | 172496 | 2020/08/31 |
| MeOH | 499mL | 2018/09/07 | 2018/2/8 | Sigma | SHBJ5451 | 2022/09/30 |
| | | | | | | |
| | | SAD | 2018/02/08 | | | |
| | | | | | | |

NOTES:

Reagent # 348 Replaced Reagent # 341 Analyst: SAD

Reagent Name: H2O:MeOH 60:40 Preparation date: 2018/02/08 Expiry date: 2018/04/08

Final Volume: 1L Oven No. : — Temp. : — Final Conc.: 60:40 v/v

Balance ID: — Pipette/Syringe/Cylinder ID: 5553 Storage: Shelf

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| MeOH | 400 | 2018/02/07 | 2018/2/8 | Sigma | SHBJ5451 | 2022/9/30 |
| H2O | 600 | 2018/01/12 | 2018/2/8 | Omni | 57297 | 2018/10/31 |
| | | | | | | |
| | | SAD | 2018/02/08 | | | |
| | | | | | | |

NOTES:

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Maxxam Analytics

SIGMA-ALDRICH®

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%

$CH_3OH$

| | |
|---|---|
| **Product Number:** | **34860** |
| **Batch Number:** | **SHBJ5451** |
| Brand: | SIGALD |
| CAS Number: | 67-56-1 |
| MDL Number: | MFCD00004595 |
| Formula: | CH4O |
| Formula Weight: | 32.04 g/mol |
| Quality Release Date: | 27 SEP 2017 |
| Expiration Date: | SEP 2022 |

Recd: 2017/11/20
4 x 4 L
LC grade

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless | Colorless |
| Appearance (Form) | Liquid | Liquid |
| UV Absorbance 400nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 280nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 260nm | ≤ 0.04 | < 0.01 |
| UV Absorbance 240nm | ≤ 0.10 | 0.02 |
| UV Absorbance 235nm | ≤ 0.10 | 0.03 |
| UV Absorbance 230nm | ≤ 0.20 | 0.05 |
| UV Absorbance 220nm | ≤ 0.30 | 0.11 |
| UV Absorbance 210nm | ≤ 0.60 | 0.28 |
| UV Absorbance 205nm | ≤ 1.00 | 0.65 |
| Fluorescence 254nm | ≤ 1.0 ppb | < 0.1 ppb |
| Fluorescence 365nm | ≤ 1.0 ppb | 0.1 ppb |
| Purity (GC) | ≥ 99.90 % | 100.00 % |
| Color Test | ≤ 10 APHA | < 10 APHA |
| Water (by Karl Fischer) | ≤ 0.03 % | < 0.01 % |
| Residue on Evaporation | ≤ 0.0005 % | 0.0001 % |
| Expiration Date Period 1800 Days | | |

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

SIGMA-ALDRICH®

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Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Number: 34860
Batch Number: SHBJ5451

Michael Grady, Manager
Quality Control
Sheboygan Falls, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Version Number: 1



Date Received: 2017/11/10 4x4L
Date Received: 2017/11/27 4x4L
Date Received: 2017/12/01 4x4L
Date Received: 2017/12/04 4x4L
Date Received: 2017/12/07 4x4L
Date Received: 2017/12/09 4x4L
Date Received: 2017/12/12 4x4L
Date Received: 2017/12/16 4x4L
Date Received: 2017/12/17 4x4L
Date Received: 2017/12/19 4x4L
Date Received: 2018/01/04 4x4L
Date Received: 2018/01/06 4x4L
Date Received: 2018/01/09 4x4L
Date Received: 2018/01/19 4x4L
Date Received: 2018/02/07 4x4L

## Certificate of Analysis

MilliporeSigma

Date of Release: 10/31/2017

Name: Water
OmniSolv®, For LC/MS

Item No: WX0001-1, WX0001-3, WX0001-901

Lot / Batch No: 57297

Country of Origin: USA

| Characteristic | Requirement | | Results | Units |
|---|---|---|---|---|
| | Min. | Max. | | |
| Appearance | | | Clear | |
| Evaporation residue | | 1 | < 0.5 | ppm |
| Filtered through 0.2 µm filter | | | Passes test | |
| Fluorescence as quinine at 254 nm | | 1 | < 1 | ppb |
| Fluorescence as quinine at 365 nm | | 1 | < 1 | ppb |
| Gradient at 210 nm | | 2 | 0.22 | mAU |
| Gradient at 254 nm | | 0.5 | 0.09 | mAU |
| LC/MS Purity (p-nitrophenol) | | 50 | <50 | ppb |
| LC/MS Purity (reserpine) | | 50 | <50 | ppb |
| Metals, suitable for LC/MS | | | Contains | |
| UV Abs. at 200 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 210 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 220 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 230 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 240 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 250 nm | | 0.005 | < 0.001 | AU |
| UV Abs. at 270 nm | | 0.005 | < 0.001 | AU |
| UV Abs. at 400–210 nm | | 0.005 | < 0.001 | AU |
| UV Cut-off | | 190 | <190 | nm |

Dr. Oliver Schumann
Quality Control Manager
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290 Concord Road
Billerica, MA 01821
U.S.A.
The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.

Date Received: 2017/12/01 1 x 4L LCMS
Date Received: 2017/12/04 4 x 4L LCMS
Date Received: 2017/12/06 4 x 4L LCMS
Date Received: 2017/12/07 4 x 4L LCMS
Date Received: 2017/12/10 4 x 4L LCMS
Date Received: 2017/12/19 4 x 4L LCMS
Date Received: 2017.12.28 - 8 x 4L - HPLC
Date Received: 2017.12.29 - 8 x 4L - HPLC
Date Received: 2018.01.04 - 8 x 4L - HPLC
Date Received: 2018.01.19 - 8 x 4L - HPLC
Date Received: 2018.01.31 - 8 x 4L - HPLC
Date Received: 2018.02.07 - 4 x 4L - HPLC
Date Received: 2018.02.07 - 4 x 4L - HPLC

# REAGENT PREPARATION FORM

Reagent # 355 Replaced Reagent # 350 Analyst: 652

Reagent Name: 0.3% NH4OH in MeOH Preparation date: 2018/02/12 Expiry date: Daily

Final Volume: 250ml Oven No. : — Temp. : — Final Conc.: 0.3 : 99.7 v/v

Balance ID: — Pipette/Syringe/Cylinder ID: J434346 Storage: —

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| NH4OH | 0.75 mL | 2018/01/09 | 2018/01/25 | Fisher | 172996 | 2020/07/31 |
| MeOH | 249.25 mL | 2018/02/07 | 2018/02/09 | Sigma | SHBJ5495 | 2022/09/30 |
| | | | | | | |
| | | 652, 2018/02/12 | | | | |
| | | | | | | |

NOTES: 250ml Class A Vol. Cylinder (3026)

Reagent # 356 Replaced Reagent # _____ Analyst: JB

Reagent Name: FMOC Preparation date: 2018/02/12 Expiry date: Daily

Final Volume: _____ Oven No. : _____ Temp. : _____ Final Conc.: _____

Balance ID: _____ Pipette/Syringe/Cylinder ID: _____ Storage: _____

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
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Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

# Certificate of Analysis

| | | | |
|---|---|---|---|
| Catalog Number | A639 | Quality Test / Release Date | 8/24/2017 |
| Lot Number | 172386 | Expiration Date | Aug/2020 |
| Description | AMMONIUM HYDROXIDE, CERTIFIED A.C.S. PLUS | | |
| Country of Origin | United States | | |
| Chemical Origin | Inorganic-non animal | | |
| BSE/TSE Comment | This product does not contain and is not manufactured with raw material ingredients derived from any animal products, including countries where Bovine Spongiform Encephalopathy (BSE) is known to exist. | | |
| Chemical Comment | This product is free from genetically modified substances and is gluten free. | | |

| Test Name | Units | Specifications | Test Value |
|---|---|---|---|
| APPEARANCE | | REPORT | COLORLESS AND FREE FROM SUSPENDED MATTER |
| ALUMINUM | ppm | <= 5.3 | 0.002 |
| ARSENIC AND ANTIMONY | ppm | <= 5.05 | <0.050 |
| ASSAY | wt/ % | Inclusive Between 28.0 - 30.0 | 29.2 |
| BORON (B) | ppm | <= 5.1 | 0.001 |
| CALCIUM (Ca) | ppm | <= 5.3 | 0.008 |
| CARBON DIOXIDE | % | <= 5.052 | <0.0020 |
| CHLORIDE | ppm | <= 5.5 | <0.50 |
| CHROMIUM (Cr) | ppm | <= 5.2 | 0.001 |
| COPPER (Cu) | ppm | <= 5.1 | 0.001 |
| GOLD (Au) | ppm | <= 5.3 | 0.001 |
| HEAVY METALS (as Pb) | ppm | <= 5.5 | <0.5 |
| IRON (Fe) | ppm | <= 5.1 | 0.001 |
| LEAD (Pb) | ppm | <= 5.2 | 0.001 |
| MAGNESIUM (Mg) | ppm | <= 5.3 | 0.001 |
| MANGANESE (Mn) | ppm | <= 5.2 | 0.001 |
| NICKEL (Ni) | ppm | <= 5.1 | 0.001 |
| NITRATE (NO3) | ppm | <= 2 | <2.0 |
| PHOSPHATE (PO4) | ppm | <= 5.4 | <0.40 |
| POTASSIUM (K) | ppm | <= 5.3 | 0.002 |
| RESIDUE AFTER IGNITION | ppm | <= 3 | <3.00 |
| SODIUM (Na) | ppm | = Report | 0.005 |
| SUBSTANCES REDUCING KMNO4 | PASS/FAIL | = PASS TEST | PASS TEST |
| SULFATE (SO4) | ppm | <= 2 | <2.0 |
| TIN (Sn) | ppm | <= 5.3 | 0.001 |
| TITANIUM (Ti) | ppm | <= 5.3 | 0.001 |
| ZINC (Zn) | ppm | <= 5.3 | 0.003 |

Quality Assurance Specialist - Certificate of Analysis EPF

Note: The data listed is valid for all package sizes of this lot of this product, unless noted in a subversion of this catalog number listed above. If there are any questions with this certificate, please call Customer Service at (800)926-6168. Trained QA supported always on-duty.

Date Received: 2017/12/28-RAZ-P2B
Date Received: 2018/01/09-lov-HPLC 1X500ml

SIGMA-ALDRICH®

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%

$CH_3OH$

| | |
|---|---|
| **Product Number:** | **34860** |
| **Batch Number:** | **SHBJ5451** |
| Brand: | SIGALD |
| CAS Number: | 67-56-1 |
| MDL Number: | MFCD00004595 |
| Formula: | CH4O |
| Formula Weight: | 32.04 g/mol |
| Quality Release Date: | 27 SEP 2017 |
| Expiration Date: | SEP 2022 |

Rec'd: 2017/11/20
4 x 4 L
LC pump

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless | Colorless |
| Appearance (Form) | Liquid | Liquid |
| UV Absorbance 400nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 280nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 260nm | ≤ 0.04 | < 0.01 |
| UV Absorbance 240nm | ≤ 0.10 | 0.02 |
| UV Absorbance 235nm | ≤ 0.10 | 0.03 |
| UV Absorbance 230nm | ≤ 0.20 | 0.05 |
| UV Absorbance 220nm | ≤ 0.30 | 0.11 |
| UV Absorbance 210nm | ≤ 0.60 | 0.28 |
| UV Absorbance 205nm | ≤ 1.00 | 0.65 |
| Fluorescence 254nm | ≤ 1.0 ppb | < 0.1 ppb |
| Fluorescence 365nm | ≤ 1.0 ppb | 0.1 ppb |
| Purity (GC) | ≥ 99.90 % | 100.00 % |
| Color Test | ≤ 10 APHA | < 10 APHA |
| Water (by Karl Fischer) | ≤ 0.03 % | < 0.01 % |
| Residue on Evaporation | ≤ 0.0005 % | 0.0001 % |
| Expiration Date Period 1800 Days | | |

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Version Number: 1

SIGMA-ALDRICH®

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Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Number: 34860
Batch Number: SHBJ5451

Michael Grady, Manager
Quality Control
Sheboygan Falls, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Version Number: 1



Date Received: 2017/11/10 4x4L
Date Received: 2017/11/27 4x4L
Date Received: 2017/12/01 4x4L
Date Received: 2017/12/04 4x4L
Date Received: 2017/12/07 4x4L
Date Received: 2017/12/09 4x4L
Date Received: 2017/12/12 4x4L
Date Received: 2017/12/16 4x4L
Date Received: 2017/12/17 4x4L
Date Received: 2017/12/19 4x4L
Date Received: 2018/01/04 4x4L
Date Received: 2018/01/06 4x4L
Date Received: 2018/01/09 4x4L
Date Received: 2018/01/19 4x4L
Date Received: 2018/02/07 4x4L

# REAGENT PREPARATION FORM

Reagent # 357 Replaced Reagent # 354 Analyst: DM3

Reagent Name: 0.2% $NH_4OH$ Preparation date: 2018/02/13 Expiry date: daily

Final Volume: 1L Oven No. : – Temp. : – Final Conc.: 0.2:99.8 v/v

Balance ID: – Pipette/Syringe/Cylinder ID: K39732F Storage: –

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| $NH_4OH$ | 2ml | 2018/01/09 | 2018/01/25 | Fisher | 172996 | 2020/07/31 |
| MeOH | 998ml | 2018/02/07 | 2018/02/13 | Sigma | SHBJ5451 | 2022/09/30 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

2018/02/13 DM3

NOTES: 1L cylinder # 5553

Reagent # 358 Replaced Reagent # 342 Analyst: SSV

Reagent Name: 2% formic acid Preparation date: 2018/02/13 Expiry date: 2018/04/13

Final Volume: 1L Oven No. : – Temp. : – Final Conc.: 2%

Balance ID: – Pipette/Syringe/Cylinder ID: K55191G Storage: –

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| formic acid | 20ml | 2017/08/25 | 2017/12/07 | sigma | SHBJ 1624 | 2018/05/31 |
| LCMS $H_2O$ | 980ml | 2017/12/06 | 2018/02/13 | OMNI | 57297 | 2018/10/31 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

2018/02/13 SSV

NOTES: 1L cylinder # 5553



DO NOT WRITE BENEATH ANY INSERTS OR PLACE ANY INSERTS ON TOP OF ANY RAW DATA ENTERED ON THIS PAGE. INITIAL AND DATE ALL ENTRIES, CORRECTIONS AND INSERTS. INCLUDE ALL RELEVANT TRACEABLE REFERENCES ON ALL INSERTS.
ONLY CLASS A GLASSWARE IS USED FOR THE PREPARATION OF REAGENTS WHEN APPLICABLE.

Fisher Scientific

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.4329 fax

# Certificate of Analysis

Fisher Scientific Quality Systems has been found to conform to Quality Management System Standard ISO/IEC 17025:2005 standards by SAI Global Certification Number CERT - 0008816

This is to certify that lots of the listed product have been tested and found to comply with the specifications of the grade listed. No duty data have been established by this laboratory relevant to the identification, assessment or hazards, including the chemical nomenclature of reproductability and fitness for a particular purpose. Certain reagents, solvents and mixtures are sold for use in drugs, drug or medical device manufacturing. Where items are listed as such, they are tested to meet USP or NF specifications. This document was produced electronically and is valid without signature.

| | | | |
|---|---|---|---|
| Catalog Number | A669 | Quality Test / Release Date | 8/24/2017 |
| Lot Number | 172996 | Expiration Date | Aug/2020 |
| Description | AMMONIUM HYDROXIDE, CERTIFIED A.C.S. PLUS | | |
| Country of Origin | United States | | |
| Chemical Origin | Inorganic-non animal | | |

| | |
|---|---|
| BSE/TSE Comment | This product does not contain and is not manufactured with raw material ingredients derived from any animal products, including countries where Bovine Spongiform Encephalopathy (BSE) is known to exist. |
| Chemical Comment | This product is free from genetically modified substances and is gluten free. |

| Test Name | Units | Specifications | Test Value |
|---|---|---|---|
| APPEARANCE | | REPORT | COLORLESS AND FREE FROM SUSPENDED MATTER |
| ALUMINUM | ppm | -= 5.3 | 0.002 |
| ARSENIC AND ANTIMONY | ppm | -= 5.05 | -0.050 |
| ASSAY | Wt/ % | Inclusive Between 28.0 - 30.0 | 29.2 |
| BORON (B) | ppm | -= 5.1 | 0.001 |
| CALCIUM (Ca) | ppm | -= 5.3 | 0.005 |
| CARBON DIOXIDE | % | -= 5.052 | -0.0025 |
| CHLORIDE | ppm | -= 5.5 | -0.50 |
| CHROMIUM (Cr) | ppm | -= 5.2 | 0.001 |
| COPPER (Cu) | ppm | -= 5.1 | 0.001 |
| GOLD (Au) | ppm | -= 5.3 | 0.001 |
| HEAVY METALS (as Pb) | ppm | -= 5.5 | -0.5 |
| IRON (Fe) | ppm | -= 5.1 | 0.001 |
| LEAD (Pb) | ppm | -= 5.2 | 0.001 |
| MAGNESIUM (Mg) | ppm | -= 5.3 | 0.001 |
| MANGANESE (Mn) | ppm | -= 5.2 | 0.001 |
| NICKEL (Ni) | ppm | -= 5.1 | 0.001 |
| NITRATE (NO3) | ppm | -= 2 | -2.0 |
| PHOSPHATE (PO4) | ppm | -= 5.4 | -0.40 |
| POTASSIUM (K) | ppm | -= 5.3 | 0.002 |
| RESIDUE AFTER IGNITION | ppm | -= 3 | -3.00 |
| SODIUM (Na) | ppm | = Report | 0.005 |
| SUBSTANCES REDUCING KMNO4 | PASS/FAIL | = PASS TEST | PASS TEST |
| SULFATE (SO4) | ppm | -= 2 | -2.0 |
| TIN (Sn) | ppm | -= 5.3 | 0.001 |
| TITANIUM (Ti) | ppm | -= 5.3 | 0.001 |
| ZINC (Zn) | ppm | -= 5.3 | 0.003 |

Teresa Bailey-Wright

Quality Assurance Specialist - Certificate of Analysis SPF

Note: The data listed is valid for all packages lots of this product, unless stated as a reference of the catalog number listed above. If there are any questions with this certificate, please call Technical Services at (800) 227-4701.
Stored at suggested storage condition

Date Received: 2017/12/28-RAZ-P2B
Date Received: 2018/01/09-lov-HPLC 1X500ml

SIGMA-ALDRICH®

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%

| | |
|---|---|
| **Product Number:** | **34860** |
| **Batch Number:** | **SHBJ5451** |
| Brand: | SIGALD |
| CAS Number: | 67-56-1 |
| MDL Number: | MFCD00004595 |
| Formula: | CH4O |
| Formula Weight: | 32.04 g/mol |
| Quality Release Date: | 27 SEP 2017 |
| Expiration Date: | SEP 2022 |

$CH_3OH$

Recd: 2
2017/11/20
4 x 4 L
LC pump

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless | Colorless |
| Appearance (Form) | Liquid | Liquid |
| UV Absorbance 400nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 280nm | ≤ 0.01 | < 0.01 |
| UV Absorbance 260nm | ≤ 0.04 | < 0.01 |
| UV Absorbance 240nm | ≤ 0.10 | 0.02 |
| UV Absorbance 235nm | ≤ 0.10 | 0.03 |
| UV Absorbance 230nm | ≤ 0.20 | 0.05 |
| UV Absorbance 220nm | ≤ 0.30 | 0.11 |
| UV Absorbance 210nm | ≤ 0.60 | 0.28 |
| UV Absorbance 205nm | ≤ 1.00 | 0.65 |
| Fluorescence 254nm | ≤ 1.0 ppb | < 0.1 ppb |
| Fluorescence 365nm | ≤ 1.0 ppb | 0.1 ppb |
| Purity (GC) | ≥ 99.90 % | 100.00 % |
| Color Test | ≤ 10 APHA | < 10 APHA |
| Water (by Karl Fischer) | ≤ 0.03 % | < 0.01 % |
| Residue on Evaporation | ≤ 0.0005 % | 0.0001 % |
| Expiration Date Period 1800 Days | | |

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Version Number: 1

SIGMA-ALDRICH®

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Number: 34880
Batch Number: SHBJ5451

Michael Grady, Manager
Quality Control
Sheboygan Falls, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Version Number: 1



Date Received: 2017/11/10 4x4L
Date Received: 2017/11/27 4x4L
Date Received: 2017/12/01 4x4L
Date Received: 2017/12/04 4x4L
Date Received: 2017/12/07 4x4L
Date Received: 2017/12/09 4x4L
Date Received: 2017/12/12 4x4L
Date Received: 2017/12/16 4x4L
Date Received: 2017/12/17 4x4L
Date Received: 2017/12/19 4x4L
Date Received: 2018/01/04 4x4L
Date Received: 2018/01/06 4x4L
Date Received: 2018/01/09 4x4L
Date Received: 2018/01/19 4x4L
Date Received: 2018/02/07 4x4L

Maxxam

CAM FCD-00595/1
FSRE: 18 PG: 133

## REAGENT PREPARATION FORM

**SOLUTION #** 265 REAGENT NAME: 20 mM Ammonium acetate

ANALYST: KC DATE PREPARED: 2018/01/16 EXPIRY DATE: 2018/03/16

STORAGE: R/T BALANCE ID: MS 204S PIPET/SYRINGE ID: -

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| Ammonium acetate | ~~16.~~ 6.1645g KC 2018/01/16 | 2017/08/03 | 2017/09/18 | Sigma | BCBT4732 | 2019/01/30 |
| Water | 4L | 2017/12/28 | 2018/01/16 | Millipore | 57297 | 2018/10/31 |
| | | | | | | |
| | | KC 2018/01/16 | | | | |
| | | | | | | |

NOTES:

**SOLUTION #** 266 REAGENT NAME: 50/50 ACN / 20 mM Ammonium Formate

ANALYST: J DATE PREPARED: 2018/01/17 EXPIRY DATE: 2018/03/17

STORAGE: RT BALANCE ID: AB-02 PIPET/SYRINGE ID: —

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| Ammonium Formate | 0.6301g | 2017/08/03 | 2017/10/17 | Sigma | MKBJ4480V | 2022/08/03 |
| RODI H2O | 500 mL | — | — | in-house | — | — |
| ACN | 500 mL | 2017/09/20 | 2017/10/17 | Fisher | 172966 | 2022/05/31 |
| | | | | | | |
| | J 2018/01/17 | | | | | |

NOTES:



ONLY CLASS A GLASSWARE IS USED FOR THE PREPARATION OF REAGENTS WHEN APPLICABLE.
RT = Room Temperature

SIGMA-ALDRICH

3050 Spruce Street, Saint Louis, MO 63103 USA
Email USA: techserv@sial.com Outside USA: eurtechserv@sial.com

| | |
|---|---|
| **Product Name:** | AMMONIUM ACETATE<br>reagent grade, >= 98 % |
| **Product Number:** | A7262 |
| **Batch Number:** | BCBT4732 |
| **Brand:** | Sigma-Aldrich |
| **CAS Number:** | 631-61-8 |
| **Formula:** | $CH_3CO_2NH_4$ |
| **Formula Weight:** | 77.08 |
| **Storage Temperature:** | 2-8 C |
| **Quality Release Date:** | 16 JAN 2017 |
| **Recommended Retest Date:** | JAN 2019 |

| TEST | SPECIFICATION | RESULT |
|---|---|---|
| APPEARANCE (COLOR) | WHITE | WHITE |
| APPEARANCE (FORM) | MOIST CRYSTALS | MOIST CRYSTALS |
| TITRATION | ≥ 98 % | 99.6 % |
| TITRATION (METHOD) | TITRATION WITH NAOH | TITRATION WITH NAOH |
| SOLUBILITY (COLOR) | COLORLESS | COLORLESS |
| SOLUBILITY (TURBIDITY) | CLEAR | CLEAR |
| SOLUBILITY (METHOD) | 1 G/ML, H2O | 1 G/ML, H2O |

Claudia Seither

Dr. Claudia Gellner
Manager Quality Control
Buchs, Switzerland

Rec'd: J
20 17/08/03
1 X 500 g
LC group
Storage: FD

Sigma-Aldrich warrants that at the time of the quality release or subsequent retest date the product conformed to the information contained in this publication. The current specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

## Certificate of Analysis

MILLIPORE SIGMA

| | |
|---|---|
| Date of Release: | 10/27/2017 |
| Name: | Water<br>OmniSolv®, For LC/MS |
| Item No: | WX0001-1, WX0001-6, WX0001-901 |
| Lot / Batch No: | 57297 |
| Country of Origin: | USA |

| Characteristic | Requirement | | Results | Units |
|---|---|---|---|---|
| | Min. | Max. | | |
| Expiration date | | | 31-OCT-2019 | |
| Evaporation residue | | 1 | < 0.5 | ppm |
| Filtered through 0.2 µm filter | | | Passes test | |
| Fluorescence as quinine at 254 nm | | 1 | < 1 | ppb |
| Fluorescence as quinine at 365 nm | | 1 | < 1 | ppb |
| Gradient at 210 nm | | 2 | 0.22 | mAU |
| Gradient at 254 nm | | 0.5 | 0.09 | mAU |
| LC/MS Purity (5-nitrosalicylic) | | 50 | <50 | ppb |
| LC/MS Purity (reserpine) | | 50 | <50 | ppb |
| Metals, suitable for LC/MS | | | Conforms | |
| UV Abs. at 200 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 210 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 220 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 230 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 240 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 255 nm | | 0.005 | < 0.001 | AU |
| UV Abs. at 270 nm | | 0.005 | < 0.001 | AU |
| UV Abs. at 400–280 nm | | 0.005 | < 0.001 | AU |
| UV Cut-off | | 190 | <190 | nm |

Dr. Oliver Schrumpf
Quality Control Manager
This document has been produced electronically and is valid without a signature.

EMD Millipore Corporation, an affiliate of Merck KGaA, Darmstadt, Germany
400 Common Road
Billerica, MA 01821
U.S.A.
The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.

Date Received: 2017/12/01 1 x 4L LCMS
Date Received: 2017/12/04 4 x 4L LCMS
Date Received: 2017/12/06 4 x 4L LCMS
Date Received: 2017/12/07 4 x 4L LCMS
Date Received: 2017/12/10 4 x 4L LCMS
Date Received: 2017/12/19 4 x 4L LCMS
Date Received: 2017.12.28 - 8 x 4L - HPLC
Date Received: 2017.12.29 - 8 x 4L - HPLC
Date Received: 2018.01.04 - 8 x 4L - HPLC
Date Received: 2018.01.19 - 8 x 4L - HPLc

Maxxam

CAM FCD-00595/1
FSRE: 18 PG: 136

## REAGENT PREPARATION FORM

**SOLUTION #** 271 **REAGENT NAME:** 25mM Ammonium Bicarbonate pH 10

**ANALYST:** JI **DATE PREPARED:** 2018/01/26 **EXPIRY DATE:** 2018/02/26

**STORAGE:** RT **BALANCE ID:** AB-02 **PIPET/SYRINGE ID:** —

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| Ammonium Hydrogen Carbonate | 3.9501g | 2017/10/17 | 2017/10/20 | Merck | K47547305 | 2019/01/31 |
| RODI H2O | top up to 2L | — | — | in-house | — | — |
| Ammonium Hydroxide | drop wise up to pH 10 | 2017/10/17 | 2018/01/15 | Fisher | 7217070 | 2020/08/23 |
| | | | JI 2018/01/26 | | | |
| | | | | | | |

**NOTES:** pH meter Account Fisher AP-61 S/N 342908

**SOLUTION #** 272 **REAGENT NAME:** 50:50 MeOH: ACN

**ANALYST:** KEL **DATE PREPARED:** 2018/01/29 **EXPIRY DATE:** 2018/03/29

**STORAGE:** RT **BALANCE ID:** - **PIPET/SYRINGE ID:** -

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| Methanol | 500 mL | 2018/01/09 | 2018/01/16 | Fisher | 171027 | 2022/05/31 |
| Acetonitrile | 500 mL | 2018/01/09 | 2018/01/29 | Honeywell | H0848 | 2019/03/15 |
| | | | | | | |
| | | | | | | |
| | | KL 2018/01/29 | | | | |

**NOTES:**



ONLY CLASS A GLASSWARE IS USED FOR THE PREPARATION OF REAGENTS WHEN APPLICABLE.
RT = Room Temperature

Fisher Scientific

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

# Certificate of Analysis

Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0000010

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not claim regulatory coverage under 21 CFR nor maintain DMF's with the FDA. The following are the actual analytical results obtained:

| | | | |
|---|---|---|---|
| Catalog Number | A454 | Quality Test / Release Date | 5/14/2017 |
| Lot Number | 171027 | | |
| Description | METHANOL, OPTIMA, A.C.S. | | |
| Country of Origin | Trinidad | * Suggested Retest Date | May-2022 |
| Chemical Origin | Organic - synthetic | | |
| BSE/TSE Comment | No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product. | | |

Recd: 8
2017/08/21
4 x 4L

| Result name | Units | Specifications | Test Value |
|---|---|---|---|
| APPEARANCE | | REPORT | CLEAR, COLORLESS LIQUID |
| ASSAY | % | >= 99.9 | 99.9 |
| CARBONYL COMPOUNDS | % | <= 0.001 | 0.0003 |
| COLOR | APHA | <= 5 | 5 |
| EVAPORATION RESIDUE | ppm | <= 1 | 0.4 |
| FLUORESCENCE BACKGROUND | ppb | <= 1 | <1 |
| IDENTIFICATION | PASS/FAIL | = PASS TEST | PASS TEST |
| LC GRADIENT SUITABILITY | PASS/FAIL | = PASS TEST | PASS TEST |
| OPTICAL ABS AT 205 NM | ABSORBANCE UNITS | <= 1.00 | 0.93 |
| OPTICAL ABS AT 220 NM | ABSORBANCE UNITS | <= 0.23 | 0.23 |
| OPTICAL ABS AT 230 NM | ABSORBANCE UNITS | <= 0.11 | 0.10 |
| OPTICAL ABS AT 254 NM | ABSORBANCE UNITS | <= 0.01 | 0.010 |
| REFRACTIVE INDEX @ 25 DEG C | | Inclusive Between 1.3260 - 1.3300 | 1.3284 |
| SOLUBILITY IN WATER | PASS/FAIL | = PASS TEST | PASS TEST |
| SUBSTANCES DARKENED BY H2SO4 | PASS/FAIL | = PASS TEST | PASS TEST |
| SUBSTANCES REDUCING KMNO4 | PASS/FAIL | = PASS TEST | PASS TEST |
| TITRATABLE ACID | mEq/g | <= 0.0003 | 0.00020 |
| TITRATABLE BASE | mEq/g | <= 0.0002 | 0.00003 |
| WATER (H2O) | % | <= 0.07 | 0.01 |




Teresa Bailey-Wepfer

Quality Assurance Specialist - Certificate of Analysis BPF

Note: The data listed is valid for all package sizes of this lot of this product, expressed as a subset of the catalog number listed above. If there are any questions with this certificate, please call Chemical Services at (800) 227-5701.
*Based on suggested storage condition.

Date Received: 2017.09.01- 4 bottles - P2A
Date Received:2017/10/17-4 x 4L - LC
Date Received: 2017/10/19-JT- 2 bottles-P1
Date Received: 2017/11/23-PBE-1x4L
Date Received: 2018.01.09 - 4 x 4L - HPLC Main Lab
Date Received: 2018.01.10 - 4 x 4L - HPLC Main Lab

Rec'd: 2018/01/09 by: AR
2 x 1L
Storage: ML - Flamm Cabinet.

**Honeywell Specialty Chemicals Seelze GmbH**
Wunstorferstrasse 40
Seelze, 30926
Telefon: +49 5137 8238-0
www.lab-honeywell.com

# Honeywell

**CERTIFICATE OF ANALYSIS**

| | |
|---|---|
| **Brand:** | Honeywell Riedel-de Haën™ |
| **Product:** | 34967 |
| **Lot No:** | H084B |
| **Production date:** | 25.Mar.2017 |
| **Best before:** | 15.Mar.2019 |

Acetonitrile LC-MS CHROMASOLV

| Parameter | Specification | Units | Result | Units |
|---|---|---|---|---|
| assay (GC) | min. 99.9 | % | 99.99 | % |
| propionitrile (GC) | max. 0.2 | % | <0.2 | % |
| non-volatile matter | max. 0.0002 | % | <0.0002 | % |
| water (Karl Fischer) | max. 0.01 | % | 0.001 | % |
| free acid (as CH3COOH) | max. 0.001 | % | 0.0008 | % |
| free alkali (as NH3) | max. 0.0001 | % | <0.0001 | % |
| silver (Ag) | max. 0.1 | ppm | <0.1 | ppm |
| aluminium (Al) | max. 0.5 | ppm | <0.5 | ppm |
| barium (Ba) | max. 0.1 | ppm | <0.1 | ppm |
| bismuth (Bi) | max. 0.1 | ppm | <0.1 | ppm |
| calcium (Ca) | max. 0.05 | ppm | <0.05 | ppm |
| cadmium (Cd) | max. 0.05 | ppm | <0.05 | ppm |
| cobalt (Co) | max. 0.02 | ppm | <0.02 | ppm |
| chromium (Cr) | max. 0.02 | ppm | <0.02 | ppm |
| copper (Cu) | max. 0.02 | ppm | <0.02 | ppm |
| iron (Fe) | max. 0.02 | ppm | <0.02 | ppm |
| potassium (K) | max. 0.05 | ppm | <0.05 | ppm |
| lithium (Li) | max. 0.1 | ppm | <0.1 | ppm |
| magnesium (Mg) | max. 0.1 | ppm | <0.1 | ppm |
| manganese (Mn) | max. 0.02 | ppm | <0.02 | ppm |
| molybdenum (Mo) | max. 0.1 | ppm | <0.1 | ppm |
| sodium (Na) | max. 0.05 | ppm | <0.05 | ppm |
| nickel (Ni) | max. 0.02 | ppm | <0.02 | ppm |
| lead (Pb) | max. 0.02 | ppm | <0.02 | ppm |
| tin (Sn) | max. 0.1 | ppm | <0.1 | ppm |
| strontium (Sr) | max. 0.1 | ppm | <0.1 | ppm |

Honeywell

Acetonitrile LC-MS CHROMASOLV

| Parameter | Specification | Units | Result | Units |
|---|---|---|---|---|
| zinc (Zn) | max. 0.1 | ppm | <0.1 | ppm |
| HPLC-gradient at 210 nm | max. 1 | mAU | <1 | mAU |
| HPLC-gradient at 254 nm | max. 0.2 | mAU | <0.2 | mAU |
| baseline drift at 210 nm | max. 12 | mAU | <12 | mAU |
| suitability for the LC-MS | complying | | complying | |
| fluorescence (chinin) at 254 nm | max. 0.5 | ppb | <0.5 | ppb |
| fluorescence (chinin) at 365 nm | max. 0.5 | ppb | <0.5 | ppb |
| absorbance at 195 nm | max. 0.097 | | <0.097 | |
| absorbance at 200 nm | max. 0.022 | | <0.022 | |
| absorbance at 230 nm | max. 0.004 | | <0.004 | |

Maxxam

CAM FCD-00595/1
FSRE: 18 PG: 140

## REAGENT PREPARATION FORM

SOLUTION # 280 REAGENT NAME: 20 mM Ammonium acetate

ANALYST: KCl DATE PREPARED: 2018/02/06 EXPIRY DATE: 2018/04/06

STORAGE: RT BALANCE ID: MS204S PIPET/SYRINGE ID: -

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| Ammonium acetate | 6.1658g | 2017/08/03 | 2017/09/18 | Sigma | BCBT4732 | 2019/01/30 |
| Water | 4L | 2017/12/06 | 2018/02/06 | Millipore | 57297 | 2018/10/31 |
| | | | | | | |
| | | | | | | |
| | | KC 2018/02/06 | | | | |

NOTES:

SOLUTION # 281 REAGENT NAME: 20 mM Ammonium Acetate

ANALYST: [illegible] DATE PREPARED: 2018/02/09 EXPIRY DATE: 2018/04/10

STORAGE: RT BALANCE ID: AB02 PIPET/SYRINGE ID:

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| Ammonium Acetate | 3.0804g | 2017/08/03 | 2017/09/18 | Sigma | BCBT4732 | 2019/01/30 |
| LCMS Water | 2L | 2017/12/28 | 2018/02/09 | (Omni Solv) EMD Millipore | 57297 | 2018/10/31 |
| | | | | | | |
| | | | | | | |
| | [illegible] 2018/02/09 | | | | | |

NOTES:



ONLY CLASS A GLASSWARE IS USED FOR THE PREPARATION OF REAGENTS WHEN APPLICABLE.
RT = Room Temperature

SIGMA-ALDRICH

3050 Spruce Street, Saint Louis, MO 63103 USA
Email USA: techserv@sial.com Outside USA: eurtechserv@sial.com

| | |
|---|---|
| **Product Name:** | **AMMONIUM ACETATE** reagent grade, >= 98 % |
| **Product Number:** | A7262 |
| **Batch Number:** | BCBT4732 |
| **Brand:** | Sigma-Aldrich |
| **CAS Number:** | 631-61-8 |
| **Formula:** | $CH_3CO_2NH_4$ |
| **Formula Weight:** | 77.08 |
| **Storage Temperature:** | 2-8 C |
| **Quality Release Date:** | 16 JAN 2017 |
| **Recommended Retest Date:** | JAN 2019 |

| TEST | SPECIFICATION | RESULT |
|---|---|---|
| APPEARANCE (COLOR) | WHITE | WHITE |
| APPEARANCE (FORM) | MOIST CRYSTALS | MOIST CRYSTALS |
| TITRATION | ≥ 98 % | 99.6 % |
| TITRATION (METHOD) | TITRATION WITH NAOH | TITRATION WITH NAOH |
| SOLUBILITY (COLOR) | COLORLESS | COLORLESS |
| SOLUBILITY (TURBIDITY) | CLEAR | CLEAR |
| SOLUBILITY (METHOD) | 1 G/ML, H2O | 1 G/ML, H2O |

Claudia Geitner

Dr. Claudia Geitner
Manager Quality Control
Buchs, Switzerland

Rec'd: 3
20 JAN 2017
1 X 500 g
LC group
Storage: FD

Sigma-Aldrich warrants that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

## Certificate of Analysis

MilliPORE SIGMA

Date of Release: 10/27/2017

Name: Water
Dimethicone: For LC/MS

Item No: WX0001-1, WX0001-3, WX0001-901

Lot / Batch No: 57297

Country of Origin: USA

| Characteristic | Requirement | | Results | Units |
|---|---|---|---|---|
| | Min. | Max. | | |
| Expiration date | | | SI-OCT-2018 | |
| Evaporation residue | | 1 | < 0.5 | ppm |
| Filtered through 0.2 µm filter | | | Passes test | |
| Fluorescence as quinine at 254 nm | | 1 | < 1 | ppb |
| Fluorescence as quinine at 365 nm | | 1 | < 1 | ppb |
| Gradient at 210 nm | | 2 | 0.33 | mAU |
| Gradient at 254 nm | | 0.5 | 0.09 | mAU |
| LC/MS Purity (n-nitrosamines) | | 50 | <50 | ppb |
| LC/MS Purity (preservative) | | 50 | <50 | ppb |
| Metals, solitaire for LC/MS | | | Conforms | |
| UV Abs. at 205 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 210 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 220 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 230 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 240 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 250 nm | | 0.005 | < 0.001 | AU |
| UV Abs. at 270 nm | | 0.005 | < 0.001 | AU |
| UV Abs. at 400–200 nm | | 0.005 | < 0.001 | AU |
| UV Cut-off | | 190 | <190 | nm |

Dr. Oliver Schrumpf
Quality Control Manager
This document has been produced electronically and is valid without a signature.

EMD Millipore Corporation, an affiliate of Merck KGaA, Darmstadt, Germany
290 Concord Road
Billerica, MA 01822
U.S.A.
The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.

Date Received: 2017/12/01 1 x 4L LCMS
Date Received: 2017/12/04 4 x 4L LCMS
Date Received: 2017/12/06 4 x 4L LCMS
Date Received: 2017/12/07 4 x 4L LCMS
Date Received: 2017/12/10 4 x 4L LCMS
Date Received: 2017/12/19 4 x 4L LCMS
Date Received: 2017.12.28 - 8 x 4L - HPLC
Date Received: 2017.12.29 - 8 x 4L - HPLC
Date Received: 2018.01.04 - 8 x 4L - HPLC
Date Received: 2018.01.19 - 8 x 4L - HPLC
Date Received: 2018.01.31 - 8 x 4L - HPLC
Date Received: 2018.02.07 - 4 x 4L - HPLC
Date Received: 2018.02.07 - 4 x 4L - HPLC

Maxxam



## REAGENT PREPARATION FORM

SOLUTION # 284 REAGENT NAME: 50:50 MeOH: ACN

ANALYST: KC DATE PREPARED: 2018/02/12 EXPIRY DATE: 2018/04/12

STORAGE: RT BALANCE ID: - PIPET/SYRINGE ID: -

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| Methanol | 500 mL | 2018/01/09 | 2018/01/30 | Fisher | 171027 | 2022/05/31 |
| Acetonitrile | 500 mL | 2018/01/09 | 2018/01/29 | Honeywell | #0846 | 2019/03/15 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

KC 2018/02/12

NOTES:

SOLUTION # 285 REAGENT NAME: 1/39 H2O / Acetonitrile

ANALYST: SM DATE PREPARED: 2018/02/12 EXPIRY DATE:

STORAGE: RT BALANCE ID: — PIPET/SYRINGE ID: FE-8-68

| CHEMICAL NAME | VOLUME/ WEIGHT | DATE RECEIVED | DATE OPENED | SUPPLIER | LOT NUMBER | EXPIRY DATE |
|---|---|---|---|---|---|---|
| RO D1 Water | 10 mL | — | — | In-house | — | — |
| Acetonitrile | 390 mL | 2018/02/12 | 2018/02/12 | Fisher | 176083 | 2024/09/31 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

SM 2018/02/12

NOTES:



ONLY CLASS A GLASSWARE IS USED FOR THE PREPARATION OF REAGENTS WHEN APPLICABLE.
RT = Room Temperature

Fisher Scientific

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

# Certificate of Analysis

Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0009910

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, aforesaid or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/JP/RJP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not claim regulatory coverage under 21 CFR not maintain DMFs with the FDA. The following are the actual analytical results obtained:

| | | | |
|---|---|---|---|
| Catalog Number | A454 | Quality Test / Release Date | 6/16/2017 |
| Lot Number | 171027 | | |
| Description | METHANOL, OPTIMA, A.C.S. | | |
| Country of Origin | Trinidad | * Suggested Retest Date | May-2022 |
| Chemical Origin | Organic - synthetic | | |
| BSE/TSE Comment | No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product. | | |

Rec'd: 9
2017/08/21
4 x 4L

| Result name | Units | Specification | Test Value |
|---|---|---|---|
| APPEARANCE | | REPORT | CLEAR, COLORLESS LIQUID |
| ASSAY | % | >= 99.9 | 99.9 |
| CARBONYL COMPOUNDS | % | <= 0.001 | 0.0008 |
| COLOR | APHA | <= 5 | 5 |
| EVAPORATION RESIDUE | ppm | <= 1 | 0.4 |
| FLUORESCENCE BACKGROUND | ppb | <= 1 | <1 |
| IDENTIFICATION | PASS/FAIL | = PASS TEST | PASS TEST |
| LC GRADIENT SUITABILITY | PASS/FAIL | = PASS TEST | PASS TEST |
| OPTICAL ABS AT 205 NM | ABSORBANCE UNITS | <= 1.00 | 0.83 |
| OPTICAL ABS AT 220 NM | ABSORBANCE UNITS | <= 0.23 | 0.23 |
| OPTICAL ABS AT 230 NM | ABSORBANCE UNITS | <= 0.11 | 0.10 |
| OPTICAL ABS AT 254 NM | ABSORBANCE UNITS | <= 0.01 | 0.010 |
| REFRACTIVE INDEX @ 25 DEG C | | Inclusive Between 1.3260 - 1.3300 | 1.3284 |
| SOLUBILITY IN WATER | PASS/FAIL | = PASS TEST | PASS TEST |
| SUBSTANCES DARKENED BY H2SO4 | PASS/FAIL | = PASS TEST | PASS TEST |
| SUBSTANCES REDUCING KMNO4 | PASS/FAIL | = PASS TEST | PASS TEST |
| TITRATABLE ACID | mEq/g | <= 0.0003 | 0.00020 |
| TITRATABLE BASE | mEq/g | <= 0.0002 | 0.00003 |
| WATER (H2O) | % | <= 0.07 | 0.01 |

CERTIFIED BY

Quality Assurance Specialist - Certificate of Analysis BPF

Note: The date listed is valid for all package sizes of this lot of this product, expressed as a extension of the catalog number listed above. If there are any questions with this certificate, please call Chemical Services at (800) 227-6701.
*Based on suggested storage condition.

Date Received: 2017.09.01- 4 bottles - P2A
Date Received:2017/10/17-4 x 4L - LC
Date Received: 2017/10/19-JT- 2 bottles-P1
Date Received: 2017/11/23-PBE-1x4L
Date Received: 2018.01.09 - 4 x 4L - HPLC Main Lab
Date Received: 2018.01.10 - 4 x 4L - HPLC Main Lab

Rec'd: 2018/01/09 by: AR
2 x 1L
Storage: ML - Flamm Cabinet.

# Honeywell

**CERTIFICATE OF ANALYSIS**

**Honeywell Specialty Chemicals Seelze GmbH**
Wunstorferstrasse 40
Seelze, 30926
Telefon: +49 5137 8238-0
www.lab-honeywell.com

| | |
|---|---|
| **Brand:** | Honeywell Riedel-de Haën™ |
| **Product:** | 34967 |
| **Lot No:** | H084B |
| **Production date:** | 25.Mar.2017 |
| **Best before:** | 15.Mar.2019 |

Acetonitrile LC-MS CHROMASOLV

| Parameter | Specification | Units | Result | Units |
|---|---|---|---|---|
| assay (GC) | min. 99.9 | % | 99.99 | % |
| propionitrile (GC) | max. 0.2 | % | <0.2 | % |
| non-volatile matter | max. 0.0002 | % | <0.0002 | % |
| water (Karl Fischer) | max. 0.01 | % | 0.001 | % |
| free acid (as CH3COOH) | max. 0.001 | % | 0.0008 | % |
| free alkali (as NH3) | max. 0.0001 | % | <0.0001 | % |
| silver (Ag) | max. 0.1 | ppm | <0.1 | ppm |
| aluminium (Al) | max. 0.5 | ppm | <0.5 | ppm |
| barium (Ba) | max. 0.1 | ppm | <0.1 | ppm |
| bismuth (Bi) | max. 0.1 | ppm | <0.1 | ppm |
| calcium (Ca) | max. 0.05 | ppm | <0.05 | ppm |
| cadmium (Cd) | max. 0.05 | ppm | <0.05 | ppm |
| cobalt (Co) | max. 0.02 | ppm | <0.02 | ppm |
| chromium (Cr) | max. 0.02 | ppm | <0.02 | ppm |
| copper (Cu) | max. 0.02 | ppm | <0.02 | ppm |
| iron (Fe) | max. 0.02 | ppm | <0.02 | ppm |
| potassium (K) | max. 0.05 | ppm | <0.05 | ppm |
| lithium (Li) | max. 0.1 | ppm | <0.1 | ppm |
| magnesium (Mg) | max. 0.1 | ppm | <0.1 | ppm |
| manganese (Mn) | max. 0.02 | ppm | <0.02 | ppm |
| molybdenum (Mo) | max. 0.1 | ppm | <0.1 | ppm |
| sodium (Na) | max. 0.05 | ppm | <0.05 | ppm |
| nickel (Ni) | max. 0.02 | ppm | <0.02 | ppm |
| lead (Pb) | max. 0.02 | ppm | <0.02 | ppm |
| tin (Sn) | max. 0.1 | ppm | <0.1 | ppm |
| strontium (Sr) | max. 0.1 | ppm | <0.1 | ppm |

Honeywell

Acetonitrile LC-MS CHROMASOLV

| Parameter | Specification | Units | Result | Units |
|---|---|---|---|---|
| zinc (Zn) | max. 0.1 | ppm | <0.1 | ppm |
| HPLC-gradient at 210 nm | max. 1 | mAU | <1 | mAU |
| HPLC-gradient at 254 nm | max. 0.2 | mAU | <0.2 | mAU |
| baseline drift at 210 nm | max. 12 | mAU | <12 | mAU |
| suitability for the LC-MS | complying | | complying | |
| fluorescence (chinin) at 254 nm | max. 0.5 | ppb | <0.5 | ppb |
| fluorescence (chinin) at 365 nm | max. 0.5 | ppb | <0.5 | ppb |
| absorbance at 195 nm | max. 0.097 | | <0.097 | |
| absorbance at 200 nm | max. 0.022 | | <0.022 | |
| absorbance at 230 nm | max. 0.004 | | <0.004 | |

# Certificate of Analysis

Date of Release: 10/27/2017

Name: Water
OmniSolv®, For LC/MS

Item No: WX0001-1, WX0001-3, WX0001-901

Lot / Batch No: 57297

Country of Origin: USA

| Characteristic | Requirement | | Results | Units |
|---|---|---|---|---|
| | Min. | Max. | | |
| #Expiration date | | | 31-OCT-2019 | |
| Evaporative residue | | 1 | < 0.5 | ppm |
| Filtered through 0.2 µm filter | | | Passes test | |
| Fluorescence as quinine at 254 nm | | 1 | < 1 | ppb |
| Fluorescence as quinine at 365 nm | | 1 | < 1 | ppb |
| Gradient at 210 nm | | 2 | 0.22 | mAU |
| Gradient at 254 nm | | 0.5 | 0.09 | mAU |
| LC/MS Purity (p-nitrophenol) | | 50 | <50 | ppb |
| LC/MS Purity (reserpine) | | 50 | <50 | ppb |
| Metals, suitable for LC/MS | | | Conforms | |
| UV Abs. at 200 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 210 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 220 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 230 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 240 nm | | 0.01 | < 0.001 | AU |
| UV Abs. at 250 nm | | 0.005 | < 0.001 | AU |
| UV Abs. at 270 nm | | 0.005 | < 0.001 | AU |
| UV Abs. at 400–280 nm | | 0.005 | < 0.001 | AU |
| UV Cut-off | | 190 | <190 | nm |

Dr. Oliver Schrunk

Quality Control Manager
This document has been produced electronically and is valid without a signature.

EMD Millipore Corporation, an affiliate of Merck KGaA, Darmstadt, Germany
290 Concord Road
Billerica, MA 01821
U.S.A.
The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.

Date Received: 2017/12/01 1 x 4L LCMS
Date Received: 2017/12/06 4 x 4L LCMS

PRLST 142 PG. 172

## PREPARATION OF STANDARDS OF INTERMEDIARY CONCENTRATION

Solution No.: I-5297 Date: 2018/01/30 Expiry Date: 2019/01/30 Discard Date: —

Replaces Solution No.: I-5244 Replaced by Solution: _____ Chemist: LaV

Compound(s)/Solution Name: Comp: PFC working soln A

Number of Parent Solution(s): See attached sheet

Concentration of Parent Solution(s): See attached sheet (mg, ug)/mL

Aliquot of Parent Solution(s): See attached sheet mL / uL

Pippette/Syringe ID N31477F (1ml)

Dilution Solvent: 0.3% NH4OH in MeOH Dilution Volume: 25 mL

Final Concentration(s): 1.0 (mg, ug)/mL

Solution derivatized (as methyl ester): — As Other (specify): —

Solution Contains Surrogate Compounds: — For mix refer to table on page: —

Solution used for: PFC Volumetric Flask: 25 ml Class A 5640
(identify by serial number or other unique ID)

Solvent Supplier: See PRLRE108-327 Lot No.: See PRLRE108-327

Date Opened: See PRLRE108-327

Storage Location: F2-11 One time Use, Not Stored: —

Ampule Supplier: Wellington Date Opened: —

Mix Name: —

Catalogue No.: — Ampule expiry Date: See attached sheet

Lot No.: See attached sheet

Date Received: See attached sheet

Notes/Comments:

I-5297 (PRLST 142 Pg. 172)

| Compound Name | ID# | Conc. (ug/mL) | Vol.. of Stock standard (uL) | Final Conc. (ug/mL) | Exp. date |
|---|---|---|---|---|---|
| PFBA | S4269-1 | 50 | 500 | 1 | 2022/05/29 |
| L-PFBS | S4269-2 | 44.2 | 565 | 1 | 2022/09/21 |
| PFPeA | S4269-3 | 50 | 500 | 1 | 2022/06/14 |
| PFHxA | S4269-4 | 50 | 500 | 1 | 2022/09/27 |
| br-PFHxSk | S4269-5 | 45.5 | 549 | 1 | 2022/01/04 |
| PFHpA | S4269-6 | 50 | 500 | 1 | 2021/12/02 |
| L-PFHpS | S4269-7 | 47.6 | 525 | 1 | 2022/09/01 |
| PFOA | S4269-8 | 50 | 500 | 1 | 2022/02/17 |
| brPFOSK | S4269-9 | 46.4 | 540 | 1 | 2022/01/12 |
| PFNA | S4269-10 | 50 | 500 | 1 | 2022/07/20 |
| PFDA | S4269-11 | 50 | 500 | 1 | 2022/05/29 |
| L-PFDS | S4269-12 | 48.2 | 518 | 1 | 2022/02/17 |
| PFUdA | S4269-13 | 50 | 500 | 1 | 2022/09/21 |
| PFDoA | S4269-14 | 50 | 500 | 1 | 2022/05/29 |
| PFTrDA | S4269-15 | 50 | 500 | 1 | 2022/05/02 |
| PFTeDA | S4269-16 | 50 | 500 | 1 | 2022/09/21 |
| PFOSA (FOSA-I) | S4269-17 | 50 | 500 | 1 | 2022/09/01 |
| N-MeFOSA-M | S4269-18 | 50 | 500 | 1 | 2022/07/05 |
| N-EtFOSA-M | S4269-19 | 50 | 500 | 1 | 2022/07/05 |
| N-MeFOSE-M | S4269-20 | 50 | 500 | 1 | 2022/04/24 |
| N-EtFOSE-M | S4269-21 | 50 | 500 | 1 | 2022/04/24 |
| N-MeFOSAA | S4269-22 | 50 | 500 | 1 | 2022/01/11 |
| N-EtFOSAA | S4269-23 | 50 | 500 | 1 | 2022/01/11 |
| 6:2FTS | S4269-24 | 47.4 | 528 | 1 | 2022/04/20 |
| 8:2FTS | S4269-25 | 47.9 | 522 | 1 | 2021/12/12 |

No writting on bottom Page

La, 2018/01/30

PRLST 133 PG 150

## PREPARATION OF CONCENTRATED STOCK STANDARDS

Solution No.: S-4269 Date: 2018/01/03 Expiry Date: See Below Discard Date: _____

Replaces Solution: _____ Replaced by Solution: _____ Chemist: Lav

S-4269 (PRLST133 p. 150)

| Solution ID# | Compound Name | Lot# | Received date | Exp. date | Replaces Solution | Replaced by Solution | Conc. (ug/mL) | Solvent | Storage |
|---|---|---|---|---|---|---|---|---|---|
| S4269-1 | PFBA | PFBA0517 | 2017/11/30 | 2022/05/29 | S4240-1 | | 50 | MeOH | FZ-11 |
| S4269-2 | L-PFBS | LPFBS0917 | 2017/11/30 | 2022/09/21 | S4240-2 | | 44.2 | MeOH | FZ-11 |
| S4269-3 | PFPeA | PFPeA0617 | 2017/11/30 | 2022/06/14 | S4240-3 | | 50 | MeOH | FZ-11 |
| S4269-4 | PFHxA | PFHxA0917 | 2017/11/30 | 2022/09/27 | S4240-4 | | 50 | MeOH | FZ-11 |
| S4269-5 | br-PFHxSk | brPFHxSK0117 | 2017/11/30 | 2022/01/04 | S4240-5 | | 45.5 | MeOH | FZ-11 |
| S4269-6 | PFHpA | PFHpA1216 | 2017/11/30 | 2021/12/02 | S4240-6 | | 50 | MeOH | FZ-11 |
| S4269-7 | L-PFHpS | LPFHpS0817 | 2017/11/30 | 2022/09/01 | S4240-7 | | 47.6 | MeOH | FZ-11 |
| S4269-8 | PFOA | PFOA0217 | 2017/09/26 | 2022/02/17 | S4240-8 | | 50 | MeOH | FZ-11 |
| S4269-9 | brPFOSK | brPFOSK0117 | 2017/11/30 | 2022/01/12 | S4240-9 | | 46.4 | MeOH | FZ-11 |
| S4269-10 | PFNA | PFNA0717 | 2017/11/30 | 2022/07/20 | S4240-10 | | 50 | MeOH | FZ-11 |
| S4269-11 | PFDA | PFDA0517 | 2017/11/30 | 2022/05/29 | S4240-11 | | 50 | MeOH | FZ-11 |
| S4269-12 | L-PFDS | LPFDS0217 | 2017/11/30 | 2022/02/17 | S4240-12 | | 48.2 | MeOH | FZ-11 |
| S4269-13 | PFUdA | PFUdA0917 | 2017/11/30 | 2022/09/21 | S4240-13 | | 50 | MeOH | FZ-11 |
| S4269-14 | PFDoA | PFDoA0517 | 2017/11/30 | 2022/05/29 | S4240-14 | | 50 | MeOH | FZ-11 |
| S4269-15 | PFTrDA | PFTrDA0517 | 2017/11/30 | 2022/05/02 | S4240-15 | | 50 | MeOH | FZ-11 |
| S4269-16 | PFTeDA | PFTeDA0917 | 2017/11/30 | 2022/09/21 | S4240-16 | | 50 | MeOH | FZ-11 |
| S4269-17 | PFOSA (FOSA-I) | FOSA08171 | 2017/11/30 | 2022/09/01 | S4240-17 | | 50 | IPA | FD-59 |
| S4269-18 | N-MeFOSA-M | NMeFOSA0717M | 2017/11/30 | 2022/07/05 | S4240-18 | | 50 | MeOH | FZ-11 |
| S4269-19 | N-EtFOSA-M | NEtFOSA0717M | 2017/11/30 | 2022/07/05 | S4240-19 | | 50 | MeOH | FZ-11 |
| S4269-20 | N-MeFOSE-M | NMeFOSE0417M | 2017/11/30 | 2022/04/24 | S4240-20 | | 50 | MeOH | FZ-11 |
| S4269-21 | N-EtFOSE-M | NEtFOSE0417M | 2017/11/30 | 2022/04/24 | S4240-21 | | 50 | MeOH | FZ-11 |
| S4269-22 | N-MeFOSAA | NMeFOSAA0117 | 2017/11/30 | 2022/01/11 | S4240-22 | | 50 | MeOH | FD-59 |
| S4269-23 | N-EtFOSAA | NEtFOSAA0117 | 2017/11/30 | 2022/01/11 | S4240-23 | | 50 | MeOH | FD-59 |
| S4269-24 | 6:2FTS | 62FTS0417 | 2017/11/30 | 2022/04/20 | S4240-24 | | 47.4 | MeOH | FD-59 |
| S4269-25 | 8:2FTS | 82FTS1216 | 2017/11/30 | 2021/12/12 | S4240-25 | | 47.9 | MeOH | FD-59 |
| Date Opened (All compounds): 2018/01/03 | | | Supplier (All compounds) : Wellington | | | | Chemist: Lav | | |

No writting on bottom Page

Lav, 2018/01/03

_____
(specify model and serial no.)

Solvent Used: _____

Solvent Supplier: _____ Lot No(s).: _____

Date Opened: _____

Storage Location / Conditions: _____

Notes/Comments _____

# WELLINGTON LABORATORIES

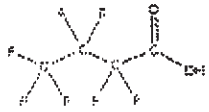
## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** PFBA
**COMPOUND:** Perfluoro-n-butanoic acid

**LOT NUMBER:** PFBA0517

**STRUCTURE:**

**CAS #:** 375-22-4



**MOLECULAR FORMULA:** $C_4HF_7O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml

**MOLECULAR WEIGHT:** 214.04
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** 05/29/2017
**EXPIRY DATE:** 05/29/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

657 2017/11/30
2 ampules

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

Certified By: _____ Date: 05/30/2017
E.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

WELLINGTON LABORATORIES

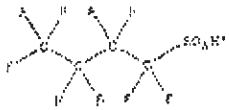
# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** L-PFBS

**COMPOUND:** Potassium perfluoro-1-butanesulfonate

**LOT NUMBER:** LPFBS0917

**STRUCTURE:**



**CAS #:** 29420-49-3

**MOLECULAR FORMULA:** $C_4F_9SO_3K$

**CONCENTRATION:** 50.0 ± 2.5 µg/ml (K salt)
44.2 ± 2.2 µg/ml (PFBS anion)

**CHEMICAL PURITY:** >98%

**LAST TESTED:** 09/21/2017

**EXPIRY DATE:** 09/21/2022

**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**MOLECULAR WEIGHT:** 338.19

**SOLVENT(S):** Methanol

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

652 2017/11/30
2 ampoules

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

*FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE*

Certified By: _____ Date: 09/22/2017
B.G. Chilton, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr, Guelph ON N1G 3M5 CANADA*
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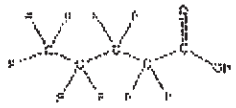
# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| PRODUCT CODE: | PFPeA | LOT NUMBER: | PFPeA0617 |
| COMPOUND: | Perfluoro-n-pentanoic acid | | |
| STRUCTURE: | | CAS #: | 2706-90-3 |



| | | | |
|---|---|---|---|
| MOLECULAR FORMULA: | $C_5HF_9O_2$ | MOLECULAR WEIGHT: | 264.05 |
| CONCENTRATION: | 50 ± 2.5 µg/ml | SOLVENT(S): | Methanol<br>Water (<1%) |
| CHEMICAL PURITY: | >98% | | |
| LAST TESTED: | 06/14/2017 | | |
| EXPIRY DATE: | 06/14/2022 | | |
| RECOMMENDED STORAGE: | Store ampoule in a cool, dark place | | |

1 ampoule
2017/06/30 692

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.3% of Perfluoro-n-heptenoic acid (PFHpA) and ~ 0.2% of $C_7H_2F_{12}O_2$ (hydrido - derivative) as measured by $^{19}F$ NMR

*FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE*

Certified By: _____ Date: 06/16/2017
D.G. Chetin, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
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Date Received: 2017.11.30 - 2 ampoules - HPLC

WELLINGTON LABORATORIES

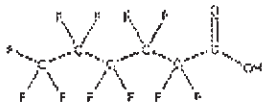
# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** PFHxA
**COMPOUND:** Perfluoro-n-hexanoic acid

**LOT NUMBER:** PFHxA0817

**STRUCTURE:**

**CAS #:** 307-24-4



**MOLECULAR FORMULA:** $C_6HF_{11}O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml

**MOLECULAR WEIGHT:** 314.05
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yy) 09/27/2017
**EXPIRY DATE:** (mm/dd/yy) 09/27/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

GSZ 2017/11/30
2 ampules

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 1.0% of branched isomers.

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Certified By: _____ Date: 11/01/2017
B.G. Chittim, General Manager

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WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

## br-PFHxSK

**Potassium Perfluorohexanesulfonate Solution/Mixture of Linear and Branched Isomers**

| | |
|---|---|
| **PRODUCT CODE:** | br-PFHxSK |
| **LOT NUMBER:** | brPFHxSK0117 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/ml (total potassium salt) |
| | 45.5 ± 2.3 µg/ml (total PFHxS anion) |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** | 01/03/2017 |
| **LAST TESTED:** | 01/04/2017 |
| **EXPIRY DATE:** | 01/04/2022 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DESCRIPTION:**

The chemical purity has been determined to be ≥98% perfluorohexanesulfonate linear and branched isomers. The full name, structure and percent composition for each of the identified isomeric components are given in Table A.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

652 2017/11/30
2 ampules

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~ 0.5% of perfluoro-1-pentanesulfonate and ~ 0.2% of perfluoro-1-octanesulfonate.
- CAS#: 3871-99-6 (for linear isomer; potassium salt).

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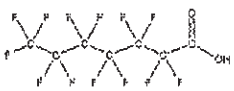
WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** PFHpA
**COMPOUND:** Perfluoro-n-heptanoic acid

**LOT NUMBER:** PFHpA1216

**STRUCTURE:**



**CAS #:** 375-85-9

Received from
2016-12-16
2 x 1.2 mL
FZ-11

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_7HF_{13}O_2$ | **MOLECULAR WEIGHT:** | 364.06 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** | 12/02/2016 | | |
| **EXPIRY DATE:** | 12/02/2021 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Certified By:** B.G. Chittim **Date:** 12/12/2016

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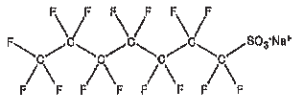
Received 2016/12/23 1 x 1.2mL MMN FZ-11
Received 2016/12/29 1 x 1.2mL MMN FZ-11
Received 2017/05/25 2 x 1.2mL MMN FZ-11
Received 2017/05/29 2 x 1.2mL MMN FZ-11
Date Received: 2017/06/02-DMZ-1.2ml-FD
Date Received: 2017/08/09 1X1.2ml HPLC
Received 2016/12/23 1 x 1.2mL MMN FZ-11
Received 2016/12/29 1 x 1.2mL MMN FZ-11
Received 2017/05/25 2 x 1.2mL MMN FZ-11
Received 2017/05/29 2 x 1.2mL MMN FZ-11
Date Received: 2017/06/02-DMZ-1.2ml-FD
Date Received: 2017/08/09 1X1.2ml HPLC
Date Received: 2017/08/30 1X1.2ml HPLC
Date received 2017/09/26 1x2 ampules HPLC
DATE RECEIVED 2017/09/12 2 ampules HPLC
Date Received: 2017.11.30 - 2 ampoules - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | L-PFHpS | **LOT NUMBER:** | LPFHpS0817 |
| **COMPOUND:** | Sodium perfluoro-1-heptanesulfonate | | |
| **STRUCTURE:** | | **CAS #:** | Not available |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_7F_{15}SO_3Na$ | **MOLECULAR WEIGHT:** | 472.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/ml (Na salt)<br>47.6 ± 2.4 µg/ml (PFHpS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 09/01/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 09/01/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

1x2 ampules
GSZ 2017/09/26

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~ 0.2% of L-PFHxS ($C_6F_{13}SO_3Na$) and ~ 0.1% of L-PFOS ($C_8F_{17}SO_3Na$).

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**Certified By:** _____ **Date:** 09/07/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

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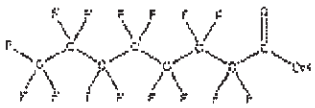
Date Received: 2017/11/30 1x2 ampoules - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | PFOA | **LOT NUMBER:** | PFOA0217 |
| **COMPOUND:** | Perfluoro-n-octanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 335-67-1 |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8HF_{15}O_2$ | **MOLECULAR WEIGHT:** | 414.07 |
| **CONCENTRATION:** | 50 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** | 02/17/2017 | | |
| **EXPIRY DATE:** | 02/17/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2. LC/MS/MS Data (Selected MRM Transitions)

Received: 2017/06/02
DMZ, 1.2mL x 1
Fridge

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

*FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE*

Certified By: B.G. Griffin  Date: 02/22/2017

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*519-822-2435 • Fax: 519-822-2849 • info@well-labs.com*

date recieved:2017/05/29 1.2x1 - HPLC
date recieved:2017/05/29 1.2x1 - HPLC
Date Received:2017/06/02-1.2 x 1-HPLC
date recieved:2017/08/09 1.2x1 - HPLC
date recieved:2017/08/30 1.2x1 - HPLC
date received 2017/09/26 1x4 ampules HPLC
date received 2017/09/12 2 ampules HPLC
date received 2017/09/26 2 ampules HPLC

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-PFOSK

**Potassium Perfluorooctanesulfonate Solution/Mixture of Linear and Branched Isomers**

| | |
|---|---|
| PRODUCT CODE: | br-PFOSK |
| LOT NUMBER: | brPFOSK0117 |
| CONCENTRATION: | 50 ± 2.5 µg/ml (total potassium salt) |
| | 46.4 ± 2.3 µg/ml (total PFOS anion) |
| SOLVENT(S): | Methanol |
| DATE PREPARED: | 01/03/2017 |
| LAST TESTED: | 01/12/2017 |
| EXPIRY DATE: | 01/12/2022 |
| RECOMMENDED STORAGE: | Store ampoule in a cool, dark place |

DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonate linear and branched isomers. The full name, structure and percent composition for each of the isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

Received: 6/7/06/02
DM2, 1.2 mL x 1
Fridge

ADDITIONAL INFORMATION:

- See page 2 for further details.
- A 5-point calibration curve was generated using linear PFOS (potassium salt) and mass-labelled PFOS as an internal standard to enable quantitation of br-PFOSK using isotopic dilution.
- CAS#: 2795-39-3 (for linear isomer, potassium salt).

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*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

date recieved:2017/05/29 1.2x1- HPLC
date received: 2017/08/09 1 ampule HPLC
date received: 2017/08/30 1 ampule HPLC
date eceived: 2017/09/26 1.2x1ampule HPLC
date received 2017/09/12 2 ampules
Date Received: 2017.11.30 - 2 ampoules -HPLC

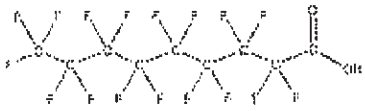
Ampoule: 2 TRW
Date received: 2017/01/12

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** PFNA
**COMPOUND:** Perfluoro-n-nonanoic acid
**LOT NUMBER:** PFNA0717

**STRUCTURE:**



**CAS #:** 375-95-1

**MOLECULAR FORMULA:** $C_9HF_{17}O_2$
**CONCENTRATION:** 50 ± 2.5 ug/ml
**MOLECULAR WEIGHT:** 464.08
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** 07/20/2017
**EXPIRY DATE:** 07/20/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.1% of perfluoro-n-octanoic acid (PFOA), < 0.1% of perfluoro-n-heptanoic acid (PFHpA), and < 0.1% of perfluoro-n-undecanoic acid (PFUdA).

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**Certified By:** B.G. Chittim, General Manager
**Date:** 07/24/2017

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Form 27, Issued 2016-11-30
Revised 4, Revised 2017-03-09

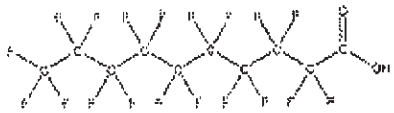


Date Received: 2017.11.30 - 2 ampoules - HPLC

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | PFDA | **LOT NUMBER:** | PFDA0517 |
| **COMPOUND:** | Perfluoro-n-decanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 335-76-2 |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}HF_{19}O_2$ | **MOLECULAR WEIGHT:** | 514.08 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 05/26/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 05/26/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/DATA ATTACHED:**

1 ampoule
2017/06/20 GS2

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.2% of perfluoro-n-nonanoic acid (PFNA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

Certified By: _____ Date: 06/30/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

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Date Received: 2017.11.30 - 2 ampoules - HPLC

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** L-PFDS
**COMPOUND:** Sodium perfluoro-1-decanesulfonate
**LOT NUMBER:** LPFDS0217

**STRUCTURE:**



**CAS #:** 2806-15-7

**MOLECULAR FORMULA:** $C_{10}F_{11}SO_3Na$
**CONCENTRATION:** 50.0 ± 2.5 µg/ml (Na salt)
48.2 ± 2.4 µg/ml (PFDS anion)
**CHEMICAL PURITY:** >98%
**LAST TESTED:** 02/17/2017
**EXPIRY DATE:** 02/17/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**MOLECULAR WEIGHT:** 622.13
**SOLVENT(S):** Methanol

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1. LC/MS Data (TIC and Mass Spectrum)
Figure 2. LC/MS/MS Data (Selected MRM Transitions)

Date received 2017/03/10 #2 Ampules HPLC SSV

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~ 0.9% of sodium perfluoro-1-dodecanesulfonate (L-PFDoS).

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Certified By: B.G. Chittim  Date: 02/22/2017

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Received 2017/05/25 2 x 1.2mL MMN FZ-11
Received 2017/05/29 2 x 1.2mL MMN FZ-11
Date REceived: 2017/06/02-DMZ-1.2ml-FD
date received: 2017/08/30 1 ampule HPLC
DATE RECEIVED: 2017/09/26 1X2 AMPULES HPLC
Date Received: 2017.11.30 - 2 ampoules - HPLC

WELLINGTON LABORATORIES

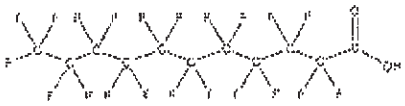
# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** PFUdA
**COMPOUND:** Perfluoro-n-undecanoic acid

**LOT NUMBER:** PFUdA0917

**STRUCTURE:**

**CAS #:** 2058-94-8



**MOLECULAR FORMULA:** $C_2HF_nO_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml

**MOLECULAR WEIGHT:** 564.09
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** 09/21/2017
**EXPIRY DATE:** 09/21/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

GSE 2017/11/30
2 AMPOULES

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY; NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/22/2017
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr, Guelph ON N1G 3M5 CANADA*
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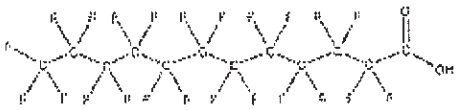
Ampoule 2 TRW
Date received: 2017/09/22

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** PFDoA
**COMPOUND:** Perfluoro-n-dodecanoic acid
**LOT NUMBER:** PFDoA0517

**STRUCTURE:**
**CAS #:** 307-55-1



**MOLECULAR FORMULA:** $C_{12}HF_{23}O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml
**MOLECULAR WEIGHT:** 614.10
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** 05/29/2017
**EXPIRY DATE:** 05/29/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

Certified By: _____ Date: 05/30/2017
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2649 • info@well-labs.com*

Form 6.27, Issue 2004-11-15
Published & Revised 2017-03-06



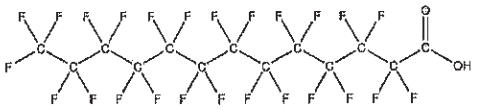
Date Received: 2017.11.30 - 2 ampoules - HPLC

Date Received: 2017.08.30 - 1 ampoule - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | PFTrDA | **LOT NUMBER:** | PFTrDA0517 |
| **COMPOUND:** | Perfluoro-n-tridecanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 72629-94-8 |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{13}HF_{25}O_2$ | **MOLECULAR WEIGHT:** | 664.11 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 05/02/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 05/02/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

HPLC (1)
2017/08/09

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.1% of PFUdA ($C_{11}HF_{21}O_2$), ~ 0.4% of PFDoA ($C_{12}HF_{23}O_2$), and ~ 0.1% of PFTeDA ($C_{14}HF_{27}O_2$).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 05/04/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*



Received 2017/05/29 1 x 1.2mL HPLC
Received 2017/08/09 1 x 1.2mL HPLC
Received 2017/08/30 1 x 1.2mL HPLC
Received 2017/09/26 1 x 2 ampules HPLC
Received 2017/09/12 2 ampules HPLC
Date Received: 2017.11.30 - 2 ampoules - HPLC

WELLINGTON LABORATORIES

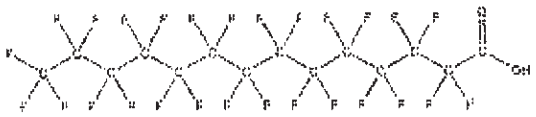
# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** PFTeDA
**COMPOUND:** Perfluoro-n-tetradecanoic acid

**LOT NUMBER:** PFTeDA0917

**STRUCTURE:**

**CAS #:** 376-06-7



**MOLECULAR FORMULA:** $C_{14}HF_{27}O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml

**MOLECULAR WEIGHT:** 714.11
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** 09/21/2017
**EXPIRY DATE:** 09/21/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

652 2017/11/30
2 ampules

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.2% of PFDoA ($C_{12}HF_{23}O_2$) and ~ 0.2% of PFPeDA ($C_{15}HF_{31}O_2$).

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Certified By: _____ Date: 09/21/2017
B.G. Chatim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

WELLINGTON LABORATORIES

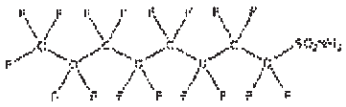
# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** FOSA-I
**COMPOUND:** Perfluoro-1-octanesulfonamide

**LOT NUMBER:** FOSA08171

**STRUCTURE:**

**CAS #:** 754-91-6



**MOLECULAR FORMULA:** $C_8H_2F_{17}NO_2S$
**CONCENTRATION:** 50 ± 2.5 µg/ml
**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 09/01/2017
**EXPIRY DATE:** (mm/dd/yyyy) 09/01/2022
**RECOMMENDED STORAGE:** Refrigerate ampoule

**MOLECULAR WEIGHT:** 499.14
**SOLVENT(S):** Isopropanol

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

652 2017/11/30
2 ampoules

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

Certified By: _____ Date: 09/14/2017
S.C. Chittim, General Manager

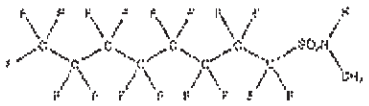
*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** N-MeFOSA-M
**COMPOUND:** N-methylperfluoro-1-octanesulfonamide
**LOT NUMBER:** NMeFOSA0717M

**STRUCTURE:**



**CAS #:** 31506-32-8

**MOLECULAR FORMULA:** $C_9H_5F_{17}NO_2S$
**CONCENTRATION:** 50 ± 2.5 µg/ml
**CHEMICAL PURITY:** >98%
**LAST TESTED:** 07/05/2017
**EXPIRY DATE:** 07/05/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**MOLECULAR WEIGHT:** 513.17
**SOLVENT(S):** Methanol

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

1 ampoule
2017/08/30 GSZ

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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Certified By: _____ Date: 07/10/2017
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Date received: 2017/11/30 1 ampoule - HPLC

# WELLINGTON LABORATORIES

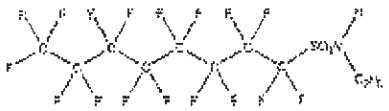
## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** N-EtFOSA-M
**COMPOUND:** N-ethylperfluoro-1-octanesulfonamide

**LOT NUMBER:** NEtFOSA0717M

**STRUCTURE:**

**CAS #:** 4151-50-2



**MOLECULAR FORMULA:** $C_{10}H_5F_{17}NO_2S$
**CONCENTRATION:** 50 ± 2.5 µg/ml
**CHEMICAL PURITY:** >98%
**LAST TESTED:** 07/05/2017
**EXPIRY DATE:** 07/05/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**MOLECULAR WEIGHT:** 527.20
**SOLVENT(S):** Methanol

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

1 ampoule
2017/08/30 642

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

Certified By: _____ Date: 07/18/2017
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr, Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Date Received: 2017.11.30 - 1 ampoule - HPLC

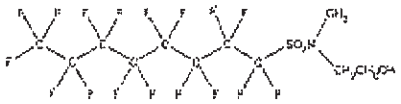
WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** N-MeFOSE-M **LOT NUMBER:** NMeFOSE0417M

**COMPOUND:** 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol

**STRUCTURE:** **CAS #:** 24448-09-7



**MOLECULAR FORMULA:** $C_{11}H_8F_{17}NO_3S$ **MOLECULAR WEIGHT:** 557.22

**CONCENTRATION:** 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol

**CHEMICAL PURITY:** >98%

**LAST TESTED:** 04/24/2017 (HRGC/LRMS)
04/21/2017 (LC/MS)

**EXPIRY DATE:** 04/24/2022

**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: HRGC/LRMS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (TIC and Mass Spectrum)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

Received: 2017/06/02
DM2, 1.2 mL X 1
fridge

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

Certified By: _____ Date: 06/05/2017
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

date recieved: 2017/05/29 1x1.2 HPLC
date recieved: 2017/06/02 1x1.2 HPLC
date recieved: 2017/08/09 1x1.2 HPLC
date recieved: 2017/08/30 1x1.2 HPLC
date received: 2017/09/26 1x1.2 HPLC
Date Received: 2017.08.09 - 1 ampoule - HPLC
Date Received: 2017.11.30 - 2 ampoules - HPLC

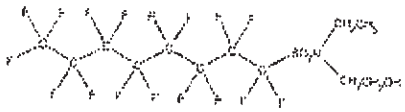
WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** N-EtFOSE-M
**COMPOUND:** 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol
**LOT NUMBER:** NEtFOSE04175

**STRUCTURE:**

**CAS #:** 1691-99-2



**MOLECULAR FORMULA:** $C_{12}H_{10}F_{17}NO_3S$
**MOLECULAR WEIGHT:** 571.25
**CONCENTRATION:** 50 ± 2.5 µg/mL
**SOLVENT(S):** Methanol
**CHEMICAL PURITY:** >98%
**LAST TESTED:** 04/24/2017 (HRGC/LRMS)
04/21/2017 (LC/MS)
**EXPIRY DATE:** 04/24/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: HRGC/LRMS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (TIC and Mass Spectrum)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

Received: 2017/06/02
DMZ, 1.2 mL x 1
Fridge

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer

*FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE*

Certified By: _____ Date: 04/26/2017
B.G. Cebbis, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr, Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

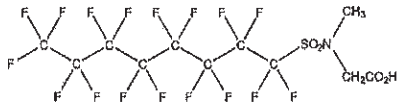
date recieved:2017/05/29 1x1.2 HPLC
date recieved:2017/08/09 1x1.2 HPLC
date recieved:2017/08/30 1x1.2 HPLC
date received:2017/08/09 1x1.2 HPLC
date received: 2017/09/26 1x1.2 HPLC
Date received: 2017.08.09 - 1 ampoule - HPLC
Date Received: 2017.11.30 - 2 ampoules - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** N-MeFOSAA **LOT NUMBER:** NMeFOSAA0117
**COMPOUND:** N-methylperfluoro-1-octanesulfonamidoacetic acid

**STRUCTURE:** **CAS #:** 2355-31-9



**MOLECULAR FORMULA:** $C_{11}H_9F_{17}NO_4S$ **MOLECULAR WEIGHT:** 571.21
**CONCENTRATION:** 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 01/11/2017
**EXPIRY DATE:** (mm/dd/yyyy) 01/11/2022
**RECOMMENDED STORAGE:** Refrigerate ampoule

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

17PLC(1) 2017.8.09

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** B.G. Chittim **Date:** 01/12/2017 (mm/dd/yyyy)

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

*Form#:27, Issued 2004-11-10*
*Revision#:3, Revised 2016-03-24*



Received date 2017/05/25 1 x 1.2mL HPLC
Received date 2017/08/09 1 x 1.2mL HPLC
Received date 2017/08/30 1 x 1.2mL HPLC
RECEIVED DATE: 2017/09/26 1X1.2 mL HPLC
received date 2017-09-12 2 ampules HPLC
Date Received: 2017.11.30 - 2 ampoules - HPLC

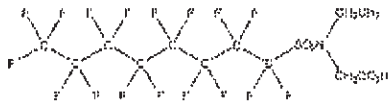
Ampoule: 2 TRW
Date received: 2017/09/12

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** N-EtFOSAA
**LOT NUMBER:** NEtFOSAA0117
**COMPOUND:** N-ethylperfluoro-1-octanosulfonamidoacetic acid

**STRUCTURE:**
**CAS #:** 2991-50-6



**MOLECULAR FORMULA:** $C_{12}H_8F_{17}NO_4S$
**MOLECULAR WEIGHT:** 585.23
**CONCENTRATION:** 50 ± 2.5 µg/ml
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** 01/11/2017
**EXPIRY DATE:** 01/11/2022
**RECOMMENDED STORAGE:** Refrigerate ampoule

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

*FOR LABORATORY USE ONLY; NOT FOR HUMAN OR DRUG USE*

Certified By: B.G. Chittim  Date: 01/12/2017

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Revised 27, March 2024-11-30
Revised 8, Revised 2020-03-24
NEtFOSAA0117 (1 of 6)
1005

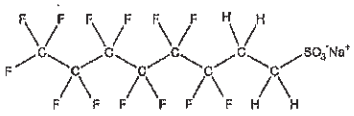
Received : 20170525HPLC,
RECEIVED:2017/09/26 HPLC
Date Received: 2017.08.09 - 1 ampoule - HPLC
Date Received: 2017.11.30 - 2 ampoules - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** 6:2FTS **LOT NUMBER:** 62FTS0417
**COMPOUND:** Sodium 1H,1H,2H,2H-perfluorooctane sulfonate

**STRUCTURE:** **CAS #:** Not available



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_4F_{13}SO_3Na$ | **MOLECULAR WEIGHT:** | 450.15 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/ml (Na salt) | **SOLVENT(S):** | Methanol |
| | 47.4 ± 2.4 µg/ml (6:2FTS anion) | | |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 04/20/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 04/20/2022 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 04/24/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*



Date Recieved: 2017/05/25 1x1.2 HPLC
Date Recieved: 2017/08/09 1x1.2 HPLC
Date Recieved: 2017/08/30 1x1.2 HPLC
Date Recieved: 2017/09/26 1x1.2 HPLC
Date Recieved: 2017/11/30 1x1.2 HPLC

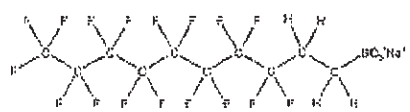
WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** 8:2FTS **LOT NUMBER:** 82FTS1218

**COMPOUND:** Sodium 1H,1H,2H,2H-perfluorodecane sulfonate

**STRUCTURE:** **CAS #:** Not available



**MOLECULAR FORMULA:** $C_{10}H_4F_{17}SO_3Na$ **MOLECULAR WEIGHT:** 650.16

**CONCENTRATION:** 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol

47.9 ± 2.4 µg/ml (8:2FTS anion)

**CHEMICAL PURITY:** >98%

**LAST TESTED:** 12/12/2016

**EXPIRY DATE:** 12/12/2021

**RECOMMENDED STORAGE:** Refrigerate ampoule

Date received 2017/03/10 # 2 Ampules HPLC SSV

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)

Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

Certified By: B.G. Chittim Date: 12/21/2016

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Received 2017/05/25 2 x 1.2mL MMN FD-59
Received 2017/05/29 2 x 1.2mL MMN FD-59
Received 2017/08/09 2 x 1.2mL MMN FD-59
Received 2017/08/30 2 x 1.2mL MMN FD-59
Received 2017/09/26 2 x 1.2nL HPLC
Date Received: 2017.11.30 - 2 ampoules - HPLC

PRLST 143 PG. 174

## PREPARATION OF STANDARDS OF INTERMEDIARY CONCENTRATION

Solution No.: I-5299 Date: 2018/01/31 Expiry Date: 2019/01/31 Discard Date: —

Replaces Solution No.: I-5239 Replaced by Solution: — Chemist: GSZ

Compound(s)/Solution Name: PFC SECOND SOURCE SPIKING SOLUTION A

Number of Parent Solution(s): See attached sheet

Concentration of Parent Solution(s): See attached sheet (mg, ug)/mL

Aliquot of Parent Solution(s): See attached sheet mL / uL

Pippette/Syringe ID J434346 (1mL)

Dilution Solvent: 0.3% NH4OH in MeOH Dilution Volume: 25 mL

Final Concentration(s): 1.C (mg, ug)/mL

Solution derivatized (as methyl ester): — As Other (specify): —

Solution Contains Surrogate Compounds: — For mix refer to table on page: —

Solution used for: PFC Volumetric Flask: 25ml Class A (5640)
(identify by serial number or other unique ID)

Solvent Supplier: See PRLRE 108-331 Lot No.: See PRLRE 108-331

Date Opened: See PRLRE 108-331

Storage Location: F211 One time Use, Not Stored: —

Ampule Supplier: Wellington Date Opened: See attached sheet

Mix Name: —

Catalogue No.: — Ampule expiry Date: See attached sheet

Lot No.: See attached sheet

Date Received: See attached sheet

Notes/Comments:

I-5299 (PRLST 140-174)

| Compound Name | ID# | Conc. (ug/mL) | Vol.. of Stock standard (uL) | Final Conc. (ug/mL) | Exp. date |
|---|---|---|---|---|---|
| PFBA | S4261-1 | 50 | 500 | 1 | 2022/05/29 |
| L-PFBS | S4261-2 | 44.2 | 565 | 1 | 2022/09/21 |
| PFPeA | S4261-3 | 50 | 500 | 1 | 2022/06/14 |
| PFHxA | S4261-4 | 50 | 500 | 1 | 2022/09/27 |
| br-PFHxSk | S4261-5 | 45.5 | 549 | 1 | 2022/01/04 |
| PFHpA | S4261-6 | 50 | 500 | 1 | 2021/12/02 |
| L-PFHpS | S4261-7 | 47.6 | 525 | 1 | 2022/09/01 |
| PFOA | S4261-8 | 50 | 500 | 1 | 2022/02/17 |
| brPFOSK | S4261-9 | 46.4 | 540 | 1 | 2022/01/12 |
| PFNA | S4261-10 | 50 | 500 | 1 | 2022/07/20 |
| PFDA | S4261-11 | 50 | 500 | 1 | 2022/05/29 |
| L-PFDS | S4261-12 | 48.2 | 518 | 1 | 2022/02/17 |
| PFUdA | S4261-13 | 50 | 500 | 1 | 2022/09/21 |
| PFDoA | S4261-14 | 50 | 500 | 1 | 2022/05/29 |
| PFTrDA | S4261-15 | 50 | 500 | 1 | 2022/05/02 |
| PFTeDA | S4261-16 | 50 | 500 | 1 | 2022/09/21 |
| PFOSA (FOSA-I) | S4261-17 | 50 | 500 | 1 | 2022/09/01 |
| N-MeFOSA-M | S4261-18 | 50 | 500 | 1 | 2022/07/05 |
| N-EtFOSA-M | S4261-19 | 50 | 500 | 1 | 2022/07/05 |
| N-MeFOSE-M | S4261-20 | 50 | 500 | 1 | 2022/04/24 |
| N-EtFOSE-M | S4261-21 | 50 | 500 | 1 | 2022/04/24 |
| N-MeFOSAA | S4261-22 | 50 | 500 | 1 | 2022/01/11 |
| N-EtFOSAA | S4261-23 | 50 | 500 | 1 | 2022/01/11 |
| 6:2FTS | S4261-24 | 47.4 | 528 | 1 | 2022/04/20 |
| 8:2FTS | S4261-25 | 47.9 | 522 | 1 | 2021/12/12 |

No writing on bottom page.

GSZ, 2018/01/31

PRLST 133 PG 145

# PREPARATION OF CONCENTRATED STOCK STANDARDS

Solution No.: S-4261 Date: 2017/12/15 Expiry Date: See Below Discard Date: _____

Replaces Solution: _____ Replaced by Solution: _____ Chemist: GSZ

S-4261 (PRLST 133 p. 145)

| Solution ID# | Compound Name | Lot# | Received date | Exp. date | Replaces Solution | Replaced by Solution | Conc. (ug/mL) | Solvent | Storage |
|---|---|---|---|---|---|---|---|---|---|
| S4261-1 | PFBA | PFBA0517 | 2017/11/30 | 2022/05/29 | S4240-1 | | 50 | MeOH | FZ-11 |
| S4261-2 | L-PFBS | LPFBS0917 | 2017/11/30 | 2022/09/21 | S4240-2 | | 44.2 | MeOH | FZ-11 |
| S4261-3 | PFPeA | PFPeA0617 | 2017/11/30 | 2022/06/14 | S4240-3 | | 50 | MeOH | FZ-11 |
| S4261-4 | PFHxA | PFHxA0917 | 2017/11/30 | 2022/09/27 | S4240-4 | | 50 | MeOH | FZ-11 |
| S4261-5 | br-PFHxSk | brPFHxSK0117 | 2017/11/30 | 2022/01/04 | S4240-5 | | 45.5 | MeOH | FZ-11 |
| S4261-6 | PFHpA | PFHpA1216 | 2017/11/30 | 2021/12/02 | S4240-6 | | 50 | MeOH | FZ-11 |
| S4261-7 | L-PFHpS | LPFHpS0817 | 2017/11/30 | 2022/09/01 | S4240-7 | | 47.6 | MeOH | FZ-11 |
| S4261-8 | PFOA | PFOA0217 | 2017/09/26 | 2022/02/17 | S4240-8 | | 50 | MeOH | FZ-11 |
| S4261-9 | brPFOSK | brPFOSK0117 | 2017/11/30 | 2022/01/12 | S4240-9 | | 46.4 | MeOH | FZ-11 |
| S4261-10 | PFNA | PFNA0717 | 2017/11/30 | 2022/07/20 | S4240-10 | | 50 | MeOH | FZ-11 |
| S4261-11 | PFDA | PFDA0517 | 2017/11/30 | 2022/05/29 | S4240-11 | | 50 | MeOH | FZ-11 |
| S4261-12 | L-PFDS | LPFDS0217 | 2017/11/30 | 2022/02/17 | S4240-12 | | 48.2 | MeOH | FZ-11 |
| S4261-13 | PFUdA | PFUdA0917 | 2017/11/30 | 2022/09/21 | S4240-13 | | 50 | MeOH | FZ-11 |
| S4261-14 | PFDoA | PFDoA0517 | 2017/11/30 | 2022/05/29 | S4240-14 | | 50 | MeOH | FZ-11 |
| S4261-15 | PFTrDA | PFTrDA0517 | 2017/11/30 | 2022/05/02 | S4240-15 | | 50 | MeOH | FZ-11 |
| S4261-16 | PFTeDA | PFTeDA0917 | 2017/11/30 | 2022/09/21 | S4240-16 | | 50 | MeOH | FZ-11 |
| S4261-17 | PFOSA (FOSA-I) | FOSA08171 | 2017/11/30 | 2022/09/01 | S4240-17 | | 50 | IPA | FD-59 |
| S4261-18 | N-MeFOSA-M | NMeFOSA0717M | 2017/11/30 | 2022/07/05 | S4240-18 | | 50 | MeOH | FZ-11 |
| S4261-19 | N-EtFOSA-M | NEtFOSA0717M | 2017/11/30 | 2022/07/05 | S4240-19 | | 50 | MeOH | FZ-11 |
| S4261-20 | N-MeFOSE-M | NMeFOSE0417M | 2017/11/30 | 2022/04/24 | S4240-20 | | 50 | MeOH | FZ-11 |
| S4261-21 | N-EtFOSE-M | NEtFOSE0417M | 2017/11/30 | 2022/04/24 | S4240-21 | | 50 | MeOH | FZ-11 |
| S4261-22 | N-MeFOSAA | NMeFOSAA0117 | 2017/11/30 | 2022/01/11 | S4240-22 | | 50 | MeOH | FD-59 |
| S4261-23 | N-EtFOSAA | NEtFOSAA0117 | 2017/11/30 | 2022/01/11 | S4240-23 | | 50 | MeOH | FD-59 |
| S4261-24 | 6:2FTS | 62FTS0417 | 2017/11/30 | 2022/04/20 | S4240-24 | | 47.4 | MeOH | FD-59 |
| S4261-25 | 8:2FTS | 82FTS1216 | 2017/11/30 | 2021/12/12 | S4240-25 | | 47.9 | MeOH | FD-59 |
| Date Opened (All compounds): 2017/12/15 | | | Supplier (All compounds) : Wellington | | | | Chemist: GSZ | | |

No writing on bottom page.

GSZ, 2017/12/15

Solvent Used: _____

Solvent Supplier: _____ Lot No(s).: _____

Date Opened: _____

Storage Location / Conditions: GSZ, 2017/12/15

Notes/Comments



DO NOT WRITE BENEATH ANY INSERTS ON THIS PAGE. DO NOT PLACE ANY INSERTS ON TOP OF ANY RAW DATA ENTERED ON THIS PAGE. INITIAL AND DATE ALL INSERTS. LOGBOOK, PAGE AND APPROPRIATE SOLUTION NUMBER REFERENCES MUST BE WRITTEN ON ALL INSERTS.

WELLINGTON LABORATORIES

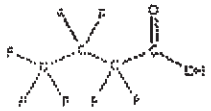
# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** PFBA
**COMPOUND:** Perfluoro-n-butanoic acid

**LOT NUMBER:** PFBA0517

**STRUCTURE:**

**CAS #:** 375-22-4



**MOLECULAR FORMULA:** $C_4HF_7O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml

**MOLECULAR WEIGHT:** 214.04
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** 05/29/2017
**EXPIRY DATE:** 05/29/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

637 2017/11/30
2 ampoules

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

Certified By: _____ Date: 05/30/2017
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Form 637, Issued 2004-11-16
Revision 4, Revised 2017-03-05

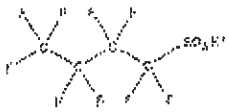
PFBA0517 (1 of 4)
rev2

Maxxam Analytics 637 of 1247

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | L-PFBS | **LOT NUMBER:** | LPFBS8917 |
| **COMPOUND:** | Potassium perfluoro-1-butanesulfonate | | |
| **STRUCTURE:** | | **CAS #:** | 29420-49-3 |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_4F_9SO_3K$ | **MOLECULAR WEIGHT:** | 338.19 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/ml (K salt)<br>44.2 ± 2.2 µg/ml (PFBS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** | 09/21/2017 | | |
| **EXPIRY DATE:** | 09/21/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

692 2017/11/30
2 originals

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

*FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE*

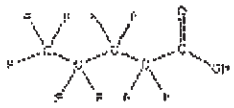
**Certified By:** _____ **Date:** 09/22/2017
B.G Chalm, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr, Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | PFPeA | **LOT NUMBER:** | PFPeA0617 |
| **COMPOUND:** | Perfluoro-n-pentanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 2706-90-3 |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_5HF_9O_2$ | **MOLECULAR WEIGHT:** | 264.05 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** | 06/14/2017 | | |
| **EXPIRY DATE:** | 06/14/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

1 ampoule
2017/06/30 692

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.3% of Perfluoro-n-heptanoic acid (PFHpA) and ~ 0.2% of $C_5H_2F_8O_2$ (hydride - derivative) as measured by $^{19}F$ NMR

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Certified By: _____ Date: 06/16/2017
B.G. Chittim, General Manager

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Date Received: 2017.11.30 - 2 ampoules - HPLC

WELLINGTON LABORATORIES

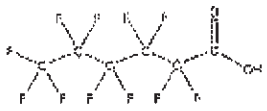
# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** PFHxA
**COMPOUND:** Perfluoro-n-hexanoic acid

**LOT NUMBER:** PFHxA0917

**STRUCTURE:**

**CAS #:** 307-24-4



**MOLECULAR FORMULA:** $C_6HF_{11}O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml

**MOLECULAR WEIGHT:** 314.05
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** 09/27/2017
**EXPIRY DATE:** 09/27/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

GSZ 2017/11/30
2 ampules

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 1.0% of branched isomers.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/01/2017
B.G. Chittim, General Manager

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Revision#4 Revised 2017-05-05

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

## br-PFHxSK

**Potassium Perfluorohexanesulfonate Solution/Mixture of Linear and Branched Isomers**

| | |
|---|---|
| **PRODUCT CODE:** | br-PFHxSK |
| **LOT NUMBER:** | brPFHxSK0117 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/ml (total potassium salt) |
| | 45.5 ± 2.3 µg/ml (total PFHxS anion) |
| **SOLVENT(S):** | Methanol |
| **DATE PREPARED:** | 01/03/2017 |
| **LAST TESTED:** | 01/04/2017 |
| **EXPIRY DATE:** | 01/04/2022 |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place |

**DESCRIPTION:**

The chemical purity has been determined to be ≥98% perfluorohexanesulfonate linear and branched isomers. The full name, structure and percent composition for each of the identified isomeric components are given in Table A.

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

652 2017/11/30
2. ampoules

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~ 0.5% of perfluoro-1-pentanesulfonate and ~ 0.2% of perfluoro-1-octanesulfonate.
- CAS#: 3871-99-6 (for linear isomer; potassium salt).

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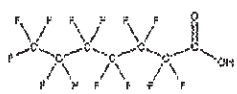
WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** PFHpA
**COMPOUND:** Perfluoro-n-heptanoic acid

**LOT NUMBER:** PFHpA1216

**STRUCTURE:**



**CAS #:** 375-85-9

Received 2016-12-16 2x1.2ml FZ-11

**MOLECULAR FORMULA:** $C_7HF_{13}O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml

**MOLECULAR WEIGHT:** 364.06
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** 12/02/2016
**EXPIRY DATE:** 12/02/2021
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Certified By: B.G. Chittim  Date: 12/12/2016

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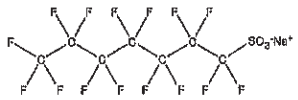
Received 2016/12/23 1 x 1.2mL MMN FZ-11
Received 2016/12/29 1 x 1.2mL MMN FZ-11
Received 2017/05/25 2 x 1.2mL MMN FZ-11
Received 2017/05/29 2 x 1.2mL MMN FZ-11
Date Received: 2017/06/02-DMZ-1.2ml-FD
Date Received: 2017/08/09 1X1.2ml HPLC
Received 2016/12/23 1 x 1.2mL MMN FZ-11
Received 2016/12/29 1 x 1.2mL MMN FZ-11
Received 2017/05/25 2 x 1.2mL MMN FZ-11
Received 2017/05/29 2 x 1.2mL MMN FZ-11
Date Received: 2017/06/02-DMZ-1.2ml-FD
Date Received: 2017/08/09 1X1.2ml HPLC
Date Received: 2017/08/30 1X1.2ml HPLC
Date received 2017/09/26 1x2 ampules HPLC
DATE RECEIVED 2017/09/12 2 ampules HPLC
Date Received: 2017.11.30 - 2 ampoules - HPLC

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | L-PFHpS | **LOT NUMBER:** | LPFHpS0817 |
| **COMPOUND:** | Sodium perfluoro-1-heptanesulfonate | | |
| **STRUCTURE:** | | **CAS #:** | Not available |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_7F_{15}SO_3Na$ | **MOLECULAR WEIGHT:** | 472.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/ml (Na salt)<br>47.6 ± 2.4 µg/ml (PFHpS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 09/01/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 09/01/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

1 x 2 ampules
GSZ 2017/09/26

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~ 0.2% of L-PFHxS ($C_6F_{13}SO_3Na$) and ~ 0.1% of L-PFOS ($C_8F_{17}SO_3Na$).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 09/07/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

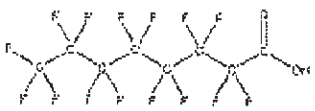


Date Received: 2017/11/30 1x2 ampoules - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | PFOA | **LOT NUMBER:** | PFOA0217 |
| **COMPOUND:** | Perfluoro-n-octanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 335-67-1 |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8HF_{15}O_2$ | **MOLECULAR WEIGHT:** | 414.07 |
| **CONCENTRATION:** | 50 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** | 02/17/2017 | | |
| **EXPIRY DATE:** | 02/17/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2. LC/MS/MS Data (Selected MRM Transitions)

Received: 2017/06/02
DMS, 1.2mL x 1
Fridge

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

*FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE*

Certified By: B.G. Griffin  Date: 02/22/2017

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2435 • Fax: 519-822-2849 • info@well-labs.com*

date recieved:2017/05/29 1.2x1 - HPLC
date recieved:2017/05/29 1.2x1 - HPLC
Date Received:2017/06/02-1.2 x 1-HPLC
date recieved:2017/08/09 1.2x1 - HPLC
date recieved:2017/08/30 1.2x1 - HPLC
date received 2017/09/26 1x4 ampules HPLC
date received 2017/09/12 2 ampules HPLC
date received 2017/09/26 2 ampules HPLC

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

# br-PFOSK

**Potassium Perfluorooctanesulfonate**
**Solution/Mixture of Linear and**
**Branched Isomers**

| | |
|---|---|
| PRODUCT CODE: | br-PFOSK |
| LOT NUMBER: | brPFOSK011? |
| CONCENTRATION: | 50 ± 2.5 µg/ml (total potassium salt) |
| | 46.4 ± 2.3 µg/ml (total PFOS anion) |
| SOLVENT(S): | Methanol |
| DATE PREPARED: | 01/08/2017 |
| LAST TESTED: | 01/12/2017 |
| EXPIRY DATE: | 01/12/2022 |
| RECOMMENDED STORAGE: | Store ampoule in a cool, dark place |

DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonate linear and branched isomers. The full name, structure and percent composition for each of the isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by $^{19}$F-NMR
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

Received: 2017/06/02
DM2, 1.2 mL x 1
Fridge

ADDITIONAL INFORMATION:

- See page 2 for further details.
- A 5-point calibration curve was generated using linear PFOS (potassium salt) and mass-labelled PFOS as an internal standard to enable quantitation of br-PFOSK using isotopic dilution.
- CAS#: 2795-39-3 (for linear isomer, potassium salt).

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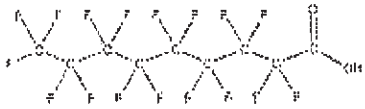
date recieved:2017/05/29 1.2x1- HPLC
date received: 2017/08/09 1 ampule HPLC
date received: 2017/08/30 1 ampule HPLC
date eceived: 2017/09/26 1.2x1ampule HPLC
date received 2017/09/12 2 ampules
Date Received: 2017.11.30 - 2 ampoules -HPLC

Ampoule: 2 mL
Date received: 2017/11/30

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | PFNA | **LOT NUMBER:** | PFNA0717 |
| **COMPOUND:** | Perfluoro-n-nonanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 375-95-1 |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_9HF_{17}O_2$ | **MOLECULAR WEIGHT:** | 464.08 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 07/20/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 07/20/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.1% of perfluoro-n-octanoic acid (PFOA), < 0.1% of perfluoro-n-heptanoic acid (PFHpA), and < 0.1% of perfluoro-n-undecanoic acid (PFUdA).

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**Certified By:** _____ **Date:** 07/24/2017
B.G. Chittim, General Manager

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Date Received: 2017.11.30 - 2 ampoules - HPLC

WELLINGTON LABORATORIES

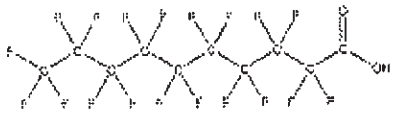
# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** PFDA
**COMPOUND:** Perfluoro-n-decanoic acid

**LOT NUMBER:** PFDA0517

**STRUCTURE:**

**CAS #:** 335-76-2



**MOLECULAR FORMULA:** $C_{10}HF_{19}O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml

**MOLECULAR WEIGHT:** 514.08
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >96%
**LAST TESTED:** (mm/dd/yy) 05/29/2017
**EXPIRY DATE:** (mm/dd/yy) 05/29/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

1 ampoule
2017/06/30 GSZ

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.2% of perfluoro-n-nonanoic acid (PFNA).

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Certified By: _____ Date: 05/30/2017
B G. Chittim, General Manager

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Form 27, Issued 2007-11-10
Amendments Revised 2017-03-07

PFDA0517 (1 of 4)
rsd

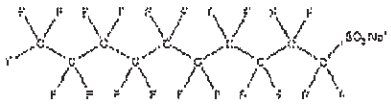
Date Received: 2017.11.30 - 2 ampoules - HPLC

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** L-PFDS
**COMPOUND:** Sodium perfluoro-1-decanesulfonate
**LOT NUMBER:** LPFDS0217

**STRUCTURE:**



**CAS #:** 2806-15-7

**MOLECULAR FORMULA:** $C_{10}F_{11}SO_3Na$
**CONCENTRATION:** 50.0 ± 2.5 µg/ml (Na salt)
48.2 ± 2.4 µg/ml (PFDS anion)
**CHEMICAL PURITY:** >98%
**LAST TESTED:** 02/17/2017
**EXPIRY DATE:** 02/17/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**MOLECULAR WEIGHT:** 622.13
**SOLVENT(S):** Methanol

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1. LC/MS Data (TIC and Mass Spectrum)
Figure 2. LC/MS/MS Data (Selected MRM Transitions)

Date received 2017/05/10 # 2 Ampules HPLC SSV

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~ 0.9% of sodium perfluoro-1-dodecanesulfonate (L-PFDoS).

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Certified By: B.G. Chittim  Date: 02/22/2017

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Form 27, Issued 2006-11-15
Revised 2015-03-24

LPFDS0217 11 of 11
rev5

Received 2017/05/25 2 x 1.2mL MMN FZ-11
Received 2017/05/29 2 x 1.2mL MMN FZ-11
Date REceived: 2017/06/02-DMZ-1.2ml-FD
date received: 2017/08/30 1 ampule HPLC
DATE RECEIVED: 2017/09/26 1X2 AMPULES HPLC
Date Received: 2017.11.30 - 2 ampoules - HPLC

WELLINGTON LABORATORIES

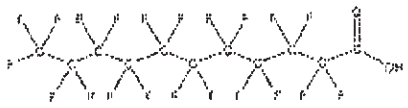
# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** PFUdA
**COMPOUND:** Perfluoro-n-undecanoic acid

**LOT NUMBER:** PFUdA0917

**STRUCTURE:**

**CAS #:** 2058-94-8



**MOLECULAR FORMULA:** $C_{11}HF_{21}O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml

**MOLECULAR WEIGHT:** 564.09
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** 09/21/2017
**EXPIRY DATE:** 09/21/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

GSE 2017/11/30
2 AMPOULES

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Certified By: _____ Date: 09/22/2017
B.G. Chittim, General Manager

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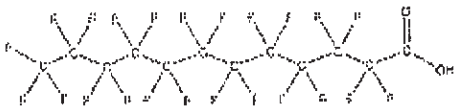
Ampoule 2 TRW
Date received: 2017/09/22

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** PFDoA
**COMPOUND:** Perfluoro-n-dodecanoic acid
**LOT NUMBER:** PFDoA0517

**STRUCTURE:**
**CAS #:** 307-55-1



**MOLECULAR FORMULA:** $C_{12}HF_{23}O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml
**MOLECULAR WEIGHT:** 614.10
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** 05/28/2017
**EXPIRY DATE:** 05/29/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Certified By: _____ Date: 05/30/2017
B.G. Chittim, General Manager

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Form 6.23, issued 2006-11-16
Published & Revised 2017-03-06



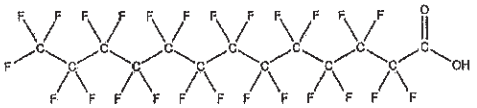
Date Received: 2017.11.30 - 2 ampoules - HPLC

Date Received: 2017.08.30 - 1 ampoule - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | PFTrDA | **LOT NUMBER:** | PFTrDA0517 |
| **COMPOUND:** | Perfluoro-n-tridecanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 72629-94-8 |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{13}HF_{25}O_2$ | **MOLECULAR WEIGHT:** | 664.11 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 05/02/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 05/02/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

HPLC ☐
2017/08/09

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.1% of PFUdA ($C_{11}HF_{21}O_2$), ~ 0.4% of PFDoA ($C_{12}HF_{23}O_2$), and ~ 0.1% of PFTeDA ($C_{14}HF_{27}O_2$).

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**Certified By:** _____ **Date:** 05/04/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

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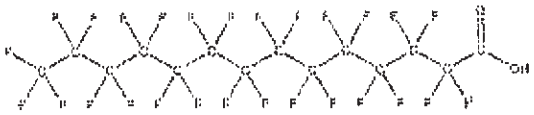
Received 2017/05/29 1 x 1.2mL HPLC
Received 2017/08/09 1 x 1.2mL HPLC
Received 2017/08/30 1 x 1.2mL HPLC
Received 2017/09/26 1 x 2 ampules HPLC
Received 2017/09/12 2 ampules HPLC
Date Received: 2017.11.30 - 2 ampoules - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | PFTeDA | **LOT NUMBER:** | PFTeDA0917 |
| **COMPOUND:** | Perfluoro-n-tetradecanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | 376-06-7 |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{14}HF_{27}O_2$ | **MOLECULAR WEIGHT:** | 714.11 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** | 09/21/2017 | | |
| **EXPIRY DATE:** | 09/21/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

652 2017/11/30
2. ampules

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the perfluoroalkyl acid to the methyl ester.
- Contains ~ 0.2% of PFDoA ($C_{12}HF_{23}O_2$) and ~ 0.2% of PFPeDA ($C_{15}HF_{29}O_2$).

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**Certified By:** _____ **Date:** 09/21/2017

B.G. Chittim, General Manager

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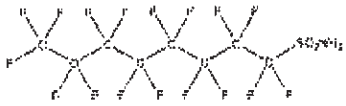
WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | FOSA-I | **LOT NUMBER:** | FOSA08171 |
| **COMPOUND:** | Perfluoro-1-octanesulfonamide | | |
| **STRUCTURE:** | | **CAS #:** | 754-91-6 |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_2F_{17}NO_2S$ | **MOLECULAR WEIGHT:** | 499.14 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** | 09/01/2017 | | |
| **EXPIRY DATE:** | 09/01/2022 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

652 2017/11/30
2 originals

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Certified By: _____ Date: 09/14/2017
S.C. Chitem, General Manager

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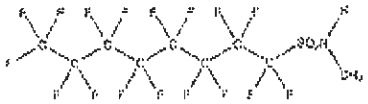
WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** N-MeFOSA-M
**COMPOUND:** N-methylperfluoro-1-octanesulfonamide

**LOT NUMBER:** NMeFOSA0717M

**STRUCTURE:**



**CAS #:** 31506-32-8

**MOLECULAR FORMULA:** $C_9H_7F_{17}NO_2S$
**CONCENTRATION:** 50 ± 2.5 µg/ml
**CHEMICAL PURITY:** >98%
**LAST TESTED:** 07/05/2017
**EXPIRY DATE:** 07/05/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**MOLECULAR WEIGHT:** 513.17
**SOLVENT(S):** Methanol

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

1 ampoule
2017/08/30 GSZ

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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Certified By: _____ Date: 07/10/2017
B.G. Chittim, General Manager

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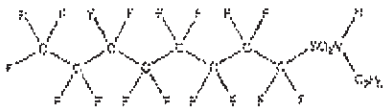
Date received: 2017/11/30 1 ampoule - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| PRODUCT CODE: | N-EtFOSA-M | LOT NUMBER: | NEtFOSA07?17M |
| COMPOUND: | N-ethylperfluoro-1-octanesulfonamide | | |
| STRUCTURE: | | CAS #: | 4151-50-2 |



| | | | |
|---|---|---|---|
| MOLECULAR FORMULA: | $C_{10}H_6F_{17}NO_2S$ | MOLECULAR WEIGHT: | 527.20 |
| CONCENTRATION: | 50 ± 2.5 µg/ml | SOLVENT(S): | Methanol |
| CHEMICAL PURITY: | >98% | | |
| LAST TESTED: | 07/05/2017 | | |
| EXPIRY DATE: | 07/05/2022 | | |
| RECOMMENDED STORAGE: | Store ampoule in a cool, dark place | | |

DOCUMENTATION/DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

1 ampoule
2017/08/30 GZ

ADDITIONAL INFORMATION:

- See page 2 for further details.

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Certified By: _____ Date: 07/15/2017
B.G. Chittim, General Manager

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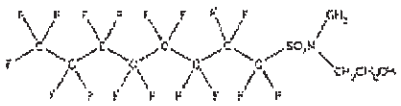
Date Received: 2017.11.30 - 1 ampoule - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | N-MeFOSE-M | **LOT NUMBER:** | NMeFOSE0417M |
| **COMPOUND:** | 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol | | |
| **STRUCTURE:** | | **CAS #:** | 24448-09-7 |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{11}H_8F_{17}NO_3S$ | **MOLECULAR WEIGHT:** | 557.22 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** | 04/24/2017 (HRGC/LRMS) | | |
| | 04/21/2017 (LC/MS) | | |
| **EXPIRY DATE:** | 04/24/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: HRGC/LRMS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (TIC and Mass Spectrum)
Figure 3. LC/MS/MS Data (Selected MRM Transitions)

received: 2017/06/02
0M2 ; 1.2 mL X 1
Fridge

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.

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Certified By: _____ Date: 06/05/2017
B.G. Chittim, General Manager

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*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*



date recieved: 2017/05/29 1x1.2 HPLC
date recieved: 2017/06/02 1x1.2 HPLC
date recieved: 2017/08/09 1x1.2 HPLC
date recieved: 2017/08/30 1x1.2 HPLC
date received: 2017/09/26 1x1.2 HPLC
Date Received: 2017.08.09 - 1 ampoule - HPLC
Date Received: 2017.11.30 - 2 ampoules - HPLC

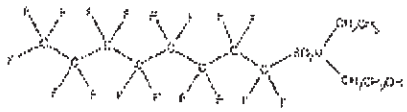
WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** N-EtFOSE-M
**COMPOUND:** 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol
**LOT NUMBER:** NEtFOSE04176

**STRUCTURE:**

**CAS #:** 1691-99-2



**MOLECULAR FORMULA:** $C_{10}H_{10}F_{17}NO_3S$
**CONCENTRATION:** 50 ± 2.5 µg/mL
**CHEMICAL PURITY:** >98%
**LAST TESTED:** 04/04/2017 (HRGC/HRMS)
04/21/2017 (LC/MS)
**EXPIRY DATE:** 04/04/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**MOLECULAR WEIGHT:** 571.25
**SOLVENT(S):** Methanol

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: HRGC/HRMS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (TIC and Mass Spectrum)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

Received: 2017/06/02
QMS, 1.2 mL x 1
Fridge.

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer

*FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE*

**Certified By:** _____ **Date:** 04/26/2017
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr, Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

date recieved:2017/05/29 1x1.2 HPLC
date recieved:2017/08/09 1x1.2 HPLC
date recieved:2017/08/30 1x1.2 HPLC
date received:2017/08/09 1x1.2 HPLC
date received: 2017/09/26 1x1.2 HPLC
Date received: 2017.08.09 - 1 ampoule - HPLC
Date Received: 2017.11.30 - 2 ampoules - HPLC

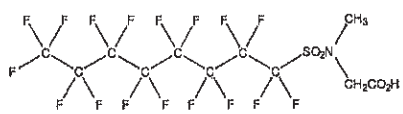
WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** N-MeFOSAA **LOT NUMBER:** NMeFOSAA0117

**COMPOUND:** N-methylperfluoro-1-octanesulfonamidoacetic acid

**STRUCTURE:** **CAS #:** 2355-31-9



**MOLECULAR FORMULA:** $C_{11}H_9F_{17}NO_4S$ **MOLECULAR WEIGHT:** 571.21

**CONCENTRATION:** 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%

**LAST TESTED:** (mm/dd/yyyy) 01/11/2017

**EXPIRY DATE:** (mm/dd/yyyy) 01/11/2022

**RECOMMENDED STORAGE:** Refrigerate ampoule

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

17PLC(1) 2017.8.09

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid molety to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** B.G. Chittim **Date:** 01/12/2017 (mm/dd/yyyy)

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

*Form#:27, Issued 2004-11-10*
*Revision#:3, Revised 2016-03-24*



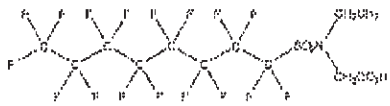
Received date 2017/05/25 1 x 1.2mL HPLC
Received date 2017/08/09 1 x 1.2mL HPLC
Received date 2017/08/30 1 x 1.2mL HPLC
RECEIVED DATE: 2017/09/26 1X1.2 mL HPLC
received date 2017-09-12 2 ampules HPLC
Date Received: 2017.11.30 - 2 ampoules - HPLC

Ampoule: 2 TBD
Date received: 20210112

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | N-EtFOSAA | **LOT NUMBER:** | NEtFOSAA0117 |
| **COMPOUND:** | N-ethylperfluoro-1-octanesulfonamidoacetic acid | | |
| **STRUCTURE:** | | **CAS #:** | 2991-50-6 |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}H_6F_{17}NO_4S$ | **MOLECULAR WEIGHT:** | 585.23 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** | 01/11/2017 | | |
| **EXPIRY DATE:** | 01/11/2022 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

***FOR LABORATORY USE ONLY; NOT FOR HUMAN OR DRUG USE***

**Certified By:** B.G. Chittim **Date:** 01/12/2017

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

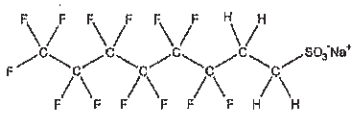


Received : 20170525HPLC,
RECEIVED:2017/09/26 HPLC
Date Received: 2017.08.09 - 1 ampoule - HPLC
Date Received: 2017.11.30 - 2 ampoules - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | 6:2FTS | **LOT NUMBER:** | 62FTS0417 |
| **COMPOUND:** | Sodium 1H,1H,2H,2H-perfluorooctane sulfonate | | |
| **STRUCTURE:** | | **CAS #:** | Not available |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_8H_4F_{13}SO_3Na$ | **MOLECULAR WEIGHT:** | 450.15 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/ml (Na salt) | **SOLVENT(S):** | Methanol |
| | 47.4 ± 2.4 µg/ml (6:2FTS anion) | | |
| **CHEMICAL PURITY:** | >98% | | |
| **LAST TESTED:** (mm/dd/yyyy) | 04/20/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 04/20/2022 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

*FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE*

**Certified By:** _____ **Date:** 04/24/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*



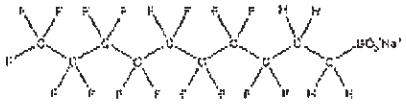
Date Recieved: 2017/05/25 1x1.2 HPLC
Date Recieved: 2017/08/09 1x1.2 HPLC
Date Recieved: 2017/08/30 1x1.2 HPLC
Date Recieved: 2017/09/26 1x1.2 HPLC
Date Recieved: 2017/11/30 1x1.2 HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** 8:2FTS **LOT NUMBER:** 82FTS1216
**COMPOUND:** Sodium 1H,1H,2H,2H-perfluorodecane sulfonate

**STRUCTURE:** **CAS #:** Not available



**MOLECULAR FORMULA:** $C_8H_3F_{13}SO_3Na$ **MOLECULAR WEIGHT:** 550.16
**CONCENTRATION:** 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
47.9 ± 2.4 µg/ml (8:2FTS anion)
**CHEMICAL PURITY:** >98%
**LAST TESTED:** 12/12/2016
**EXPIRY DATE:** 12/12/2021
**RECOMMENDED STORAGE:** Refrigerate ampoule

Date received
2017/03/10
# 2 Ampoules
HPLC
SSV

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

Certified By: B.G. Chittim Date: 12/21/2016

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

## PREPARATION OF SURROGATE / INTERNAL STANDARD SPIKING SOLUTION

Solution No.: SI.6715 Prep'n Date: 2017.11.30 Expiry Date: 2017.12.07 Discard Date: N/A
Replaces Solution No.: SI6706 Replaced by Solution: SI6722 Chemist: SMF
Sol'n. Name: Hexanes O terphenyl
Solution Used As: Internal Std: N/A Surrogate Spike: Yes
Spike Volume: 5.0 uL or mL (for I.S. uL per mL) For Instrument/Analysis: GC FID
Solvent(s): Hexanes Supplier(s): Fisher Lot No(s).: 174498
Date Solvent Opened: 2017.11.30
Volumetric Flask Used: Class A Syringe ID: G13542234
Storage Location and Conditions: FD.65
Ampule supplier; Mix Name; Catalogue No.; Lot No.; Date Rec'd.; Date Opened, Ampule Expiry Date:

| Compound | Parent Solution No. | Parent Solution Conc'n. (ug/mL) | Aliquot Volume (mL /uL) | Dilution Volume (mL) | Final Conc'n. (ug/mL) | Absolute Amount Spiked (ug / ng) |
|---|---|---|---|---|---|---|
| O-terphenyl | PH-J-~~168~~ 169 SMF 2017.11.30 | 1000 mg/mL | 4 | 4000 | 100 | N/A |

SMF 2017.11.30

Notes:

Solution No.: SI-6716 Prep'n Date: 2017/11/30 Expiry Date: 2018/06/20 Discard Date:
Replaces Solution No.: SI-6631 Replaced by Solution: Chemist: GSZ
Sol'n. Name: IND. IS
Solution Used As: Internal Std: / Surrogate Spike:
Spike Volume: 20 (uL) or mL (for I.S. uL per mL) For Instrument/Analysis: LC MS-MS
Solvent(s): 0.3% NH4OH in MeOH Supplier(s): See PRLRE 108-176 Lot No(s).: See PRLRE 108-176
Date Solvent Opened: See PRLRE 108-176
Volumetric Flask Used: 200mL Class A (5640) Syringe ID: Pipette N31477F
Storage Location and Conditions: FZ11
Ampule supplier; Mix Name; Catalogue No.; Lot No.; Date Rec'd.; Date Opened, Ampule Expiry Date:

| Compound | Parent Solution No. | Parent Solution Conc'n. (ug/mL) | Aliquot Volume (mL (uL)) | Dilution Volume (mL) | Final Conc'n. ng/mL (ug/mL) | Absolute Amount Spiked (ug/ng) |
|---|---|---|---|---|---|---|
| $^{13}C_9$ PFDA | S-4194 | 50 | 400 | 200 | 100 | |
| $^{13}C_{6}$ PFHxA | S-4195 | 50 | 400 | 200 | 100 | |

GSZ 2017/11/30

Notes: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LOGBOOK, PAGE AND APPROPRIATE SOLUTION NUMBER REFERENCES MUST BE WRITTEN ON ALL INSERTS.

PRLST 133 PG 108

## PREPARATION OF CONCENTRATED STOCK STANDARDS

Solution No.: S-4194 Date: 2017/09/18 Expiry Date: 2018/06/20 Discard Date: _____

Replaces Solution: S-4142 Replaced by Solution: _____ Chemist: GSZ

Compound: $^{13}C_9$ PFDA Purity: _____

Date Received: 2017/06/09 Expiry Date: 2018/06/20 Lot No.: SCID-014

Supplier: CIL

Date Opened: 2017/09/18

Final Gross Weight: – g/mg Dilution Volume: – mL

Tare Weight* : – g/mg Volumetric Flask: –

Net Weight: – g/mg **Concentration:** 50 (ug/mL) mg/mL

Adjusted Net Weight** : – mg Solvent(s): MeOH

Balance Used: –
(specify model and serial no.)

Solvent Used: –

Solvent Supplier: – Lot No(s).: –

Date Opened: –

Storage Location / Conditions: FZ 11

Notes/Comments
Received as solution in ampule.

---

Solution No.: S-4195 Date: 2017/09/18 Expiry Date: 2020/09/30 Discard Date: _____

Replaces Solution: S-4143 Replaced by Solution: _____ Chemist: GSZ

Compound: $^{13}C_6$ PFHxA Purity: _____

Date Received: 2017/06/09 Expiry Date: 2020/09/30 Lot No.: SDAA-004

Supplier: CIL

Date Opened: 2017/09/18

Final Gross Weight: – g/mg Dilution Volume: – mL

Tare Weight* : – g/mg Volumetric Flask: –

Net Weight: – g/mg **Concentration:** 50 ug/mL

Adjusted Net Weight** : – mg Solvent(s): MeOH

Balance Used: –
(specify model and serial no.)

Solvent Used: –

Solvent Supplier: – Lot No(s).: –

Date Opened: –

Storage Location / Conditions: FZ 11

Notes/Comments
Received as solution in ampule.

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

Quality Standards:
ISO Guide 34 • ISO/IEC 17025 • ISO 13485 • cGMP

**Product Name:** PERFLUORODECANOIC ACID
(Isotopic Label & Derivation Specification) (13C9, 99%) 50 UG/ML IN METHANOL

**Lot Number:** SCID-014

**Catalog Number:** CLM-8172-S

## Product Information

| | |
|---|---|
| Chemical Purity Specification: | ≥ 98% |
| Labeled CAS Number: | NA |
| Unlabeled CAS Number: | 335-76-2 |
| MW*: | 523.02 |
| Chemical Formula: | CF3(*CF2)8*CO2H |
| Storage: | Store at room temperature away from light and moisture. |
| Stability: | See storage and expiration date. |

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses wherever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NCSL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number. Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -1.0, or -0.1.

* *For isotopically labeled compounds, MW listed is for the fully enriched product.*

Approved by: T. J. Eckersley

Timothy J. Eckersley, Ph.D., Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 06/20/2008 |
| Expiration Date | 06/20/2018 |
| Concentration Based on Gravimetry | 50.0 µg/mL |
| Chemical Purity of Neat Material(s) | >98% |
| LC/MS for Concentration | 46.2 ± 6.4 µg/mL (k=2) |

Received June 20 in 01/15
1x 1.2mL
RT

50 Frontage Road, Andover, MA 01810-5413 USA • 1 800 322 1174 (North America) • 1 978 749 8000 (International) • isotope.com

Date Received:2016.8.17 - 1 x 1.2mL - HPLC
Date Received: 2016.09.14 -HPLC - 1 x 1.2ml
Date Received: 2016/11/22 1x 1.2ml MMN HPLC
Date Received:2017.02.15 - 1 x 1mL - HPLC (MMN)
Date received: 2017/06/09 - 1x1.2ml - HPLC

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Quality Standards:**
ISO Guide 34 • ISO/IEC 17025 • ISO 13485 • cGMP

| | |
|---|---|
| **Product Name:** (Isotopic Label & Enrichment Specification) | PERFLUOROHEXANOIC ACID, SODIUM SALT (13C6, 99%) 50 UG/ML IN METHANOL |
| **Lot Number:** | SDAA-004 |
| **Catalog Number:** | CLM-8340-S |

## Product Information

| | |
|---|---|
| Chemical Purity Specification: | ≥ 98% |
| MW*: *For unequally labeled compounds, MW listed is for the fully enriched product. | 320.00 |
| Labeled CAS Number: | NA |
| Unlabeled CAS Number: | 307-24-4 |
| Chemical Formula: | *CF3(*CF2)4*COOH |
| Storage: | Store at room temperature away from light and moisture. |
| Stability: | See storage and expiration date. |

Received from 2016/05/20 1x1.2ml RT

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number. Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

Approved by: T. J. Eckersley
Timothy J. Eckersley, Ph.D., Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 9/30/2010 |
| Expiration Date | 9/30/2020 |
| Concentration Based on Gravimetry | 50.4 µg/mL |
| Chemical Purity of Neat Material(s) | 99.2% |
| LC/MS for Concentration | 47.1 ± 2.6 µg/mL (k=2) |

50 Frontage Road, Andover, MA 01810-6413 USA • 1 800 322 1174 (North America) • 1 978 749 8000 (International) • isotope.com

Date Received: 2016/08/17 1x 1.2ml MMN HPLC
Date Received: 2016/09/14 1x 1.2ml MMN HPLC
Date Received: 2016/11/22 1x 1.2ml MMN HPLC
Date Received: 2017.02.15 - 1 x 1mL - HPLC (MMN)
Date Received: 2017.06.09 - 1 x 1.2ml - HPLC

144 PG 94

## PREPARATION OF SURROGATE / INTERNAL STANDARD SPIKING SOLUTION

Solution No.: SI-6763 Prep'n Date: 2018/01/10 Expiry Date: 2021/09/30 Discard Date: _____
Replaces Solution No.: SI-6753 Replaced by Solution: _____ Chemist: GSZ
Sol'n. Name: PFC INTERNAL STD SPIKING SOLUTION
Solution Used As: Internal Std: / Surrogate Spike: _____
Spike Volume: — uL or mL (for I.S. uL per mL) For Instrument/Analysis: LCMS/MS
Solvent(s): 0.3% NH4OH in MeOH Supplier(s): Su PRLRE 108-278 Lot No(s).: Su PRLRE 108-278
Date Solvent Opened: Su PRLRE 108-278
Volumetric Flask Used: 200mL Class A (5640) Syringe ID: Hamilton K19865F/N31477F
Storage Location and Conditions: FZ11
Ampule supplier; Mix Name; Catalogue No.; Lot No.; Date Rec'd.; Date Opened, Ampule Expiry Date: Su attached sheet

SI-6763 (PRLST-144 pg. 94)

| Compound Name | ID# | Conc. (ug/mL) | Vol.. of Stock standard (uL) | Dilution volume (mL) | Final Conc. (ng/mL) | Exp. date |
|---|---|---|---|---|---|---|
| MPFBA | S4250-1 | 50 | 200 | 200 | 50 | 2022/04/12 |
| M5PFPeA | S4250-2 | 50 | 200 | 200 | 50 | 2022/07/20 |
| MPFHxA | S4255-1 | 50 | 200 | 200 | 50 | 2021/11/22 |
| MPFHxS | S4250-3 | 50 | 200 | 200 | 50 | 2022/02/17 |
| M4PFHpA | S4250-4 | 50 | 200 | 200 | 50 | 2022/05/03 |
| MPFOA | S4250-5 | 50 | 200 | 200 | 50 | 2021/10/18 |
| MPFOS | S4250-6 | 50 | 200 | 200 | 50 | 2022/10/17 |
| MPFNA | S4250-7 | 50 | 200 | 200 | 50 | 2021/09/30 |
| MPFDA | S4250-8 | 50 | 200 | 200 | 50 | 2021/09/30 |
| MPFUdA | S4242-1 | 50 | 200 | 200 | 50 | 2021/11/22 |
| MPFDoA | S4250-9 | 50 | 200 | 200 | 50 | 2022/05/23 |
| M2PFTeDA | S4250-10 | 50 | 200 | 200 | 50 | 2022/03/01 |
| MPFOSA | S4250-11 | 50 | 200 | 200 | 50 | 2022/04/20 |
| D3-N-MeFOSAA | S4260-1 | 50 | 200 | 200 | 50 | 2021/11/22 |
| D5-N-EtFOSAA | S4260-2 | 50 | 200 | 200 | 50 | 2021/11/22 |
| D-N-MeFOSA-M | S4266-1 | 50 | 500 | 200 | 125 | 2022/04/20 |
| D-N-EtFOSA-M | S4266-2 | 50 | 500 | 200 | 125 | 2022/10/11 |
| D7-N-MeFOSE-M | S4266-3 | 50 | 500 | 200 | 125 | 2022/10/13 |
| D9-N-EtFOSE-M | S4266-4 | 50 | 500 | 200 | 125 | 2022/10/13 |
| M2-6:2FTS | S4266-5 | 50 | 500 | 200 | 125 | 2022/02/17 |
| M2-8:2FTS | S4266-6 | 50 | 500 | 200 | 125 | 2022/07/05 |

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2018/01/10
GSZ ~~2017/12/27~~

Notes:



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PRLST 133 PG 139

## PREPARATION OF CONCENTRATED STOCK STANDARDS

Solution No.: S-4250 Date: 2017/12/01 Expiry Date: See Below Discard Date: _____

Replaces Solution: _____ Replaced by Solution: _____ Chemist: GSZ

S-4250 (PRLST 133 p. 139)

| Solution ID# | Compound Name | Lot# | Received date | Exp. date | Replaces Solution | Replaced by Solution | Conc (ug/mL) | Solvent | Storage |
|---|---|---|---|---|---|---|---|---|---|
| S4250-1 | MPFBA | MPFBA0417 | 2017/10/25 | 2022/04/12 | S4204-1 | | 50 | MeOH | FZ-11 |
| S4250-2 | M5PFPeA | M5PFPeA0717 | 2017/10/25 | 2022/07/20 | S4204-2 | | 50 | MeOH | FZ-11 |
| S4250-3 | MPFHxS | MPFHxS0217 | 2017/10/25 | 2022/02/17 | S4204-3 | | 50 | MeOH | FZ-11 |
| S4250-4 | M4PFHpA | M4PFHpA0517 | 2017/10/25 | 2022/05/03 | S4204-4 | | 50 | MeOH | FZ-11 |
| S4250-5 | MPFOA | MPFOA1016 | 2017/02/22 | 2021/10/18 | S4204-5 | | 50 | MeOH | FZ-11 |
| S4250-6 | MPFOS | MPFOS1017 | 2017/10/25 | 2022/10/17 | S4204-6 | | 50 | MeOH | FZ-11 |
| S4250-7 | MPFNA | MPFNA0916 | 2017/10/25 | 2021/09/30 | S4204-7 | | 50 | MeOH | FZ-11 |
| S4250-8 | MPFDA | MPFDA0916 | 2017/02/22 | 2021/09/30 | S4204-8 | | 50 | MeOH | FZ-11 |
| S4250-9 | MPFDoA | MPFDoA0517 | 2017/10/25 | 2022/05/23 | S4204-9 | | 50 | MeOH | FZ-11 |
| S4250-10 | M2PFTeDA | M2PFTeDA0217 | 2017/10/25 | 2022/03/01 | S4204-10 | | 50 | MeOH | FZ-11 |
| S4250-11 | MPFOSA | M8FOSA0417I | 2017/05/31 | 2022/04/20 | S4204-11 | | 50 | IPA | FD-59 |
| Date opened (All compounds): 2017/12/01 | | | Supplier: Wellington | | | Chemist: GSZ | | | |

No writing on bottom page.

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Solution No.: S-4251 Date: 2017/12/05 Expiry Date: 2018/01/05 Discard Date: —

Replaces Solution: S-4249 Replaced by Solution: S-4252 Chemist: DPS

Compound: Morpholine Stock Std Purity: 99.9%

Date Received: 2016/09/07 Expiry Date: 2020/01/31 Lot No.: STBC 2152 V

Supplier: Sigma-Aldrich

Date Opened: 2016/09/06

Final Gross Weight: 0.0110 g/mg Dilution Volume: 10 mL

Tare Weight*: — g/mg Volumetric Flask: 10mL Class A

Net Weight: — g/mg **Concentration:** 1098.9 ug/mL

Adjusted Net Weight**: 0.010989 mg Solvent(s): —

Balance Used: FC-1
(specify model and serial no.)

Solvent Used: DI H2O

Solvent Supplier: — Lot No(s).: —

Date Opened: —

Storage Location / Conditions: FD-59

Notes/Comments Liquid in Bottle



DO NOT WRITE BENEATH ANY INSERTS ON THIS PAGE. DO NOT PLACE ANY INSERTS ON TOP OF ANY RAW DATA ENTERED ON THIS PAGE. INITIAL AND DATE ALL INSERTS. LOGBOOK, PAGE AND APPROPRIATE SOLUTION NUMBER REFERENCES MUST BE WRITTEN ON ALL INSERTS.

PRLST 133 PG 141

## PREPARATION OF CONCENTRATED STOCK STANDARDS

Solution No.: S-4254 Date: 2017/12/06 Expiry Date: 2018/12/06 Discard Date: _____

Replaces Solution: S-4214 Replaced by Solution: _____ Chemist: GSZ

Compound: MORPHOLINE 2,2,3,3,5,5,6,6-d8 Purity: 98.9%

Date Received: 2016/08/16 Expiry Date: 2019/08/16 Lot No.: M-346

Supplier: CDN

Date Opened: 2016/08/23

Final Gross Weight: 0.0123 g/mg Dilution Volume: 10 mL

Tare Weight*: _____ g/mg Volumetric Flask: 10ml Class A (5636)

Net Weight: _____ g/mg **Concentration:** 1,216.5 ug/mL, mg/mL

Adjusted Net Weight**: 0.012165 g mg Solvent(s): DI H2O

Balance Used: FC-1
(specify model and serial no.)

Solvent Used: DI H2O

Solvent Supplier: – Lot No(s).: –

Date Opened: –

Storage Location / Conditions: FD59

Notes/Comments

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Solution No.: S-4255 Date: 2017/12/07 Expiry Date: See Below Discard Date: _____

Replaces Solution: _____ Replaced by Solution: _____ Chemist: GSZ

S-4255 (PRLST 133 pg. 141)

| Solution ID# | Compound Name | Lot# | Received date | Exp. date | Replaces Solution | Replaced by Solution | Conc (ug/mL) | Solvent | Storage |
|---|---|---|---|---|---|---|---|---|---|
| S4255-1 | MPFHxA | MPFHxA1116 | 2017/11/07 | 2021/11/22 | S4226-1 | | 50 | MeOH | FZ11 |
| S4255-2 | D-N-MeFOSA-M | dNMeFOSA0417M | 2017/11/07 | 2022/04/20 | S4242-2 | | 50 | MeOH | FZ11 |
| S4255-3 | D-N-EtFOSA-M | dNEtFOSA0417M | 2017/11/07 | 2022/10/11 | S4242-3 | | 50 | MeOH | FZ11 |
| S4255-4 | D7-N-MeFOSE-M | d7NMeFOSE1017M | 2017/11/07 | 2022/10/13 | S4242-4 | | 50 | MeOH | FZ11 |
| S4255-5 | D9-N-EtFOSE-M | d9NEtFOSE1017M | 2017/11/07 | 2022/10/13 | S4242-5 | | 50 | MeOH | FZ11 |
| S4255-6 | M2-6:2FTS | M262FTS0217 | 2017/11/07 | 2022/02/17 | S4242-6 | | 50 | MeOH | FD59 |
| S4255-7 | M2-8:2FTS | M282FTS0717 | 2017/11/07 | 2022/07/05 | S4242-7 | | 50 | MeOH | FD59 |
| Date opened (All compounds): 2017/12/07 | | | Supplier: Wellington | | | Chemist: GSZ | | | |

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Notes/Comments



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PRLST 133 PG 135

## PREPARATION OF CONCENTRATED STOCK STANDARDS

Solution No.: S-4242 Date: 2017/11/24 Expiry Date: See Below Discard Date: _____

Replaces Solution: _____ Replaced by Solution: _____ Chemist: GSZ

S-4242 (PRLST 133 pg 135)

| Solution ID# | Compound Name | Lot# | Received date | Exp. date | Replaces Solution | Replaced by Solution | Conc (ug/mL) | Solvent | Storage |
|---|---|---|---|---|---|---|---|---|---|
| S4242-1 | MPFUdA | MPFUdA1116 | 2017/09/07 | 2021/11/22 | S4196 | | 50 | MeOH | FZ11 |
| S4242-2 | D-N-MeFOSA-M | dNMeFOSA0417M | 2017/10/25 | 2022/04/20 | S4226-4 | | 50 | MeOH | FZ11 |
| S4242-3 | D-N-EtFOSA-M | dNEtFOSA0417M | 2017/10/25 | 2022/04/20 | S4226-5 | | 50 | MeOH | FZ11 |
| S4242-4 | D7-N-MeFOSE-M | d7NMeFOSE0217M | 2017/10/25 | 2022/03/23 | S4226-6 | | 50 | MeOH | FZ11 |
| S4242-5 | D9-N-EtFOSE-M | d9NEtFOSE0317M | 2017/10/25 | 2022/03/23 | S4226-7 | | 50 | MeOH | FZ11 |
| S4242-6 | M2-6:2FTS | M262FTS0217 | 2017/10/25 | 2022/02/17 | S4226-8 | | 50 | MeOH | FD59 |
| S4242-7 | M2-8:2FTS | M282FTS0717 | 2017/10/25 | 2022/07/05 | S4226-9 | | 50 | MeOH | FD59 |
| Date opened (All compounds): | | 2017/11/24 | Supplier: | Wellington | | Chemist: | GSZ | | |

No writing on bottom page.

Notes/Comments

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Solution No.: S4243 Date: 2017/11/29 Expiry Date: 2018/11/29 Discard Date: _____

Replaces Solution: — Replaced by Solution: — Chemist: TH.

Compound: Metolachlor ESA Sodium salt Purity: _____

Date Received: 2017/11/23 Expiry Date: ~~2017/11/29~~ Lot No.: BCBT 3582

Supplier: Sigma - Aldrich.

Date Opened: 2017/11/29

Final Gross Weight: 0.0024 (g)/mg Dilution Volume: 2 mL

Tare Weight*: _____ g/mg Volumetric Flask: Class A.

Net Weight: _____ g/mg Concentration: 1000 ug/mL

Adjusted Net Weight**: _____ mg Solvent(s): _____

Balance Used: Sartorius Serial # 00 31 304817.
(specify model and serial no.)

Solvent Used: Methanol.

Solvent Supplier: Sigma aldrich Lot No(s).: SHBJ5451

Date Opened: 2017/11/29

Storage Location / Conditions: _____

Notes/Comments



DO NOT WRITE BENEATH ANY INSERTS ON THIS PAGE. DO NOT PLACE ANY INSERTS ON TOP OF ANY RAW DATA ENTERED ON THIS PAGE. INITIAL AND DATE ALL INSERTS. LOGBOOK, PAGE AND APPROPRIATE SOLUTION NUMBER REFERENCES MUST BE WRITTEN ON ALL INSERTS.

PRLST 133 PG 144

## PREPARATION OF CONCENTRATED STOCK STANDARDS

Solution No.: S-4260 Date: 2017/12/14 Expiry Date: See Below Discard Date: _____

Replaces Solution: _____ Replaced by Solution: _____ Chemist: GSZ

S-4260 (PRLST133 p. 144)

| Solution ID# | Compound Name | Lot# | Received date | Exp. date | Replaces Solution | Replaced by Solution | Conc (ug/mL) | Solvent | Storage |
|---|---|---|---|---|---|---|---|---|---|
| S4260-1 | D3-N-MeFOSAA | d3NMeFOSAA1116 | 2017/05/31 | 2021/11/22 | S4226-2 | | 50 | MeOH | FD59 |
| S4260-2 | D5-N-EtFOSAA | d3NEtFOSAA1116 | 2017/05/31 | 2021/11/22 | S4226-3 | | 50 | MeOH | FD59 |
| Date opened (All compounds): 2017/12/14 | | | Supplier: Wellington | | | Chemist: GSZ | | | |

No writing on bottom page.

Storage Location / Conditions: _____

Notes/Comments

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Solution No.: _____ Date: _____ Expiry Date: _____ Discard Date: _____

Replaces Solution: _____ Replaced by Solution: _____ Chemist: _____

Compound: _____ Purity: _____

Date Received: _____ Expiry Date: _____ Lot No.: _____

Supplier: _____

Date Opened: _____

GSZ 2017/12/15

Final Gross Weight: _____ g/mg Dilution Volume: _____ mL

Tare Weight* : _____ g/mg Volumetric Flask: _____

Net Weight: _____ g/mg **Concentration:** _____ ug/mL

Adjusted Net Weight** : _____ mg Solvent(s): _____

Balance Used: _____
(specify model and serial no.)

Solvent Used: _____

Solvent Supplier: _____ Lot No(s).: _____

Date Opened: _____

Storage Location / Conditions: _____

Notes/Comments

PRLST 133 PG 148

## PREPARATION OF CONCENTRATED STOCK STANDARDS

Solution No.: S-4266 Date: 2017/12/22 Expiry Date: _____ Discard Date: _____

Replaces Solution: _____ Replaced by Solution: _____ Chemist: GSZ

S-4266
(PRLST 133 p. 148)

| Solution ID# | Compound Name | Lot# | Received date | Exp. date | Replaces Solution | Replaced by Solution | Conc (ug/mL) | Solvent | Storage |
|---|---|---|---|---|---|---|---|---|---|
| S4266-1 | D-N-MeFOSA-M | dNMeFOSA0417M | 2017/12/06 | 2022/04/20 | S4255-2 | | 50 | MeOH | FZ11 |
| S4266-2 | D-N-EtFOSA-M | dNEtFOSA1017M | 2017/12/06 | 2022/10/11 | S4255-3 | | 50 | MeOH | FZ11 |
| S4266-3 | D7-N-MeFOSE-M | d7NMeFOSE1017M | 2017/12/06 | 2022/10/13 | S4255-4 | | 50 | MeOH | FZ11 |
| S4266-4 | D9-N-EtFOSE-M | d9NEtFOSE1017M | 2017/12/06 | 2022/10/13 | S4255-5 | | 50 | MeOH | FZ11 |
| S4266-5 | M2-6:2FTS | M262FTS0217 | 2017/12/06 | 2022/02/17 | S4255-6 | | 50 | MeOH | FD59 |
| S4266-6 | M2-8:2FTS | M282FTS0717 | 2017/12/06 | 2022/07/05 | S4255-7 | | 50 | MeOH | FD59 |
| Date opened (All compounds): 2017/12/22 | | | Supplier: Wellington | | | Chemist: GSZ | | | |

No writing on bottom page.

Notes/Comments

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Solution No.: S-4267 Date: 2017/12/27 Expiry Date: 2018/02/27 Discard Date: _____

Replaces Solution: S-4261 Replaced by Solution: _____ Chemist: GSZ

Compound: ACRYLAMIDE STOCK SOLUTION Purity: 100%

Date Received: 2016/11/02 Expiry Date: 2018/06/30 Lot No.: SLBN3158V

Supplier: Sigma

Date Opened: 2016/11/07

Final Gross Weight: 0.0106 g/mg Dilution Volume: 10 mL GSZ 2017/12/27

Tare Weight*: _____ g/mg Volumetric Flask: 10ml Class A S/N (5640)

Net Weight: 0.0106 g/mg Concentration: 1060 ug/mL

Adjusted Net Weight**: 10.6 mg Solvent(s): MeOH

Balance Used: OHAUS AP2105 SN N01360
(specify model and serial no.)

Solvent Used: MeOH

Solvent Supplier: Sigma Lot No(s).: SHBJ5451

Date Opened: 2017/12/27

Storage Location / Conditions: FZ 09

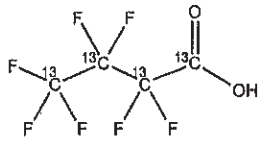
Notes/Comments

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** MPFBA
**LOT NUMBER:** MPFBA0417
**COMPOUND:** Perfluoro-n-[1,2,3,4-$^{13}C_4$]butanoic acid

**STRUCTURE:**



**CAS #:** Not available

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4HF_7O_2$ | **MOLECULAR WEIGHT:** | 218.01 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2,3,4-$^{13}C_4$) |
| **LAST TESTED:** (mm/dd/yyyy) | 04/12/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 04/12/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

1 ampoule
2017/09/07 2
1 ampoule
2014/10/25 65Z

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 04/20/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# WELLINGTON LABORATORIES

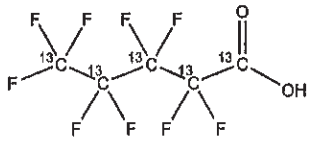
# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** M5PFPeA
**COMPOUND:** Perfluoro-n-[$^{13}C_5$]pentanoic acid

**LOT NUMBER:** M5PFPeA0717

**STRUCTURE:**

**CAS #:** Not available



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_5HF_9O_2$ | **MOLECULAR WEIGHT:** | 269.01 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($^{13}C_5$) |
| **LAST TESTED:** (mm/dd/yyyy) | 07/20/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 07/20/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

1 ampoule
2017/09/07 →
1 ampoule
2017/10/25 GSZ

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of perfluoro-n-pentanoic acid.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 07/26/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

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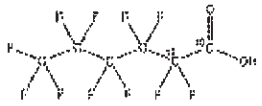
WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFHxA | **LOT NUMBER:** | MPFHxA1118 |
| **COMPOUND:** | Perfluoro-n-[1,2-$^{13}C_2$]hexanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | Not available |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_4HF_{11}O_2$ | **MOLECULAR WEIGHT:** | 316.04 |
| **CONCENTRATION:** | 50 ± 2.5 µg/mL | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2-$^{13}C_2$) |
| **LAST TESTED:** mm/dd/yyyy | 11/22/2016 | | |
| **EXPIRY DATE:** mm/dd/yyyy | 11/22/2021 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place (Freezer) | | |

HPLC (1)
2017/02/02
SSV

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of perfluoro-n-hexanoic acid and ~ 0.3% of perfluoro-n-octanoic acid.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ B.G. Chittim **Date:** 12/13/2016 mm/dd/yyyy

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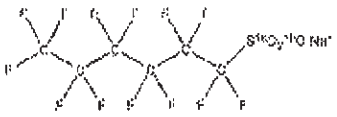
Received date: 2017/02/22 1x1.2 mL MMN
Received date: 2017/02/14 1x1.2 mL MMN
Received date: 2017/02/02 2x1.2 mL MZH
Received date: 2017/05/02 1x1.2 mL SSV
Received date: 2017/05/31 2x1.2 mL ssv
Date Received: 2017.05.02 - 1 x 1.2ml - HPLC
Date Received: 2017/09/12 - 1 ampule HPLC
Date Received: 2017/11/07 - 1 ampule HPLC

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFHxS | **LOT NUMBER:** | MPFHxS0217 |
| **COMPOUND:** | Sodium perfluoro-1-hexane[$^{18}O_2$]sulfonate | | |
| **STRUCTURE:** | | **CAS #:** | Not available |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_6F_{13}S^{18}O_2{}^{16}ONa$ | **MOLECULAR WEIGHT:** | 425.10 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.3 ± 2.4 µg/mL (MPFHxS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | >94% ($^{18}O_2$) |
| **LAST TESTED:** | 02/17/2017 | | |
| **EXPIRY DATE:** | 02/17/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

F2
1 ampule
HPLC
2017/05/02
JPS

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- The response factor for MPFHxS ($C_6F_{13}S^{18}O_2{}^{16}O$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{16}O_3$) when both compounds are injected together. This difference may vary between instruments.
- Contains ~ 1.0% of sodium perfluoro-1-octane[$^{18}O_2$]sulfonate ($^{18}O_2$-PFOS).
- Due to the isotopic purity of the starting material ($^{18}O_2$ >94%), MPFHxS contains ~ 0.3% of PFHxS. This value agrees with the theoretical percent relative abundance that is expected based on the stated isotopic purity.

***FOR LABORATORY USE ONLY; NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ B.G. Chittim **Date:** 03/02/2017

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*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

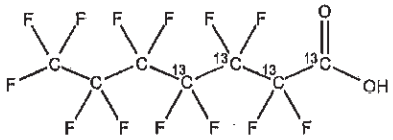


Date received 2017/09/07 1 ampule HPLC
Date received 2017/10/25 1 ampule HPLC

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | M4PFHpA | **LOT NUMBER:** | M4PFHpA0517 |
| **COMPOUND:** | Perfluoro-n-[1,2,3,4-$^{13}C_4$]heptanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | Not available |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4{}^{12}C_3HF_{13}O_2$ | **MOLECULAR WEIGHT:** | 368.03 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2,3,4-$^{13}C_4$) |
| **LAST TESTED:** (mm/dd/yyyy) | 05/03/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 05/03/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

1 ampoule
2017/09/07 2
1 ampoule
2017/10/25 GSZ

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 05/11/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

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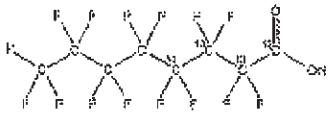
WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| PRODUCT CODE: | MPFOA | LOT NUMBER: | MPFOA1016 |
| COMPOUND: | Perfluoro-n-[1,2,3,4-$^{13}C_4$]octanoic acid | | |
| STRUCTURE: | | CAS #: | Not available |



| | | | |
|---|---|---|---|
| MOLECULAR FORMULA: | $^{13}C_4{}^{12}C_4HF_{15}O_2$ | MOLECULAR WEIGHT: | 418.04 |
| CONCENTRATION: | 50 ± 2.5 µg/ml | SOLVENT(S): | Methanol<br>Water (<1%) |
| CHEMICAL PURITY: | >98% | ISOTOPIC PURITY: | ≥99% $^{13}C$<br>(1,2,3,4-$^{13}C_4$) |
| LAST TESTED: (mm/dd/yyyy) | 10/18/2016 | | |
| EXPIRY DATE: (mm/dd/yyyy) | 10/18/2021 | | |
| RECOMMENDED STORAGE: | Store ampoule in a cool, dark place | | |

Received 2016-12-12 1X1.2 mL FZ-11

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.1% of native perfluoro-n-octanoic acid (PFOA).

*FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE*

Certified By: B.C. Crittim Date: 10/19/2016 (dd/mm/yyyy)

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2549 • info@well-labs.com*



Date Received: 2017.02.02 - 1 x 1.2ml - HPLC
Received date: 2017/02/14 1x1.2 mL MMN
Received date: 2017/02/22 2x1.2 mL MZH

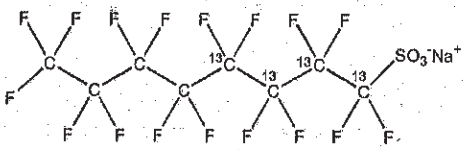
# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFOS **LOT NUMBER:** MPFOS1017

**COMPOUND:** Sodium perfluoro-1-[1,2,3,4-$^{13}C_4$]octanesulfonate

**STRUCTURE:** **CAS #:** Not available




| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4{}^{12}C_4F_{17}SO_3Na$ | **MOLECULAR WEIGHT:** | 526.08 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/ml (Na salt)<br>47.8 ± 2.4 µg/ml (MPFOS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2,3,4\text{-}^{13}C_4$) |
| **LAST TESTED:** (mm/dd/yyyy) | 10/17/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/17/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

1 ampule
2017/10/25 652

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~ 0.4% Sodium perfluoro-1-[1,2,3-$^{13}C_3$]heptanesulfonate.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 10/18/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager


*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

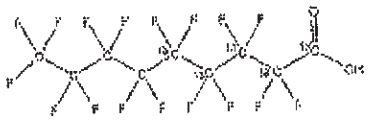
**PRODUCT CODE:** MPFNA

**COMPOUND:** Perfluoro-n-[1,2,3,4,5-$^{13}C_5$]nonanoic acid

**LOT NUMBER:** MPFNA0916

**STRUCTURE:**

**CAS #:** Not available



**MOLECULAR FORMULA:** $^{13}C_5{}^{12}C_4HF_{17}O_2$

**CONCENTRATION:** 50 ± 2.5 µg/ml

**MOLECULAR WEIGHT:** 469.04

**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%

**LAST TESTED:** 09/30/2016

**EXPIRY DATE:** 09/30/2021

**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ (1,2,3,4,5-$^{13}C_5$)

Received
2016-12-12
1x1.2 ml
F2-11

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

*FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE*

Certified By: B.G. Chittim  Date: 10/11/2016

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
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Form 0127, Issued 2004-11-10
Revised 0, Revised 2015-03-24

MPFNA0916 (1 of 4)
rev0

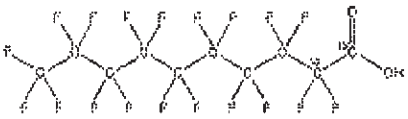
Received date: 2017/02/22 2x1.2 mL MZ
Received date: 2017/05/02 1x1.2 mL ssv
Received date: 2017/05/31 2x1.2 mL ssv
Received date: 2017/09/07 2x1.2 mL TRW
Received date: 2017/10/25 2x1.2 mL

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** MPFDA
**LOT NUMBER:** MPFDA0916
**COMPOUND:** Perfluoro-n-[1,2-$^{13}C_2$]decanoic acid

**STRUCTURE:**



**CAS #:** Not available

**MOLECULAR FORMULA:** $^{13}C_2{}^{12}C_8HF_{19}O_2$
**MOLECULAR WEIGHT:** 516.07
**CONCENTRATION:** 50 ± 2.5 µg/ml
**SOLVENT(S):** Methanol
Water (<1%)
**CHEMICAL PURITY:** >98%
**ISOTOPIC PURITY:** ≥99% $^{13}C$ (1,2-$^{13}C_2$)
**LAST TESTED:** 09/30/2016
**EXPIRY DATE:** 09/30/2021
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

Received mmd
2016-12-12
1X1.2 ml
F2-11

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of $^{13}C_4$-PFNA.

*FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE*

Certified By: B.G. Chittim  Date: 10/07/2016

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
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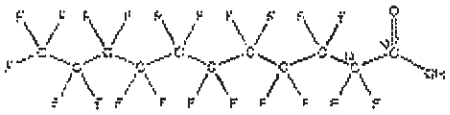
Date Received: 2017.02.02 - 1 x 1.2ml - HPLC
Received date: 2017/02/14 1x1.2 mL MMN
Date Received: 2017.02.22 - 2 x 1.2ml - HPLC,
Date Received: 2017.05.02 - 1 x 1.2ml - HPLC
Date Received: 2017.05.31 - 2 x 1.2ml - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| PRODUCT CODE: | MPFUdA | LOT NUMBER: | MPFUdA1116 |
| COMPOUND: | Perfluoro-n-[1,2-$^{13}C_2$]undecanoic acid | | |
| STRUCTURE: | | CAS #: | Not available |



| | | | |
|---|---|---|---|
| MOLECULAR FORMULA: | $^{13}C_2{}^{12}C_9HF_{21}O_2$ | MOLECULAR WEIGHT: | 566.08 |
| CONCENTRATION: | 50 ± 2.5 pg/ml | SOLVENT(S): | Methanol<br>Water (<1%) |
| CHEMICAL PURITY: | >98% | ISOTOPIC PURITY: | ≥99% $^{13}C$<br>($1,2\text{-}^{13}C_2$) |
| LAST TESTED: | 11/22/2016 | | |
| EXPIRY DATE: | 11/22/2021 | | |
| RECOMMENDED STORAGE: | Store ampoule in a cool, dark place | | |

Received 2017/02/22
2 x 1.2 mL (TZ-4)

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Presence of $1\text{-}^{13}C_2$-PFUdA (~1%; see Figure 2), $2\text{-}^{13}C_2$-PFUdA (~1%), and PFUdA (~0.2%; see Figure 2) are due to the isotopic purity of the $^{13}C$-precursor.

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Certified By: B.G. Chittim Date: 12/07/2016

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Received 2017/05/02 2x1.2 mL HPLC
Date Received: 2017.05.02 - 1 x 1.2ml - HPLC
Date Received: 2017.06.29 - 1 x 1.2ml - HPLC
Date Received: 2017.09/07 - 1 x 1.2ml - HPLC
Date Received: 2017.02/22 - 1 x 1.2ml - HPLC

# WELLINGTON LABORATORIES

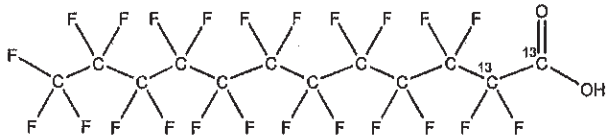
# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFDoA
**COMPOUND:** Perfluoro-n-[1,2-$^{13}C_2$]dodecanoic acid

**LOT NUMBER:** MPFDoA0517

**STRUCTURE:**

**CAS #:** Not available



**MOLECULAR FORMULA:** $^{13}C_2{}^{12}C_{10}HF_{23}O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml

**MOLECULAR WEIGHT:** 616.08
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 05/23/2017
**EXPIRY DATE:** (mm/dd/yyyy) 05/23/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$)

1 ampule
2017/09/07 ;
1 ampule
2017/10/25, GSZ

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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**Certified By:** _____ **Date:** 05/26/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

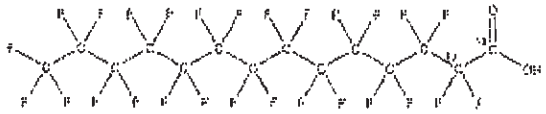
*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** M2PFTeDA
**COMPOUND:** Perfluoro-n-[1,2-$^{13}C_2$]tetradecanoic acid
**LOT NUMBER:** M2PFTeDA0217

**STRUCTURE:**
**CAS #:** Not available



**MOLECULAR FORMULA:** $^{13}C_2{}^{12}C_{12}HF_{27}O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml
**CHEMICAL PURITY:** >98%
**LAST TESTED:** 03/01/2017
**EXPIRY DATE:** 03/01/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**MOLECULAR WEIGHT:** 716.10
**SOLVENT(S):** Methanol
Water (<1%)
**ISOTOPIC PURITY:** ≥99% $^{13}C$ (1,2-$^{13}C_2$)

PV
1 ampule
HPLC
2017/05/02
DD3

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2. LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 03/07/2017
B.G. Chittim, General Manager

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Format 27, Issued 2020-11-10
Revision 4, Revised 2017-09-08



Date received 2017/09/07 1 ampule HPLC
Date received 2017/10/25 1 ampule HPLC

# WELLINGTON LABORATORIES

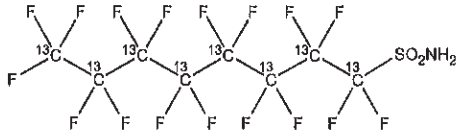
# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** M8FOSA-I
**COMPOUND:** Perfluoro-1-[$^{13}C_8$]octanesulfonamide

**LOT NUMBER:** M8FOSA0417I

**STRUCTURE:**

**CAS #:** Not available



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_8H_2F_{17}NO_2S$ | **MOLECULAR WEIGHT:** | 507.09 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($^{13}C_6$) |
| **LAST TESTED:** (mm/dd/yyyy) | 04/20/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 04/20/2022 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

Date received
2017/05/31

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~ 1.1% of perfluoro-1-[$^{13}C_4$]octanesulfonamide and ~ 0.01% of perfluoro-1-[$^{13}C_7$]heptanesulfonamide.

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**Certified By:** _____ **Date:** 05/04/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
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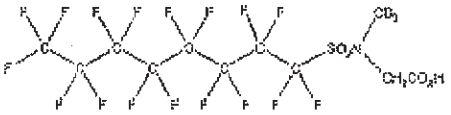
WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** d3-N-MeFOSAA
**LOT NUMBER:** d3NMeFOSAA1116
**COMPOUND:** N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid

**STRUCTURE:**
**CAS #:** Not available



**MOLECULAR FORMULA:** $C_{11}D_3H_2F_{17}NO_4S$
**MOLECULAR WEIGHT:** 574.23
**CONCENTRATION:** 50 ± 2.5 µg/ml
**SOLVENT(S):** Methanol
Water (<1%)
**CHEMICAL PURITY:** >98%
**ISOTOPIC PURITY:** ≥98% $^1H_1$
**LAST TESTED:** 11/22/2016
**EXPIRY DATE:** 11/22/2021
**RECOMMENDED STORAGE:** Refrigerate ampoule

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

Received
2x1.2mL
2017-12-22
mtr

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**Certified By:** B.G. Chittim **Date:** 12/07/2016

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Form#27, Issued 2004-11-19
Revision#2, Revised 2015-03-24



date recieved 2017/05/31 2x1`.2

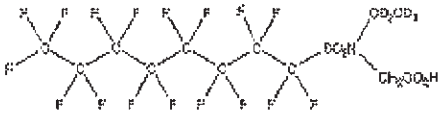
WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** d5-N-EtFOSAA **LOT NUMBER:** d5NEtFOSAA1116

**COMPOUND:** N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid

**STRUCTURE:** **CAS #:** Not available



**MOLECULAR FORMULA:** $C_{10}D_5H_3F_{17}NO_4S$ **MOLECULAR WEIGHT:** 590.26

**CONCENTRATION:** 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98% **ISOTOPIC PURITY:** ≥98% $^{2}H_{5}$

**LAST TESTED:** (mm/dd/yyyy) 11/22/2016

**EXPIRY DATE:** (mm/dd/yyyy) 11/22/2021

**RECOMMENDED STORAGE:** Refrigerate ampoule

Received 2016/12/16 1 x 1.2 mL FD-59

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** B.G. Chittim **Date:** 12/01/2016 (mm/dd/yyyy)

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Form#127, Issued 2004-11-10
Revision# 3, Revised 2016-03-24



Received date: 2017/02/22 2x1.2 mL MZH
Received date: 2017/05/31 2x1.2 mL ssv

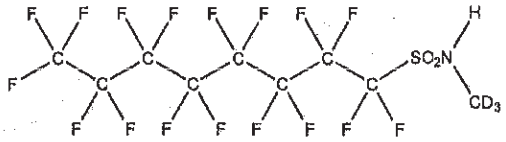
# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** d-N-MeFOSA-M
**COMPOUND:** N-methyl-$d_3$-perfluoro-1-octanesulfonamide
**LOT NUMBER:** dNMeFOSA0417M

**STRUCTURE:**

**CAS #:** Not available



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_9D_3HF_{17}NO_2S$ | **MOLECULAR WEIGHT:** | 516.19 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥98% $^2H_3$ |
| **LAST TESTED:** (mm/dd/yyyy) | 04/20/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 04/20/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

Date Received
2017/12/06
2 Ampoules

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 04/24/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

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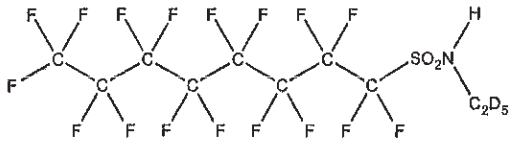
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** d-N-EtFOSA-M
**LOT NUMBER:** dNEtFOSA1017M
**COMPOUND:** N-ethyl-$d_5$-perfluoro-1-octanesulfonamide

**STRUCTURE:**



**CAS #:** Not available

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}D_5HF_{17}NO_2S$ | **MOLECULAR WEIGHT:** | 532.23 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥98% $^2H_5$ |
| **LAST TESTED:** (mm/dd/yyyy) | 10/11/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/11/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

Date received
2017/12/06
2 Ampules

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/06/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

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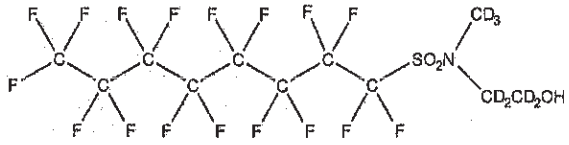
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** d7-N-MeFOSE-M **LOT NUMBER:** d7NMeFOSE1017M
**COMPOUND:** 2-(N-methyl-d3-perfluoro-1-octanesulfonamido)ethan-d4-ol

**STRUCTURE:** **CAS #:** Not available



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{11}D_7HF_{17}NO_3S$ | **MOLECULAR WEIGHT:** | 564.27 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥98% $^2H_7$ |
| **LAST TESTED:** (mm/dd/yyyy) | 10/13/2017 (HRGC/LRMS)<br>10/12/2017 (LC/MS) | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/13/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

Date Reaived
2017/12/06
2 Ampoules

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: HRGC/LRMS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (TIC and Mass Spectrum)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/03/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

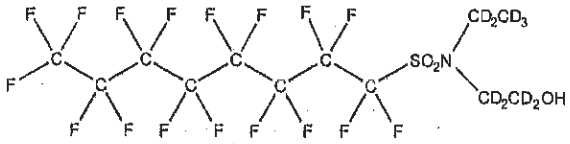
*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** d9-N-EtFOSE-M **LOT NUMBER:** d9NEtFOSE1017M
**COMPOUND:** 2-(N-ethyl-d5-perfluoro-1-octanesulfonamido)ethan-d4-ol

**STRUCTURE:** **CAS #:** Not available



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{12}D_9HF_{17}NO_3S$ | **MOLECULAR WEIGHT:** | 580.31 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥98% $^2H_9$ |
| **LAST TESTED:** (mm/dd/yyyy) | 10/13/2017 (HRGC/LRMS)<br>10/12/2017 (LC/MS) | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/13/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

Date Received
2017/12/06
2 Ampoules

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: HRGC/LRMS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (TIC and Mass Spectrum)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.
- Contains ~ 1.2% of N-ethyl-d5-perfluoro-1-octanesulfonamide.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 10/18/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

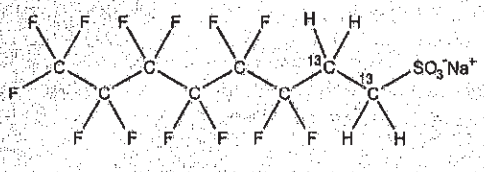
# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** M2-6:2FTS **LOT NUMBER:** M262FTS0217

**COMPOUND:** Sodium 1H,1H,2H,2H-perfluoro-[1,2-$^{13}C_2$]octane sulfonate

**STRUCTURE:**




**CAS #:** Not available

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_6H_4F_{13}SO_3Na$ | **MOLECULAR WEIGHT:** | 452.13 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/ml (Na salt)<br>47.5 ± 2.4 µg/ml (M2-6:2FTS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 02/17/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 02/17/2022 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

D.L. Recvd
2017/12/06
2 Ampoules

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- The native 6:2FTS contains 4.22% of $^{34}S$ (due to natural isotopic abundance) therefore both native 6:2FTS and M2-6:2FTS will produce signals in the m/z 429 to m/z 409 channel during SRM analysis. We recommend using the m/z 429 to m/z 81 transition to monitor for M2-6:2FTS during quantitative analysis as it will be free of any native contribution (see Figure 2).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** B.G. Chittim **Date:** 02/24/2017 (mm/dd/yyyy)


*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

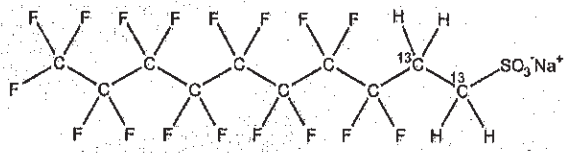
# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** M2-8:2FTS **LOT NUMBER:** M282FTS0717

**COMPOUND:** Sodium 1H,1H,2H,2H-perfluoro-[1,2-$^{13}C_2$]decane sulfonate

**STRUCTURE:** **CAS #:** Not available



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8H_4F_{17}SO_3Na$ | **MOLECULAR WEIGHT:** | 552.15 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/ml (Na salt) | **SOLVENT(S):** | Methanol |
| | 47.9 ± 2.4 µg/ml (M2-8:2FTS anion) | | |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** (mm/dd/yyyy) | 07/05/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 07/05/2022 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

Date Received
2017/12/06
2 Ampoules

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- The native 8:2FTS contains 4.22% of $^{34}S$ (due to natural isotopic abundance) therefore both native 8:2FTS and M2-8:2FTS will produce signals in the m/z 529 to m/z 509 channel during SRM analysis. We recommend using the m/z 529 to m/z 81 transition to monitor for M2-8:2FTS during quantitative analysis as it will be free of any native contribution (see Figure 2).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 07/07/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

144 PG 98

## PREPARATION OF SURROGATE / INTERNAL STANDARD SPIKING SOLUTION

Solution No.: SI-6770 Prep'n Date: 2018/01/12 Expiry Date: 2018/06/20 Discard Date:
Replaces Solution No.: SI-6716 Replaced by Solution: Chemist: GSZ
Sol'n. Name: FNL. F.S.
Solution Used As: Internal Std: ✓ Surrogate Spike:
Spike Volume: 20 (uL) or mL (for I.S. uL per mL) For Instrument/Analysis: LCMS/MS
Solvent(s): 0.3% NH4OH in MeOH Supplier(s): Sa PRURE 108-287 Lot No(s).: Sa PRURE 108-287
Date Solvent Opened: Sa PRURE 108-287
Volumetric Flask Used: 100mL Class-A (5640) Syringe ID: Pipette M4101IF
Storage Location and Conditions: FZ-11
Ampule supplier; Mix Name; Catalogue No.; Lot No.; Date Rec'd.; Date Opened, Ampule Expiry Date:

| Compound | Parent Solution No. | Parent Solution Conc'n. (ug/mL) | Aliquot Volume (mL (uL)) | Dilution Volume (mL) | Final Conc'n. ng/mL (ug/mL) | Absolute Amount Spiked (ug / ng) |
|---|---|---|---|---|---|---|
| 13 C9 PFDA | S-4194 | 50 | 200 | 100 | 100 | — |
| 13 C6 PFHxA | S-4195 | 50 | 200 | 100 | 100 | — |

GSZ 2018/01/12

Notes:

DPG 2018/01/16

Solution No.: SI-6771 Prep'n Date: 2018/01/16 Expiry Date: 2018/03/05 Discard Date: —
Replaces Solution No.: SI-6703 Replaced by Solution: — Chemist: DPG
Sol'n. Name: 2,3 Dibromopropionic Acid Surrogate
Solution Used As: Internal Std: — Surrogate Spike: ✓
Spike Volume: 40 (ul) or mL (for I.S. uL per mL) For Instrument/Analysis: GC-ECD
Solvent(s): MTBE Supplier(s): Fisher Lot No(s).: 161432
Date Solvent Opened: 2017/05/15
Volumetric Flask Used: 5630 [0ml] Class A Syringe ID: 579089-2
Storage Location and Conditions: FD-135 [1°C to 6°C]
Ampule supplier; Mix Name; Catalogue No.; Lot No.; Date Rec'd.; Date Opened, Ampule Expiry Date:

| Compound | Parent Solution No. | Parent Solution Conc'n. (ug/mL) | Aliquot Volume (mL (uL)) | Dilution Volume (mL) | Final Conc'n. (ug/mL) | Absolute Amount Spiked (ug / ng) |
|---|---|---|---|---|---|---|
| 2,3 Dibromopropionic Acid | T-5091 | 1000 | 100 | 10 | 10 | — |

DPG 2018/01/16

Notes:



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PRLST 133 PG 108

## PREPARATION OF CONCENTRATED STOCK STANDARDS

Solution No.: S-4194 Date: 2017/09/18 Expiry Date: 2018/06/20 Discard Date: _____

Replaces Solution: S-4142 Replaced by Solution: _____ Chemist: GSZ

Compound: $^{13}C_9$ PFDA Purity: _____

Date Received: 2017/06/09 Expiry Date: 2018/06/20 Lot No.: SCID-014

Supplier: CIL

Date Opened: 2017/09/18

Final Gross Weight: – g/mg Dilution Volume: – mL

Tare Weight* : – g/mg Volumetric Flask: –

Net Weight: – g/mg **Concentration:** 50 (ug/mL) mg/mL

Adjusted Net Weight** : – mg Solvent(s): MeOH

Balance Used: –
(specify model and serial no.)

Solvent Used: –

Solvent Supplier: – Lot No(s).: –

Date Opened: –

Storage Location / Conditions: FZ 11

Notes/Comments
Received as solution in ampule.

---

Solution No.: S-4195 Date: 2017/09/18 Expiry Date: 2020/09/30 Discard Date: _____

Replaces Solution: S-4143 Replaced by Solution: _____ Chemist: GSZ

Compound: $^{13}C_6$ PFHxA Purity: _____

Date Received: 2017/06/09 Expiry Date: 2020/09/30 Lot No.: SDAA-004

Supplier: CIL

Date Opened: 2017/09/18

Final Gross Weight: – g/mg Dilution Volume: – mL

Tare Weight* : – g/mg Volumetric Flask: –

Net Weight: – g/mg **Concentration:** 50 ug/mL

Adjusted Net Weight** : – mg Solvent(s): MeOH

Balance Used: –
(specify model and serial no.)

Solvent Used: –

Solvent Supplier: – Lot No(s).: –

Date Opened: –

Storage Location / Conditions: FZ 11

Notes/Comments
Received as solution in ampule.

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

Quality Standards:
ISO Guide 34 • ISO/IEC 17025 • ISO 13485 • cGMP

| | |
|---|---|
| **Product Name:** (Isotopic Label & Declaration Specification) | PERFLUORODECANOIC ACID (13C9, 99%) 50 UG/ML IN METHANOL |
| **Lot Number:** | SCID-014 |
| **Catalog Number:** | CLM-8172-S |

## Product Information

| | |
|---|---|
| Chemical Purity Specification: | ≥ 98% |
| Labeled CAS Number: | NA |
| Unlabeled CAS Number: | 335-76-2 |
| MW*: | 523.02 |
| Chemical Formula: | CF3(*CF2)8*CO2H |
| Storage: | Store at room temperature away from light and moisture. |
| Stability: | See storage and expiration date. |

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses wherever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NCSL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number. Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -1.0, or -0.1.

* *For isotopically labeled compounds, MW listed is for the fully enriched product.*

Approved by: T. J. Eckersley

Timothy J. Eckersley, Ph.D., Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 06/20/2008 |
| Expiration Date | 06/20/2018 |
| Concentration Based on Gravimetry | 50.0 µg/mL |
| Chemical Purity of Neat Material(s) | >98% |
| LC/MS for Concentration | 46.2 ± 6.4 µg/mL (k=2) |

Received June 2016/10/15 1x 1.2mL RT

50 Frontage Road, Andover, MA 01810-5413 USA • 1 800 322.1174 (North America) • 1 978 749.8000 (International) • isotope.com

Date Received:2016.8.17 - 1 x 1.2mL - HPLC
Date Received: 2016.09.14 -HPLC - 1 x 1.2ml
Date Received: 2016/11/22 1x 1.2ml MMN HPLC
Date Received:2017.02.15 - 1 x 1mL - HPLC (MMN)
Date received: 2017/06/09 - 1x1.2ml - HPLC

Cambridge Isotope Laboratories, Inc.

# Certificate of Analysis

**Quality Standards:**
ISO Guide 34 • ISO/IEC 17025 • ISO 13485 • cGMP

| | |
|---|---|
| **Product Name:** (Isotopic Label & Enrichment Specification) | PERFLUOROHEXANOIC ACID, SODIUM SALT (13C6, 99%) 50 UG/ML IN METHANOL |
| **Lot Number:** | SDAA-004 |
| **Catalog Number:** | CLM-8340-S |

## Product Information

| | |
|---|---|
| Chemical Purity Specification: | ≥ 98% |
| MW*: *For unequally labeled compounds, MW listed is for the fully enriched product. | 320.00 |
| Labeled CAS Number: | NA |
| Unlabeled CAS Number: | 307-24-4 |
| Chemical Formula: | *CF3(*CF2)4*COOH |
| Storage: | Store at room temperature away from light and moisture. |
| Stability: | See storage and expiration date. |

Received from 2016/05/20 1x1.2ml RT

## Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number. Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

Approved by: T. J. Eckersley
Timothy J. Eckersley, Ph.D., Quality Review

## Quality Control Tests and Results

| | |
|---|---|
| QC Release Date | 9/30/2010 |
| Expiration Date | 9/30/2020 |
| Concentration Based on Gravimetry | 50.4 µg/mL |
| Chemical Purity of Neat Material(s) | 99.2% |
| LC/MS for Concentration | 47.1 ± 2.6 µg/mL (k=2) |

50 Frontage Road, Andover, MA 01810-6413 USA • 1.800.322.1174 (North America) • 1.978.749.8000 (International) • isotope.com

Date Received: 2016/08/17 1x 1.2ml MMN HPLC
Date Received: 2016/09/14 1x 1.2ml MMN HPLC
Date Received: 2016/11/22 1x 1.2ml MMN HPLC
Date Received: 2017.02.15 - 1 x 1mL - HPLC (MMN)
Date Received: 2017.06.09 - 1 x 1.2ml - HPLC

144 PG 114

## PREPARATION OF SURROGATE / INTERNAL STANDARD SPIKING SOLUTION

Solution No.: SI-6801 Prep'n Date: 2018/02/12 Expiry Date: 2021/09/30 Discard Date: _____
Replaces Solution No.: SI-6763 Replaced by Solution: _____ Chemist: GSZ
Sol'n. Name: PFC INTERNAL STD SPIKING SOLUTION
Solution Used As: Internal Std: ✓ Surrogate Spike: _____
Spike Volume: — uL or mL (for I.S. uL per mL) For Instrument/Analysis: LCMS/MS
Solvent(s): 0.3% NH4OH in MeOH Supplier(s): See PRLRE 108-355 Lot No(s).: See PRLRE 108-355
Date Solvent Opened: See PRLRE 108-355
Volumetric Flask Used: 200 mL Class A (5640) Syringe ID: Hamilton MA1011F/J434346
Storage Location and Conditions: FZ-11
Ampule supplier; Mix Name; Catalogue No.; Lot No.; Date Rec'd.; Date Opened, Ampule Expiry Date: See attached sheet

SI-6801 (PRLST 144 p. 114)

| Compound Name | ID# | Conc. (ug/mL) | Vol.. of Stock standard (uL) | Dilution volume (mL) | Final Conc. (ng/mL) | Exp. date |
|---|---|---|---|---|---|---|
| MPFBA | S4290-1 | 50 | 200 | 200 | 50 | 2022/04/12 |
| M5PFPeA | S4290-2 | 50 | 200 | 200 | 50 | 2022/07/20 |
| MPFHxA | S4290-3 | 50 | 200 | 200 | 50 | 2022/10/27 |
| MPFHxS | S4290-4 | 50 | 200 | 200 | 50 | 2022/02/17 |
| M4PFHpA | S4290-5 | 50 | 200 | 200 | 50 | 2022/05/03 |
| MPFOA | S4290-6 | 50 | 200 | 200 | 50 | 2022/10/17 |
| MPFOS | S4290-7 | 50 | 200 | 200 | 50 | 2022/10/17 |
| MPFNA | S4290-8 | 50 | 200 | 200 | 50 | 2021/09/30 |
| MPFDA | S4290-9 | 50 | 200 | 200 | 50 | 2022/07/13 |
| MPFUdA | S4290-10 | 50 | 200 | 200 | 50 | 2021/11/22 |
| MPFDoA | S4290-11 | 50 | 200 | 200 | 50 | 2022/05/23 |
| M2PFTeDA | S4290-12 | 50 | 200 | 200 | 50 | 2022/11/30 |
| MPFOSA | S4290-13 | 50 | 200 | 200 | 50 | 2022/10/11 |
| D3-N-MeFOSAA | S4290-14 | 50 | 200 | 200 | 50 | 2022/05/19 |
| D5-N-EtFOSAA | S4290-15 | 50 | 200 | 200 | 50 | 2021/11/22 |
| D-N-MeFOSA-M | S4290-16 | 50 | 500 | 200 | 125 | 2022/04/20 |
| D-N-EtFOSA-M | S4290-17 | 50 | 500 | 200 | 125 | 2022/10/11 |
| D7-N-MeFOSE-M | S4290-18 | 50 | 500 | 200 | 125 | 2022/10/13 |
| D9-N-EtFOSE-M | S4290-19 | 50 | 500 | 200 | 125 | 2022/10/13 |
| M2-6:2FTS | S4290-20 | 50 | 500 | 200 | 125 | 2022/02/17 |
| M2-8:2FTS | S4290-21 | 50 | 500 | 200 | 125 | 2022/07/05 |

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GSZ, 2018/02/12

Notes:



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PRLST 133 PG 163

## PREPARATION OF CONCENTRATED STOCK STANDARDS

Solution No.: S-4290 Date: 2018/02/12 Expiry Date: See Below Discard Date: _____

Replaces Solution: _____ Replaced by Solution: _____ Chemist: GSZ

S-4290 (PRLST 133 pg. 163)

| Solution ID# | Compound Name | Lot# | Received date | Exp. date | Replaces Solution | Replaced by Solution | Conc (ug/mL) | Solvent | Storage |
|---|---|---|---|---|---|---|---|---|---|
| S4290-1 | MPFBA | MPFBA0417 | 2017/12/06 | 2022/04/12 | S4250-1 | | 50 | MeOH | FZ-11 |
| S4290-2 | M5PFPeA | M5PFPeA0717 | 2017/12/06 | 2022/07/20 | S4250-2 | | 50 | MeOH | FZ-11 |
| S4290-3 | MPFHxA | MPFHxA1017 | 2017/12/06 | 2022/10/27 | S4255-1 | | 50 | MeOH | FZ11 |
| S4290-4 | MPFHxS | MPFHxS0217 | 2017/12/06 | 2022/02/17 | S4250-3 | | 50 | MeOH | FZ-11 |
| S4290-5 | M4PFHpA | M4PFHpA0517 | 2017/12/06 | 2022/05/03 | S4250-4 | | 50 | MeOH | FZ-11 |
| S4290-6 | MPFOA | MPFOA1017 | 2017/12/06 | 2022/10/17 | S4250-5 | | 50 | MeOH | FZ-11 |
| S4290-7 | MPFOS | MPFOS1017 | 2017/12/06 | 2022/10/17 | S4250-6 | | 50 | MeOH | FZ-11 |
| S4290-8 | MPFNA | MPFNA0916 | 2017/12/06 | 2021/09/30 | S4250-7 | | 50 | MeOH | FZ-11 |
| S4290-9 | MPFDA | MPFDA0717 | 2017/12/06 | 2022/07/13 | S4250-8 | | 50 | MeOH | FZ-11 |
| S4290-10 | MPFUdA | MPFUdA1116 | 2017/12/06 | 2021/11/22 | S4242-1 | | 50 | MeOH | FZ11 |
| S4290-11 | MPFDoA | MPFDoA0517 | 2017/12/06 | 2022/05/23 | S4250-9 | | 50 | MeOH | FZ-11 |
| S4290-12 | M2PFTeDA | M2PFTeDA1117 | 2017/12/06 | 2022/11/30 | S4250-10 | | 50 | MeOH | FZ-11 |
| S4290-13 | MPFOSA | M8FOSA1017I | 2017/12/06 | 2022/10/11 | S4250-11 | | 50 | IPA | FD-59 |
| S4290-14 | D3-N-MeFOSAA | d3NMeFOSAA0517 | 2017/10/25 | 2022/05/19 | S4260-1 | | 50 | MeOH | FD59 |
| S4290-15 | D5-N-EtFOSAA | d5NEtFOSAA1116 * | 2017/10/25 | 2021/11/22 | S4260-2 | | 50 | MeOH | FD59 |
| S4290-16 | D-N-MeFOSA-M | dNMeFOSA0417M | 2017/12/06 | 2022/04/20 | S4255-2 | | 50 | MeOH | FZ11 |
| S4290-17 | D-N-EtFOSA-M | dNEtFOSA1017M | 2017/12/06 | 2022/10/11 | S4255-3 | | 50 | MeOH | FZ11 |
| S4290-18 | D7-N-MeFOSE-M | d7NMeFOSE1017M | 2017/12/06 | 2022/10/13 | S4255-4 | | 50 | MeOH | FZ11 |
| S4290-19 | D9-N-EtFOSE-M | d9NEtFOSE1017M | 2017/12/06 | 2022/10/13 | S4255-5 | | 50 | MeOH | FZ11 |
| S4290-20 | M2-6:2FTS | M262FTS0217 | 2017/12/06 | 2022/02/17 | S4255-6 | | 50 | MeOH | FD59 |
| S4290-21 | M2-8:2FTS | M282FTS0717 | 2017/12/06 | 2022/07/05 | S4255-7 | | 50 | MeOH | FD59 |
| Date opened (All compounds): 2018/02/12 | | | Supplier: Wellington | | | Chemist: GSZ | | | |

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Solution No.: _____ Date: _____ Expiry Date: _____ Discard Date: _____

Replaces Solution: _____ Replaced by Solution: _____ Chemist: _____

Compound: _____ Purity: _____

Date Received: _____ Expiry Date: _____ Lot No.: _____

Supplier: _____

Date Opened: _____

Final Gross Weight: _____ g/mg Dilution Volume: _____ mL

Tare Weight* : _____ g/mg Volumetric Flask: _____

Net Weight: _____ g/mg **Concentration:** _____ ug/mL

Adjusted Net Weight** : _____ mg Solvent(s): _____

Balance Used: _____
(specify model and serial no.)

Solvent Used: _____

Solvent Supplier: _____ Lot No(s).: _____

Date Opened: _____

Storage Location / Conditions: _____

Notes/Comments

OK 10 2018/02/13



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# WELLINGTON LABORATORIES

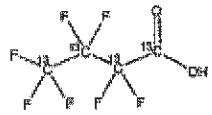
## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** MPFBA
**COMPOUND:** Perfluoro-n-[1,2,3,4-$^{13}C_4$]butanoic acid

**LOT NUMBER:** MPFBA0417

**STRUCTURE:**

**CAS #:** Not available



**MOLECULAR FORMULA:** $^{13}C_4HF_7O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml

**MOLECULAR WEIGHT:** 218.01
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 04/12/2017
**EXPIRY DATE:** (mm/dd/yyyy) 04/12/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ (1,2,3,4-$^{13}C_4$)

1 ampoule
2017/10/25 652

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

*FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE*

Certified By: B.G. Chittim, General Manager  Date: 04/20/2017 (mm/dd/yyyy)

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*



Date Received: 2017.09.07 - 1 ampoule - HPLC
Date Received: 2017.12.06 - 1 ampoule - HPLC

Date Received: 2018.01.16 - 1 ampoule - HPLC

Date received: 2017/09/07 RW Ampoule: 1

WELLINGTON LABORATORIES

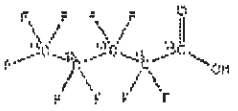
# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** M5PFPeA
**COMPOUND:** Perfluoro-n-[$^{13}C_5$]pentanoic acid

**LOT NUMBER:** M5PFPeA0717

**STRUCTURE:**

**CAS #:** Not available



**MOLECULAR FORMULA:** $^{13}C_5HF_9O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml

**MOLECULAR WEIGHT:** 269.01
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** 07/20/2017
**EXPIRY DATE:** 07/20/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥98% $^{13}C$ ($^{13}C_5$)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of perfluoro-n-pentanoic acid.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

Certified By: _____ Date: 07/26/2017
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Form 27 Issued 2004-11-10
Revised 4 Revised 2017-03-08



Date Received: 2017.10.25 - 1 ampoule - HPLC
Date Received: 2017.12.06 - 1 ampoule - HPLC
Date Received: 2018.01.16 - 1 ampoule -HPLC

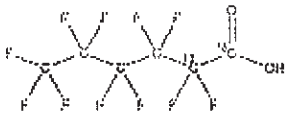
# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** MPFHxA
**COMPOUND:** Perfluoro-n-[1,2-$^{13}C_2$]hexanoic acid

**LOT NUMBER:** MPFHxA1017

**STRUCTURE:**



**CAS #:** Not available

2018/01/16
1 ampoule
E.G

**MOLECULAR FORMULA:** $^{13}C_2{}^{12}C_4HF_9O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml
**CHEMICAL PURITY:** >98%
**LAST TESTED:** 10/27/2017
**EXPIRY DATE:** 10/27/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**MOLECULAR WEIGHT:** 316.04
**SOLVENT(S):** Methanol
Water (<1%)
**ISOTOPIC PURITY:** ≥99% $^{13}C$ (1,2-$^{13}C_2$)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of perfluoro-n-hexanoic acid and < 0.3% of perfluoro-n-octanoic acid.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 10/30/2017
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Form#17, Issued 2021-11-10
Revision#4, Revised 2017-03-06

WPFHxA1017 (1 of 4)
[illegible]

Date Received: 2017.12.06 - 1 ampoule - HPLC

WELLINGTON LABORATORIES

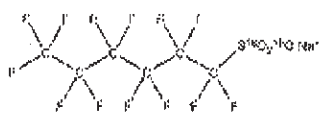
# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** MPFHxS

**LOT NUMBER:** MPFHxS0217

**COMPOUND:** Sodium perfluoro-1-hexane[$^{18}O_2$]sulfonate

**STRUCTURE:**



**CAS #:** Not available

**MOLECULAR FORMULA:** $C_6F_{13}S^{18}O_2{}^{18}ONa$

**MOLECULAR WEIGHT:** 425.10

**CONCENTRATION:** 50.0 ± 2.5 µg/mL (Na salt)
47.3 ± 2.4 µg/mL (MPFHxS anion)

**SOLVENT(S):** Methanol

**CHEMICAL PURITY:** >98%

**ISOTOPIC PURITY:** >94% ($^{18}O_2$)

**LAST TESTED:** 02/17/2017

**EXPIRY DATE:** 02/17/2022

**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

F2
1 ampoule
HPLC
2017/05/02
JPB3

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- The response factor for MPFHxS ($C_6F_{13}S^{18}O_2{}^{18}O^-$) has been observed to be up to 10% lower than for PFHxS ($C_6F_{13}S^{18}O_3^-$) when both compounds are injected together. This difference may vary between instruments.
- Contains ~ 1.0% of sodium perfluoro-1-octane[$^{18}O_2$]sulfonate ($^{18}O_2$-PFOS).
- Due to the isotopic purity of the starting material ($^{18}O_2$ >94%), MPFHxS contains ~ 0.3% of PFHxS. This value agrees with the theoretical percent relative abundance that is expected based on the stated isotopic purity.

***FOR LABORATORY USE ONLY; NOT FOR HUMAN OR DRUG USE***

Certified By: B.G. Chittim  Date: 03/02/2017

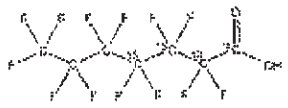
*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2049 • info@well-labs.com*

Date received 2017/09/07 1 ampoule HPLC
Date received 2017/10/25 1 ampoule HPLC
Date Received: 2017.10.25 - 1 ampoule - HPLC
Date Received: 2017.12.06 - 1 ampoule - HPLC
Date Received: 2018.01.16 - 1 ampoule - HPLC

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | M4PFHpA | **LOT NUMBER:** | M4PFHpA0517 |
| **COMPOUND:** | Perfluoro-n-[1,2,3,4-$^{13}C_4$]heptanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | Not available |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_4{}^{12}C_3HF_{13}O_2$ | **MOLECULAR WEIGHT:** | 368.03 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ (1,2,3,4-$^{13}C_4$) |
| **LAST TESTED:** | 05/03/2017 | | |
| **EXPIRY DATE:** | 05/03/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

1 ampoule
2017/10/26 652

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

*FOR LABORATORY USE ONLY. NOT FOR HUMAN OR DRUG USE*

Certified By: _____ Date: 05/11/2017
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Date Received: 2017.09.07 - 1 ampoule - HPLC
Date Received: 2017.12.06 - 1 ampoule - HPLC
Date Received: 2018.01.16 - 1 ampoule - HPLC

# WELLINGTON LABORATORIES

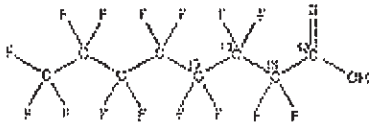
## CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** MPFOA

**COMPOUND:** Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid

**LOT NUMBER:** MPFOA1017

**STRUCTURE:**



**CAS #:** Not available

2018/01/16

**MOLECULAR FORMULA:** $^{13}C_4{}^{12}C_4HF_{15}O_2$

**CONCENTRATION:** 50 ± 2.5 µg/ml

**MOLECULAR WEIGHT:** 418.04

**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%

**LAST TESTED:** 10/17/2017

**EXPIRY DATE:** 10/17/2022

**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ (1,2,3,4-$^{13}C_4$)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.1% of native perfluoro-n-octanoic acid (PFOA).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 10/19/2017

B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Form 27, Issued 2004-12-06
Revision 4, Revised 2017-03-06

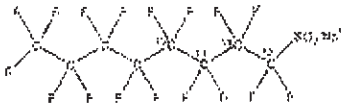
MPFOA1017 (1 of 4)

Date Received: 2017.12.06 - 1 ampoule - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

| | | | |
|---|---|---|---|
| PRODUCT CODE: | MPFOS | LOT NUMBER: | MPFOS1017 |
| COMPOUND: | Sodium perfluoro-1-[1,2,3,4-$^{13}C_4$]octanesulfonate | | |
| STRUCTURE: | | CAS #: | Not available |



| | | | |
|---|---|---|---|
| MOLECULAR FORMULA: | $^{13}C_4C_4F_{17}SO_3Na$ | MOLECULAR WEIGHT: | 526.08 |
| CONCENTRATION: | 50.0 ± 2.5 ug/ml (Na salt)<br>47.8 ± 2.4 ug/ml (MPFOS anion) | SOLVENT(S): | Methanol |
| CHEMICAL PURITY: | >98% | ISOTOPIC PURITY: | ≥99% $^{13}C$ ($1,2,3,4\text{-}^{13}C_4$) |
| LAST TESTED: | 10/17/2017 | | |
| EXPIRY DATE: | 10/17/2022 | | |
| RECOMMENDED STORAGE: | Store ampoule in a cool, dark place | | |

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

1 ampoule
2017/10/25 GSA

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.4% Sodium perfluoro-1-[1,2,3-$^{13}C_3$]heptanesulfonate.

*FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE*

Certified By: _____ Date: 10/18/2017
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*



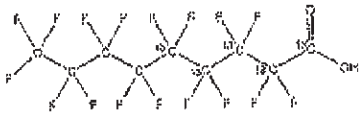
Date Received: 2017.12.06 - 1 ampoule - HPLC

Date Received: 2018.01.16 - 1 ampoule - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFNA | **LOT NUMBER:** | MPFNA0916 |
| **COMPOUND:** | Perfluoro-n-[1,2,3,4,5-$^{13}C_5$]nonanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | Not available |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_5{}^{12}C_4HF_{17}O_2$ | **MOLECULAR WEIGHT:** | 469.04 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$<br>(1,2,3,4,5-$^{13}C_5$) |
| **LAST TESTED:** | 09/30/2016 | | |
| **EXPIRY DATE:** | 09/30/2021 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

Received mm
2016-12-12
1x1.2 mL
F2-11

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

*FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE*

Certified By: _____ Date: 10/11/2016
B.G. Chittim

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*



Received date: 2017/02/22 2x1.2 mL MZ
Received date: 2017/05/02 1x1.2 mL ssv
Received date: 2017/05/31 2x1.2 mL ssv
Received date: 2017/09/07 2x1.2 mL TRW
Received date: 2017/10/25 2x1.2 mL
Date Received: 2017.12.06 - 1 ampoule - HPLC

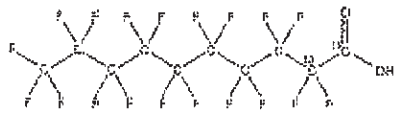
# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
### DOCUMENTATION

**PRODUCT CODE:** MPFDA
**COMPOUND:** Perfluoro-n-[1,2-$^{13}C_2$]decanoic acid

**LOT NUMBER:** MPFDA0717

**STRUCTURE:**



**CAS #:** Not available

2018/01/16
1 ampoule
E.G

**MOLECULAR FORMULA:** $^{12}C_8{}^{13}C_2HF_{15}O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml

**MOLECULAR WEIGHT:** 516.07
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 07/13/2017
**EXPIRY DATE:** (mm/dd/yyyy) 07/13/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ (1,2-$^{13}C_2$)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of $^{13}C_4$-$^{13}$FNA.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 07/14/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr, Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Form# 27, Issued 2016-11-16
Revisions, Revised 2017-03-05

MPFDA0717 (1 of 4)
rev 0

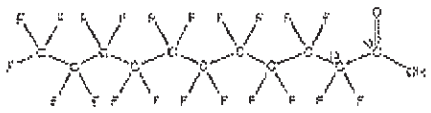
Date Received: 2017.12.06 - 1 ampoule - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** MPFUdA
**COMPOUND:** Perfluoro-n-[1,2-$^{13}C_2$]undecanoic acid
**LOT NUMBER:** MPFUdA1116

**STRUCTURE:**
**CAS #:** Not available



**MOLECULAR FORMULA:** $^{13}C_2{}^{13}C_1HF_{21}O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml
**MOLECULAR WEIGHT:** 566.08
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** (mm/dd/yyyy) 11/22/2016
**EXPIRY DATE:** (mm/dd/yyyy) 11/22/2021
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place
**ISOTOPIC PURITY:** ≥99% $^{13}C$ (1,2-$^{13}C_2$)

Received 2017/05/22
1 x 1.2 mL (TZ-4)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Presence of 1-$^{13}C_1$-PFUdA (~1%; see Figure 2), 2-$^{13}C_1$-PFUdA (~1%), and PFUdA (~0.2%; see Figure 2) are due to the isotopic purity of the $^{13}C$-precursor.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

Certified By: B.G. Chittim
Date: 12/07/2016 (mm/dd/yyyy)

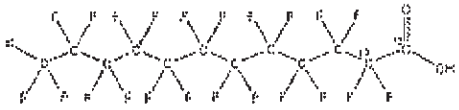
*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Received 2017/05/02 2x1.2 mL HPLC
Date Received: 2017.05.02 - 1 x 1.2ml - HPLC
Date Received: 2017.06.29 - 1 x 1.2ml - HPLC
Date Received: 2017.09/07 - 1 x 1.2ml - HPLC
Date Received: 2017.02/22 - 1 x 1.2ml - HPLC
Date Received: 2017.12.06 - 1 ampoule - HPLC
Date Received: 2018.01.16 - 1 ampoule - HPLC

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | MPFDoA | **LOT NUMBER:** | MPFDoA0517 |
| **COMPOUND:** | Perfluoro-n-[1,2-$^{13}C_2$]dodecanoic acid | | |
| **STRUCTURE:** | | **CAS #:** | Not available |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_{10}HF_{23}O_2$ | **MOLECULAR WEIGHT:** | 616.08 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol<br>Water (<1%) |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ (1,2-$^{13}C_2$) |
| **LAST TESTED:** | 05/23/2017 | | |
| **EXPIRY DATE:** | 05/23/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

Transfer
2017/01/25, 652-

**ADDITIONAL INFORMATION:**

- See page 2 for further details
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

*FOR LABORATORY USE ONLY; NOT FOR HUMAN OR DRUG USE*

Certified By: _____ Date: 05/26/2017
S.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*



Date Received: 2017.09.07 - 1 ampoule - HPLC
Date Received: 2017.12.06 - 1 ampoule - HPLC
Date Received: 2018.01.16 - 1 ampoule - HPLC

WELLINGTON LABORATORIES

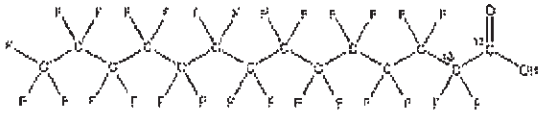
# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** M2PFTeDA
**COMPOUND:** Perfluoro-n-[1,2-$^{13}C_2$]tetradecanoic acid

**LOT NUMBER:** M2PFTeDA1117

**STRUCTURE:**

**CAS #:** Not available



2018/01/16
1 ampoule
E. G

**MOLECULAR FORMULA:** $^{13}C_2{}^{13}C_{12}HF_{27}O_2$
**CONCENTRATION:** 50 ± 2.5 µg/ml

**MOLECULAR WEIGHT:** 716.10
**SOLVENT(S):** Methanol
Water (<1%)

**CHEMICAL PURITY:** >98%
**LAST TESTED:** 11/30/2017
**EXPIRY DATE:** 11/30/2022
**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

**ISOTOPIC PURITY:** ≥99% $^{13}C$ (1,2-$^{13}C_2$)

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

Certified By: _____ Date: 12/01/2017
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Form# 21, Issued 2004-11-30
Revision 4, Revised 2017-03-06

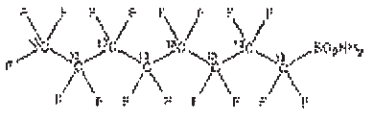
M2PFTeDA1117 (1 of 4)
rev0

Date Received: 2017.12.06 - 1 ampoule - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | M8FOSA-I | **LOT NUMBER:** | M8FOSA1017I |
| **COMPOUND:** | Perfluoro-1-[$^{13}C_8$]octanesulfonamide | | |
| **STRUCTURE:** | | **CAS #:** | Not available |



20180116
1 ampoule
4.6

| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_8H_2F_{17}NO_2S$ | **MOLECULAR WEIGHT:** | 507.09 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Isopropanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($^{13}C_8$) |
| **LAST TESTED:** | 10/11/2017 | | |
| **EXPIRY DATE:** | 10/11/2022 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains ~ 1.1% of perfluoro-1-[$^{13}C_8$]octanesulfonamide and ~ 0.01% of perfluoro-1-[$^{13}C_7$]heptanesulfonamide.

***FOR LABORATORY USE ONLY; NOT FOR HUMAN OR DRUG USE***

Certified By: _____ Date: 10/20/2017
S.O. Childs, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Form 07 Issued 2004-11-19
Revised 4, Revised 2017-03-06



Date Received: 2017.12.06 - 1 ampoule - HPLC

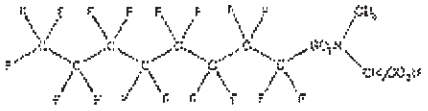
Ampoule: 1 TRW
Date received: 2017/09/12

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** d3-N-MeFOSAA
**LOT NUMBER:** d3NMeFOSAA0517
**COMPOUND:** N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid

**STRUCTURE:**
**CAS #:** Not available



**MOLECULAR FORMULA:** $C_{11}D_3H_2F_{17}NO_4S$
**MOLECULAR WEIGHT:** 574.23
**CONCENTRATION:** 50 ± 2.5 µg/ml
**SOLVENT(S):** Methanol
Water (<1%)
**CHEMICAL PURITY:** >98%
**ISOTOPIC PURITY:** ≥98% $^2H_3$
**LAST TESTED:** 05/19/2017
**EXPIRY DATE:** 05/19/2022
**RECOMMENDED STORAGE:** Refrigerate ampoule

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

*FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE*

Certified By: _____ Date: 05/31/2017
B. G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Revision 27, Issued 2016-11-10
Revision 4, Revised 2017-03-16



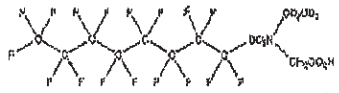
Date Received: 2017.10.25 - 1 ampoules - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** d5-N-EtFOSAA **LOT NUMBER:** d5NEtFOSAA1116
**COMPOUND:** N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid

**STRUCTURE:** **CAS #:** Not available



**MOLECULAR FORMULA:** $C_{10}D_4H_5F_{17}NO_4S$ **MOLECULAR WEIGHT:** 590.26
**CONCENTRATION:** 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)
**CHEMICAL PURITY:** >98% **ISOTOPIC PURITY:** ≥98% $^{2}H_4$
**LAST TESTED:** 11/22/2016
**EXPIRY DATE:** 11/22/2021
**RECOMMENDED STORAGE:** Refrigerate ampoule

Received 2016/12/16 17 1.2 ml FD-59

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent the conversion of the acetic acid moiety to the methyl ester.

*FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE*

Certified By: B.G. Chittim Date: 12/01/2016

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Form 22, Issued 2004-12-10
Revision 3, Revised 2012-03-24

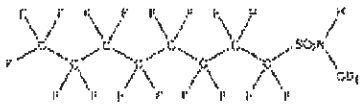


Date Received: 2017/10/25 2x1.2 ml

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | d-N-MeFOSA-M | **LOT NUMBER:** | dNMeFOSA0417M |
| **COMPOUND:** | N-methyl-$d_3$-perfluoro-1-octanesulfonamide | | |
| **STRUCTURE:** | | **CAS #:** | Not available |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_9D_3HF_{17}NO_2S$ | **MOLECULAR WEIGHT:** | 516.19 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥98% $^2H_3$ |
| **LAST TESTED:** | 04/20/2017 | | |
| **EXPIRY DATE:** | 04/20/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

Fz
2 ampoule
HPLC
2017/06/29
DPS

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1. LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

*FOR LABORATORY USE ONLY; NOT FOR HUMAN OR DRUG USE*

**Certified By:** _____ **Date:** 04/24/2017
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Received date 2017/07/21 2 x 1.2mL HPLC
Received date 2017/08/09 1 x 1.2mL HPLC
Received date 2017/09/07 1 x 1.2mL HPLC
RECEIVED: 2017/09/27 1X2 AMPULES HPLC
Date Received: 2017.10.25 - 1 ampoule - HPLC
RECEIVED: 2017/11/07 1 x 1.2ml HPLC
RECEIVED: 2017/11/07 1 x 1.2ml HPLC
Date Received: 2017.12.06 - 1 ampoule - HPLC

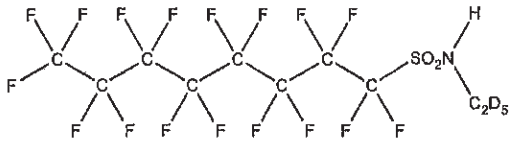
# WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

**PRODUCT CODE:** d-N-EtFOSA-M
**COMPOUND:** N-ethyl-$d_5$-perfluoro-1-octanesulfonamide
**LOT NUMBER:** dNEtFOSA1017M

**STRUCTURE:**

**CAS #:** Not available



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{10}D_5HF_{17}NO_2S$ | **MOLECULAR WEIGHT:** | 532.23 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥98% $^2H_5$ |
| **LAST TESTED:** (mm/dd/yyyy) | 10/11/2017 | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/11/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

Date received
2017/12/06
2 Ampules

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

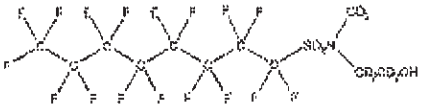
**Certified By:** _____ **Date:** 11/06/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | d7-N-MeFOSE-M | **LOT NUMBER:** | d7NMeFOSE1617M |
| **COMPOUND:** | 2-(N-methyl-d3-perfluoro-1-octanesulfonamido)ethan-d4-ol | | |
| **STRUCTURE:** | | **CAS #:** | Not available |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $C_{11}D_7HF_{17}NO_3S$ | **MOLECULAR WEIGHT:** | 564.27 |
| **CONCENTRATION:** | 50 ± 2.5 µg/ml | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥98% $^2H_7$ |
| **LAST TESTED:** (mm/dd/yyyy) | 10/13/2017 (HRGC/LRMS)<br>10/12/2017 (LC/MS) | | |
| **EXPIRY DATE:** (mm/dd/yyyy) | 10/13/2022 | | |
| **RECOMMENDED STORAGE:** | Store ampoule in a cool, dark place | | |

1 Ampoule
HPLC
2017/11/07

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: HRGC/LRMS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (TIC and Mass Spectrum)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 11/03/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Created 07, Revised 2014-11-14
Updated 04, Revised 2017-03-08

Page 1 of 3
rev 0

Date Received: 2017.12.06 - 1 ampoule - HPLC
Date Received: 2018.01.16 - 1 ampoule - HPLC

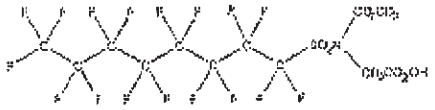
WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS DOCUMENTATION

**PRODUCT CODE:** d9-N-EtFOSE-M **LOT NUMBER:** d9NEtFOSE1017M

**COMPOUND:** 2-(N-ethyl-d5-perfluoro-1-octanesulfonamido)ethan-d4-ol

**STRUCTURE:** **CAS #:** Not available



**MOLECULAR FORMULA:** $C_{10}D_4HF_{17}NO_3S$ **MOLECULAR WEIGHT:** 580.31

**CONCENTRATION:** 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol

**CHEMICAL PURITY:** >98% **ISOTOPIC PURITY:** ≥98% $^2H_4$

**LAST TESTED:** 10/13/2017 (HRGC/LRMS)
10/12/2017 (LC/MS)

**EXPIRY DATE:** 10/13/2022

**RECOMMENDED STORAGE:** Store ampoule in a cool, dark place

1 ampoule
HPLC
2017/11/07

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: HRGC/LRMS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (TIC and Mass Spectrum)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.
- Contains ~ 1.2% of N-ethyl-d5-perfluoro-1-octanesulfonamide.

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** [signature] **Date:** 10/18/2017
S.G. Chalim, General Manager

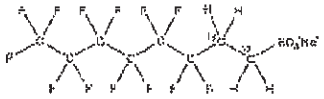
*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*

Date Received: 2017.12.06 - 1 ampoule - HPLC
Date Received: 2018.01.16 - 1 ampoule - HPLC

WELLINGTON LABORATORIES

# CERTIFICATE OF ANALYSIS
## DOCUMENTATION

| | | | |
|---|---|---|---|
| **PRODUCT CODE:** | M2-6:2FTS | **LOT NUMBER:** | M262FTS0217 |
| **COMPOUND:** | Sodium 1H,1H,2H,2H-perfluoro-[1,2-$^{13}C_2$]octane sulfonate | | |
| **STRUCTURE:** | | **CAS #:** | Not available |



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_6H_2F_{13}SO_3Na$ | **MOLECULAR WEIGHT:** | 452.13 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/mL (Na salt)<br>47.5 ± 2.4 µg/mL (M2-6:2FTS anion) | **SOLVENT(S):** | Methanol |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ ($1,2\text{-}^{13}C_2$) |
| **LAST TESTED:** | 02/17/2017 | | |
| **EXPIRY DATE:** | 02/17/2022 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

HPLC 2017/05/01 2x1.2 mL

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- The native 6:2FTS contains 4.22% of $^{34}S$ (due to natural isotopic abundance) therefore both native 6:2FTS and M2-6:2FTS will produce signals in the m/z 429 to m/z 409 channel during SRM analysis. We recommend using the m/z 429 to m/z 81 transition to monitor for M2-6:2FTS during quantitative analysis as it will be free of any native contribution (see Figure 2).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 02/24/2017
B.G. Chittim

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2435 • Fax: 519-822-2849 • info@well-labs.com*



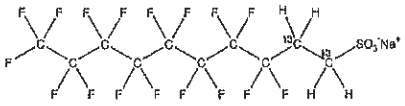
Date Recieved:2017/05/02 2x1.2ml HPLC
Date Recieved:2017/06/29 2x1.2ml HPLC
Received date 2017/07/21 2 x 1.2mL HPLC
Received date 2017/09/07 1 x 1.2mL HPLC
Received date:2017/09/27 1x2 ampules HPLC
Received date:2017/10/25 1x2 ampules HPLC
Received date:2017/11/07 1x2 ampules HPLC
Date Received: 2017.11.07 - 1 ampule - HPLC
Date Received: 2017.12.06 - 2 ampoule - HPLC
Date Received: 2018.01.16 -1 ampoule - HPLC

# WELLINGTON LABORATORIES

## CERTIFICATE OF ANALYSIS
DOCUMENTATION

**PRODUCT CODE:** M2-8:2FTS **LOT NUMBER:** M282FTS0717
**COMPOUND:** Sodium 1H,1H,2H,2H-perfluoro-[1,2-$^{13}C_2$]decane sulfonate

**STRUCTURE:** **CAS #:** Not available



| | | | |
|---|---|---|---|
| **MOLECULAR FORMULA:** | $^{13}C_2{}^{12}C_8H_4F_{17}SO_3Na$ | **MOLECULAR WEIGHT:** | 552.15 |
| **CONCENTRATION:** | 50.0 ± 2.5 µg/ml (Na salt) | **SOLVENT(S):** | Methanol |
| | 47.9 ± 2.4 µg/ml (M2-8:2FTS anion) | | |
| **CHEMICAL PURITY:** | >98% | **ISOTOPIC PURITY:** | ≥99% $^{13}C$ |
| **LAST TESTED:** (mm/dd/yyyy) | 07/05/2017 | | ($1,2\text{-}^{13}C_2$) |
| **EXPIRY DATE:** (mm/dd/yyyy) | 07/05/2022 | | |
| **RECOMMENDED STORAGE:** | Refrigerate ampoule | | |

2 ampules x 1.2 mL
HPLC
2017/07/21
FDS

**DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- The native 8:2FTS contains 4.22% of $^{34}S$ (due to natural isotopic abundance) therefore both native 8:2FTS and M2-8:2FTS will produce signals in the m/z 529 to m/z 509 channel during SRM analysis. We recommend using the m/z 529 to m/z 81 transition to monitor for M2-8:2FTS during quantitative analysis as it will be free of any native contribution (see Figure 2).

***FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE***

**Certified By:** _____ **Date:** 07/07/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

*Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA*
*519-822-2436 • Fax: 519-822-2849 • info@well-labs.com*



Date Recieved: 2017/07/21 2x1.2ml HPLC
Date Recieved: 2017/09/07 1x1.2ml HPLC
Received date: 2017/09/27 1x2 ampules HPLC
Received date: 2017/10/25 1x2 ampules HPLC
Date Received: 2017.11.07 - 1 ampule - HPLC
Date Received: 2018.01.16 -1 ampoule- HPLC
Date Received: 2017.12.06 - 2 ampoules - HPLC

# PREPARATION OF SPIKING STANDARD SOLUTION

**Solution No.:** SK-7377 Prep'n Date: 2018/01/30 Expiry Date: 2019/01/30 Discard Date: —

Replaces Solution No.: SK-7277 Replaced by Solution: _____ Chemist: LaV

Solution Name: Comp. PFC working Sol'n C Solvent(s): 0.3% NH4OH in MeOH

Solvent Supplier(s): Aldrich Solvent Lot No(s): See PRLRE108-327

Date Opened: See PRLRE108-327

Volumetric Flask Used: 25 mL Class A (5640) Volume: 25 mL **Spike Volume:** — uL / mL*

Syringe ID: Pipette K39876F

Storage Location and Conditions: F2-11

For extended mix of compounds, refer to table on: —

| Compound | Parent Solution No. | Parent Solution Conc'n. (ug/mL) | Aliquot Volume (uL / mL)* | Final Conc'n. (ug/mL) | Absolute Amount Spiked (ug / ng)* |
|---|---|---|---|---|---|
| Comp. PFC working Sol'n A | I-5297 | 1 | 2.5 | 100 ng/ml | — |
| | | | | 2018/01/30 | |

Notes:

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**Solution No.:** SK-7378 Prep'n Date: 2018/01/30 Expiry Date: 2018/04/07 Discard Date: 2018/04/08

Replaces Solution No.: SK-7088 Replaced by Solution: — Chemist: K

Solution Name: Glyphosate Solvent(s): LC-MS Grade Water

Solvent Supplier(s): EMD Millipore Corp. Solvent Lot No(s): 57297

Date Opened: 2018/01/29

Volumetric Flask Used: Class A (#5640) Volume: 50 mL **Spike Volume:** — uL / mL*

Syringe ID: G434346

Storage Location and Conditions: FD-59

For extended mix of compounds, refer to table on: —

| Compound | Parent Solution No. | Parent Solution Conc'n. (ug/mL) | Aliquot Volume (uL / mL)* | Final Conc'n. (ug/mL) | Absolute Amount Spiked (ug / ng)* |
|---|---|---|---|---|---|
| N-(Phosphonomethyl) glycine | S4212 | 3264 µg/ml | 0.383 | 25 µg/ml | — |
| | | | K | 2018/01/30 | |

Notes: Second source (for spiking and ICV)

K 2018/01/30

* = Specify Units



Do not write beneath any inserts or place any inserts on top of any raw data entered on this page. Initial and date all entries, corrections and inserts. Include ALL relevant traceable references on ALL inserts.

# PREPARATION OF SPIKING STANDARD SOLUTION

**Solution No.:** SK-7389 Prep'n Date: 2018/01/31 Expiry Date: 2019/01/31 Discard Date: _____

Replaces Solution No.: N/A Replaced by Solution: N/A Chemist: WBA

Solution Name: 1,4 DIOXANE Spk Solvent(s): Acetone

Solvent Supplier(s): Fisher Solvent Lot No(s): 174411

Date Opened: 2018/01/31

Volumetric Flask Used: class A Volume: 10 mL **Spike Volume:** 100ul uL / mL *

Syringe ID: 100ul ~~Lot~~ Lot # 579137-1

Storage Location and Conditions: 2018/1/31 F2-11, F2-35

For extended mix of compounds, refer to table on: _____

| Compound | Parent Solution No. | Parent Solution Conc'n. (ug/mL) | Aliquot Volume (uL mL) * | Final Conc'n. (ug/mL) | Absolute Amount Spiked (ug ng) * |
|---|---|---|---|---|---|
| 1,4 DIOXANE Spk | SK-7388 | 100 | 100 | 10 | – |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

2018/1/31

Notes: MDL study only

**Solution No.:** SK-7390 Prep'n Date: 2018/01/31 Expiry Date: 2019/01/31 Discard Date: _____

Replaces Solution No.: SK-7268 Replaced by Solution: _____ Chemist: GSZ

Solution Name: PFC SECOND SOURCE SPIKING SOL'N C Solvent(s): 0.3% NH4OH in MeOH

Solvent Supplier(s): See PRLRE 108-331 Solvent Lot No(s): See PRLRE 108-331

Date Opened: 2018/01/31

Volumetric Flask Used: 10ml Class A (5640) Volume: 10 mL **Spike Volume:** – uL / mL *

Syringe ID: Pipette J434346

Storage Location and Conditions: F2 11

For extended mix of compounds, refer to table on: –

| Compound | Parent Solution No. | Parent Solution Conc'n. (ug/mL) | Aliquot Volume (uL mL) * | Final Conc'n. (ug/mL) | Absolute Amount Spiked (ug ng) * |
|---|---|---|---|---|---|
| PFC SECOND SOURCE SPIKING SOL'N A | I-5299 | 1 | 1 | 100 ug/mL | – |
| | | | | | |
| | | | | | |
| | | | | | |

GSZ 2018/01/31

Notes:



Do not write beneath any inserts or place any inserts on top of any raw data entered on this page. Initial and date all entries, corrections and inserts. Include ALL relevant traceable references on ALL inserts.

# TUNE CHECK

**Instrument:** Agilent 6470 LC/MS/MS

**Instrument Serial Number:** SG1611G001

**Maxxam Instrument Identification:** LCMS04

**Mass Calibration Performed:** July 7, 2017

**Tune Check Performed:** July 10 & 11, 2017


Mass Assignment Reference Table _____ Page 2

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Analyte Product Ion Verification _____ Page 31

Extracted and Injection Internal Standard Precursor Ion Verification _____ Page 59

Extracted and Injection Internal Standard Product Ion Verification _____ Page 83


Reviewed by:

Adam Robinson, Supervisor – Liquid Chromatography

July 12 /2017
Date

Maxxam Analytics

# Mass Assignments – Analytes, Extracted Internal Standards and Injection Internal Standards

| Compound | Abbreviation | Precursor Ion (m/z) | Precursor Ion Formula | Quant Ion (m/z) | Quantitation Ion Formula | Confirmation Ion (m/z) | Confirmation Ion Formula |
|---|---|---|---|---|---|---|---|
| **Native Analytes** | | | | | | | |
| Perfluorobutanoic acid | PFBA | 212.9 | $[CF_3(CF_2)_2CO_2]^-$ | 169.0 | $[CF_3(CF_2)_2]^-$ | [1] N/A | N/A |
| Perfluorobutanesulfonate | PFBS | 298.9 | $[CF_3(CF_2)_3SO_3]^-$ | 79.9 | $[SO_3]^-$ | 98.9 | $[FSO_3]^-$ |
| Perfluoropentanoic acid | PFPeA | 262.9 | $[CF_3(CF_2)_3CO_2]^-$ | 218.9 | $[CF_3(CF_2)_3]^-$ | [1] N/A | N/A |
| Perfluorohexanoic acid | PFHxA | 313.0 | $[CF_3(CF_2)_4CO_2]^-$ | 269.0 | $[CF_3(CF_2)_4]^-$ | 119.0 | $[CF_3(CF_2)]^-$ |
| Perfluorohexanesulfonate | PFHxS | 398.9 | $[CF_3(CF_2)_5SO_3]^-$ | 79.9 | $[SO_3]^-$ | 98.9 | $[FSO_3]^-$ |
| Perfluoroheptanoic acid | PFHpA | 363.0 | $[CF_3(CF_2)_5CO_2]^-$ | 319.0 | $[CF_3(CF_2)_5]^-$ | 169.2 | $[CF_3(CF_2)_2]^-$ |
| Perfluoroheptanesulfonate | PFHpS | 448.9 | $[CF_3(CF_2)_6SO_3]^-$ | 79.9 | $[SO_3]^-$ | 99.0 | $[FSO_3]^-$ |
| Perfluorooctanoic acid | PFOA | 413.1 | $[CF_3(CF_2)_6CO_2]^-$ | 369.0 | $[CF_3(CF_2)_6]^-$ | 169.0 | $[CF_3(CF_2)_2]^-$ |
| Perfluorooctanesulfonate | PFOS | 498.8 | $[CF_3(CF_2)_7SO_3]^-$ | 79.9 | $[SO_3]^-$ | 98.9 | $[FSO_3]^-$ |
| Perfluorononanoic acid | PFNA | 462.9 | $[CF_3(CF_2)_7CO_2]^-$ | 419.0 | $[CF_3(CF_2)_7]^-$ | 219.1 | $[CF_3(CF_2)_3]^-$ |
| Perfluorodecanoic acid | PFDA | 513.0 | $[CF_3(CF_2)_8CO_2]^-$ | 469.1 | $[CF_3(CF_2)_8]^-$ | 218.9 | $[CF_3(CF_2)_3]^-$ |
| Perfluorodecanesulfonate | PFDS | 598.9 | $[CF_3(CF_2)_9SO_3]$- | 79.9 | $[SO_3]^-$ | 98.8 | $[FSO_3]^-$ |
| Perfluoroundecanoic acid | PFUnA | 562.9 | $[CF_3(CF_2)_9CO_2]^-$ | 519.0 | $[CF_3(CF_2)_9]^-$ | 269.2 | $[CF_3(CF_2)_4]^-$ |
| Perfluorododecanoic acid | PFDoA | 612.9 | $[CF_3(CF_2)_{10}CO_2]^-$ | 569.0 | $[CF_3(CF_2)_{10}]^-$ | 319.0 | $[CF_3(CF_2)_5]^-$ |
| Perfluorotridecanoic acid | PFTrDA | 663.0 | $[CF_3(CF_2)_{11}CO_2]^-$ | 619.0 | $[CF_3(CF_2)_{11}]^-$ | 318.9 | $[CF_3(CF_2)_5]^-$ |
| Perfluorotetradecanoic acid | PFTeDA | 713.0 | $[CF_3(CF_2)_{12}CO_2]^-$ | 669.0 | $[CF_3(CF_2)_{12}]^-$ | 319.2 | $[CF_3(CF_2)_5]^-$ |
| Perfluorooctane sulfonamide | PFOSA | 497.9 | $[CF_3(CF_2)_7SO_2NH]^-$ | 78.0 | $[SO_2N]^-$ | 478.0 | $[(CF_2)_8SO_2N]^-$ |
| N-methylperfluorooctane sulfonamide | MeFOSA | 511.9 | $[CF_3(CF_2)_7SO_2N(CH_3)]^-$ | 169.0 | $[CF_3(CF_2)_2]^-$ | 219.0 | $[CF_3(CF_2)_3]^-$ |
| N-ethylperfluorooctane sulfonamide | EtFOSA | 526.0 | $[CF_3(CF_2)_7SO_2N(C_2H_5)]^-$ | 169.0 | $[CF_3(CF_2)_2]^-$ | 219.0 | $[CF_3(CF_2)_3]^-$ |
| N-methylperfluorooctane sulfonamidoethanol | MeFOSE | 616.0 | $[CF_3(CF_2)_7SO_2N(CH_3)C_2H_4OH{\cdot}CH_3CO_2]^-$ | 59.0 | $[CH_3CO_2]^-$ | [1] N/A | N/A |
| N-ethylperfluorooctane sulfonamidoethanol | EtFOSE | 630.0 | $[CF_3(CF_2)_7SO_2N(C_2H_5)C_2H_4OH{\cdot}CH_3CO_2]^-$ | 59.0 | $[CH_3CO_2]^-$ | [1] N/A | N/A |
| N-methylperfluorooctanesufonamidoacetic acid | MeFOSAA | 570.1 | $[CF_3(CF_2)_7SO_2N(CH_3)CH_2CO_2]^-$ | 419.1 | $[CF_3(CF_2)_7]^-$ | 483.0 | $[CF_3(CF_2)_7SO_2]^-$ |
| N-ethylperfluorooctanesufonamidoacetic acid | EtFOSAA | 584.1 | $[CF_3(CF_2)_7SO_2N(CH_2CH_3)CH_2CO_2]^-$ | 419.1 | $[CF_3(CF_2)_7]^-$ | 483.0 | $[CF_3(CF_2)_7SO_2]^-$ |
| 6:2 Fluorotelomersulfonate | 6:2FTS | 427.0 | $[CF_3(CF_2)_5CH_2CH_2SO_3]^-$ | 407.0 | $[CF_3(CF_2)_4CFCHCH_2SO_3]^-$ | 80.9 | $[SO_2OH]^-$ |
| 8:2 Fluorotelomersulfonate | 8:2FTS | 526.9 | $[CF_3(CF_2)_7CH_2CH_2SO_3]^-$ | 507.0 | $[CF_3(CF_2)_6CFCHCH_2SO_3]^-$ | 80.9 | $[SO_2OH]^-$ |
| **Mass-labeled Extracted Internal Standards** | | | | | | | |
| $^{13}C_4$-Perfluorobutanoic acid | MPFBA | 216.9 | $[^{13}CF_3(^{13}CF_2)_2{}^{13}CO_2]^-$ | 172.0 | $[^{13}CF_3(^{13}CF_2)_2]^-$ | N/A | N/A |

| Compound | Abbreviation | Precursor Ion (m/z) | Precursor Ion Formula | Quant Ion (m/z) | Quantitation Ion Formula | Confirmation Ion (m/z) | Confirmation Ion Formula |
|---|---|---|---|---|---|---|---|
| $^{13}C_5$-Perfluoropentanoic acid | MPFPeA | 267.9 | $[^{13}CF_3(^{13}CF_2)_3{}^{13}CO_2]^-$ | 223.0 | $[^{13}CF_3(^{13}CF_2)_3]^-$ | N/A | N/A |
| $^{13}C_2$-Perfluorohexanoic acid | MPFHxA | 314.9 | $[CF_3(CF_2)_3(^{13}CF_2){}^{13}CO_2]^-$ | 270.0 | $[CF_3(CF_2)_3{}^{13}CF_2]^-$ | N/A | N/A |
| $^{18}O_2$-Perfluorohexanesulfonate | MPFHxS | 402.9 | $[CF_3(CF_2)_5S(^{18}O)_2O]^-$ | 84.0 | $[S(^{18}O)_2O]^-$ | N/A | N/A |
| $^{13}C_4$-Perfluoroheptanoic acid | MPFHpA | 366.9 | $[CF_3CF_2(^{13}CF_2)_3{}^{13}CO_2]^-$ | 322.0 | $[CF_3CF_2(^{13}CF_2)_4]^-$ | N/A | N/A |
| $^{13}C_4$-Perfluorooctanoic acid | MPFOA | 416.9 | $[CF_3(CF_2)_3(^{13}CF_2)_3{}^{13}CO_2]^-$ | 372.0 | $[CF_3(CF_2)_3(^{13}CF_2)_3]^-$ | N/A | N/A |
| $^{13}C_4$-Perfluorooctanesulfonate | MPFOS | 502.9 | $[CF_3(CF_2)_3(^{13}CF_2)_4SO_3]^-$ | 79.9 | $[SO_3]^-$ | N/A | N/A |
| $^{13}C_5$-Perfluorononanoic acid | MPFNA | 467.9 | $[CF_3(CF_2)_3(^{13}CF_2)_4{}^{13}CO_2]^-$ | 423.0 | $[CF_3(CF_2)_3(^{13}CF_2)_4]^-$ | N/A | N/A |
| $^{13}C_2$-Perfluorodecanoic acid | MPFDA | 514.9 | $[CF_3(CF_2)_7(^{13}CF_2){}^{13}CO_2]^-$ | 470.0 | $[CF_3(CF_2)_7{}^{13}CF_2]^-$ | N/A | N/A |
| $^{13}C_2$-Perfluoroundecanoic acid | MPFUnA | 564.9 | $[CF_3(CF_2)_8(^{13}CF_2){}^{13}CO_2]^-$ | 520.0 | $[CF_3(CF_2)_8{}^{13}CF_2]^-$ | N/A | N/A |
| $^{13}C_2$-Perfluorododecanoic acid | MPFDoA | 614.9 | $[CF_3(CF_2)_9(^{13}CF_2){}^{13}CO_2]^-$ | 570.0 | $[CF_3(CF_2)_9{}^{13}CF_2]^-$ | N/A | N/A |
| $^{13}C_2$-Perfluorotetradecanoic acid | MPFTeDA | 714.9 | $[CF_3(CF_2)_{12}(^{13}CF_2){}^{13}CO_2]^-$ | 669.9 | $[CF_3(CF_2)_{12}]^-$ | N/A | N/A |
| $^{13}C_8$-Perfluorooctane sulfonamide | MPFOSA | 505.8 | $[^{13}CF_3(^{13}CF_2)_7SO_2NH]^-$ | 77.9 | $[SO_2N]^-$ | N/A | N/A |
| N-methyl-$d_3$-perfluorooctanesulfonamide | $D_3$-MeFOSA | 514.9 | $[CF_3(CF_2)_7SO_2N(CD_3)]^-$ | 168.9 | $[CF_3(CF_2)_2]^-$ | N/A | N/A |
| N-ethyl-$d_5$-perfluorooctanesulfonamide | $D_5$-EtFOSA | 531.0 | $[CF_3(CF_2)_7SO_2N(C_2D_5)]^-$ | 168.9 | $[CF_3(CF_2)_2]^-$ | N/A | N/A |
| N-methyl-$d_3$-perfluorooctanesulfonamidoethanol-$d_4$ | $D_7$-MeFOSE | 623.1 | $[CF_3(CF_2)_7SO_2N(CD_3)CD_2CD_2OH \cdot CH_3CO_2]^-$ | 59.0 | $[CH_3CO_2]^-$ | N/A | N/A |
| N-ethyl-$d_5$-perfluorooctanesulfonamidoethanol-$d_4$ | $D_9$-EtFOSE | 639.1 | $[CF_3(CF_2)_7SO_2N(CD_2CD_3)CD_2CD_2OH \cdot CH_3CO_2]^-$ | 59.0 | $[CH_3CO_2]^-$ | N/A | N/A |
| N-methyl-$d_3$-perfluorooctanesulfonamidoacetic acid | $D_3$-MeFOSAA | 573.1 | $[CF_3(CF_2)_7SO_2N(CD_3)CH_2CO_2]^-$ | 419.1 | $[CF_3(CF_2)_7]^-$ | N/A | N/A |
| N-ethyl-$d_5$-perfluorooctanesulfonamidoacetic acid | $D_5$-EtFOSAA | 589.2 | $[CF_3(CF_2)_7SO_2N(CD_2CD_3)CH_2CO_2]^-$ | 419.0 | $[CF_3(CF_2)_7]^-$ | N/A | N/A |
| $^{13}C_2$-Fluorotelomersulfonate (6:2) | M2-6:2FTS | 429.0 | $[CF_3(CF_2)_5(^{13}CH_2)_2SO_3]^-$ | 80.9 | $[SO_2OH]^-$ | N/A | N/A |
| $^{13}C_2$-Fluorotelomersulfonate (8:2) | M2-8:2FTS | 528.9 | $[CF_3(CF_2)_7(^{13}CH_2)_2SO_3]^-$ | 80.9 | $[SO_2OH]^-$ | N/A | N/A |
| **Injection Internal Standards** | | | | | | | |
| $^{13}C_6$-Perfluorohexanoic acid | $^{13}C_6$-PFHxA | 318.9 | $[^{13}CF_3(^{13}CF_2)_4{}^{13}CO_2]^-$ | 274.0 | $[^{13}CF_3(^{13}CF_2)_4]^-$ | N/A | N/A |
| $^{13}C_9$-Perfluorodecanoic acid | $^{13}C_9$-PFDA | 521.9 | $[CF_3(^{13}CF_2)_8{}^{13}CO_2]^-$ | 477.1 | $[CF_3(^{13}CF_2)_8]^-$ | N/A | N/A |

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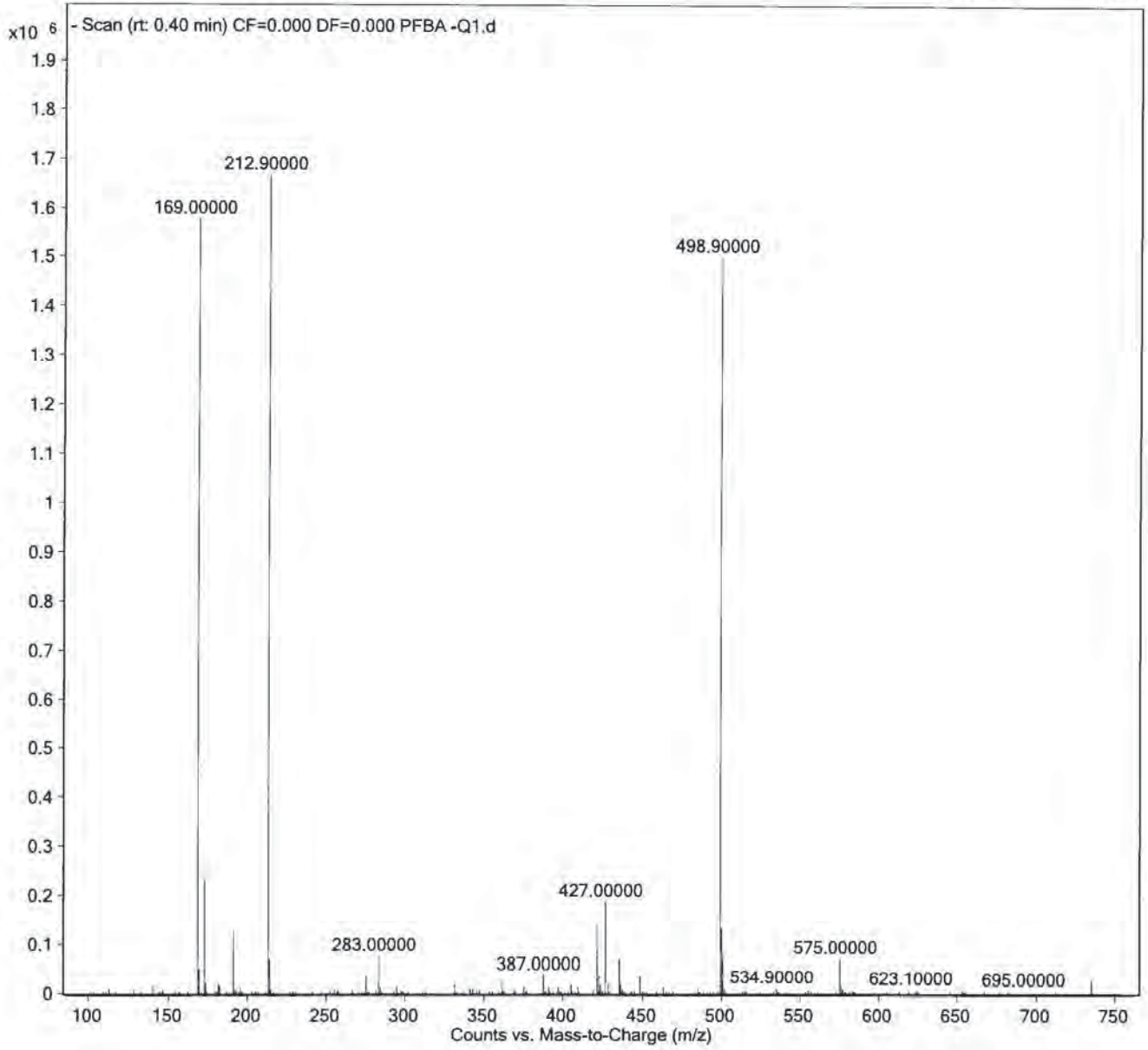
# Analyte Precursor Ion Verification

| | | | | | |
|---|---|---|---|---|---|
| **Sample Name** | PFBA -Q1 | **Position** | P1-A1 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFBA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 4:37:04 PM |

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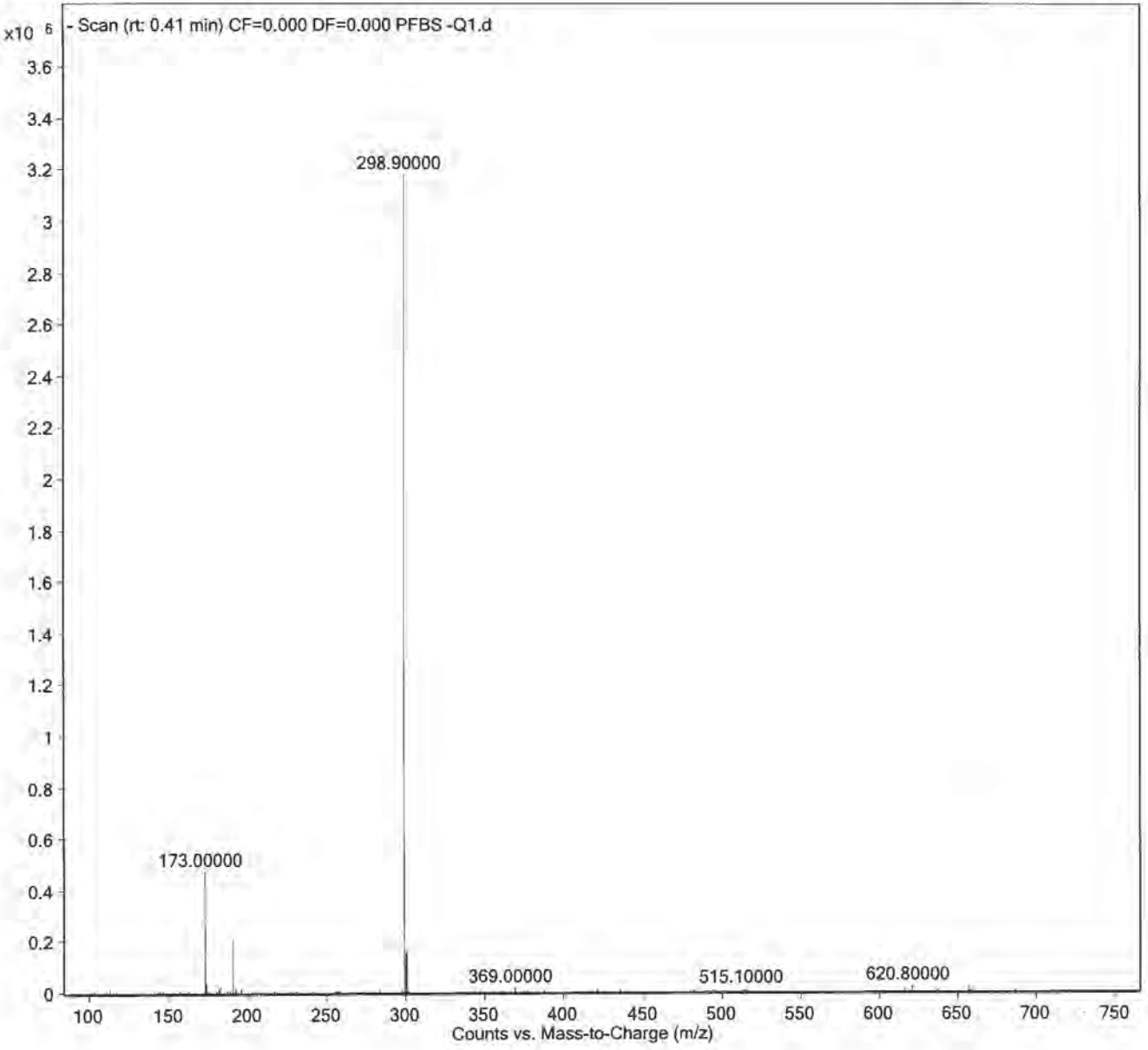
|---|---|---|---|---|---|
| **Sample Name** | PFBS -Q1 | **Position** | P1-A2 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFBS -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 4:42:36 PM |




Maxxam Analytics

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|---|---|---|---|---|---|
| **Sample Name** | PFPeA -Q1 | **Position** | P1-A3 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFPeA -Q1.d |
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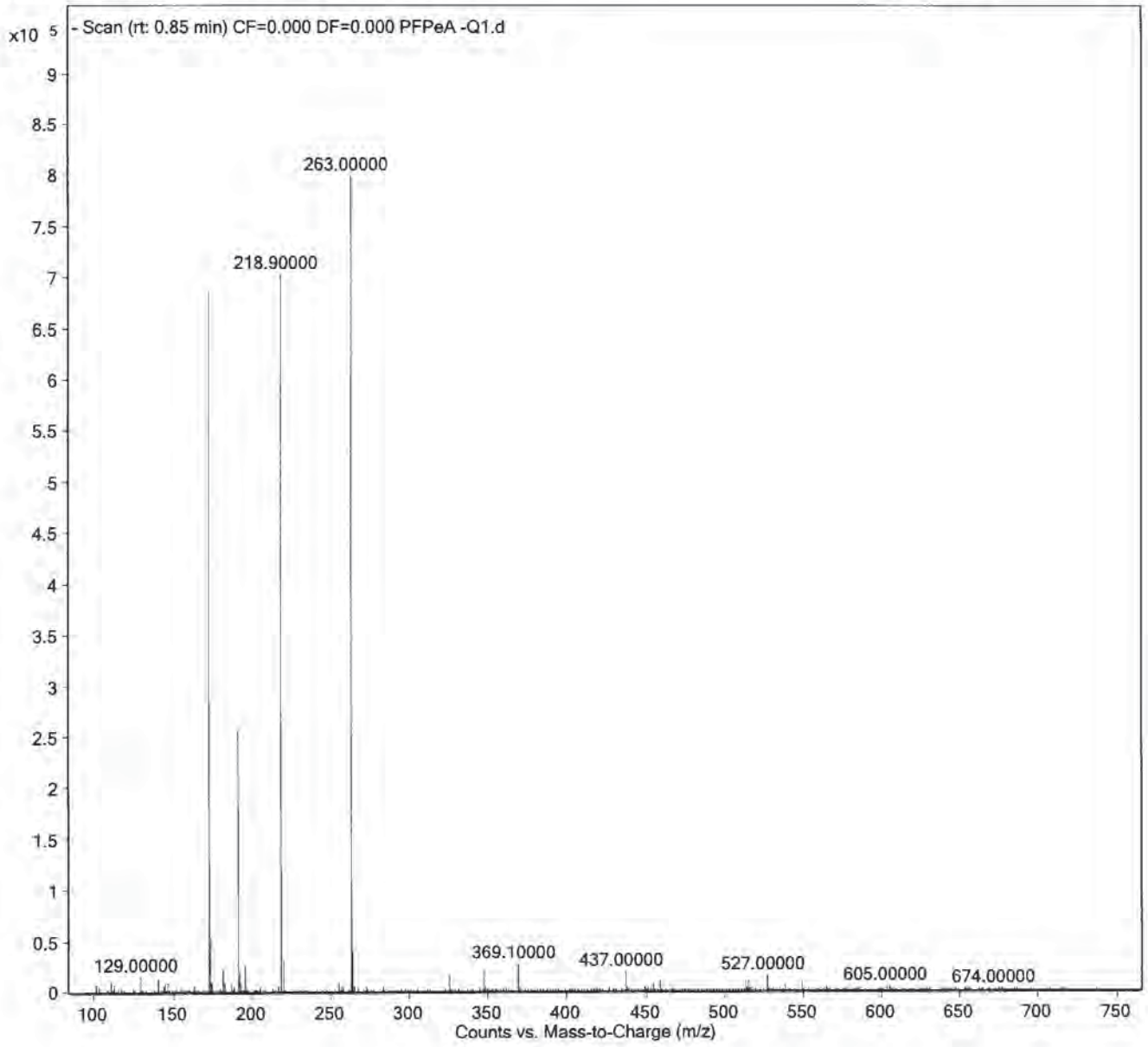


MaxXam Analytics

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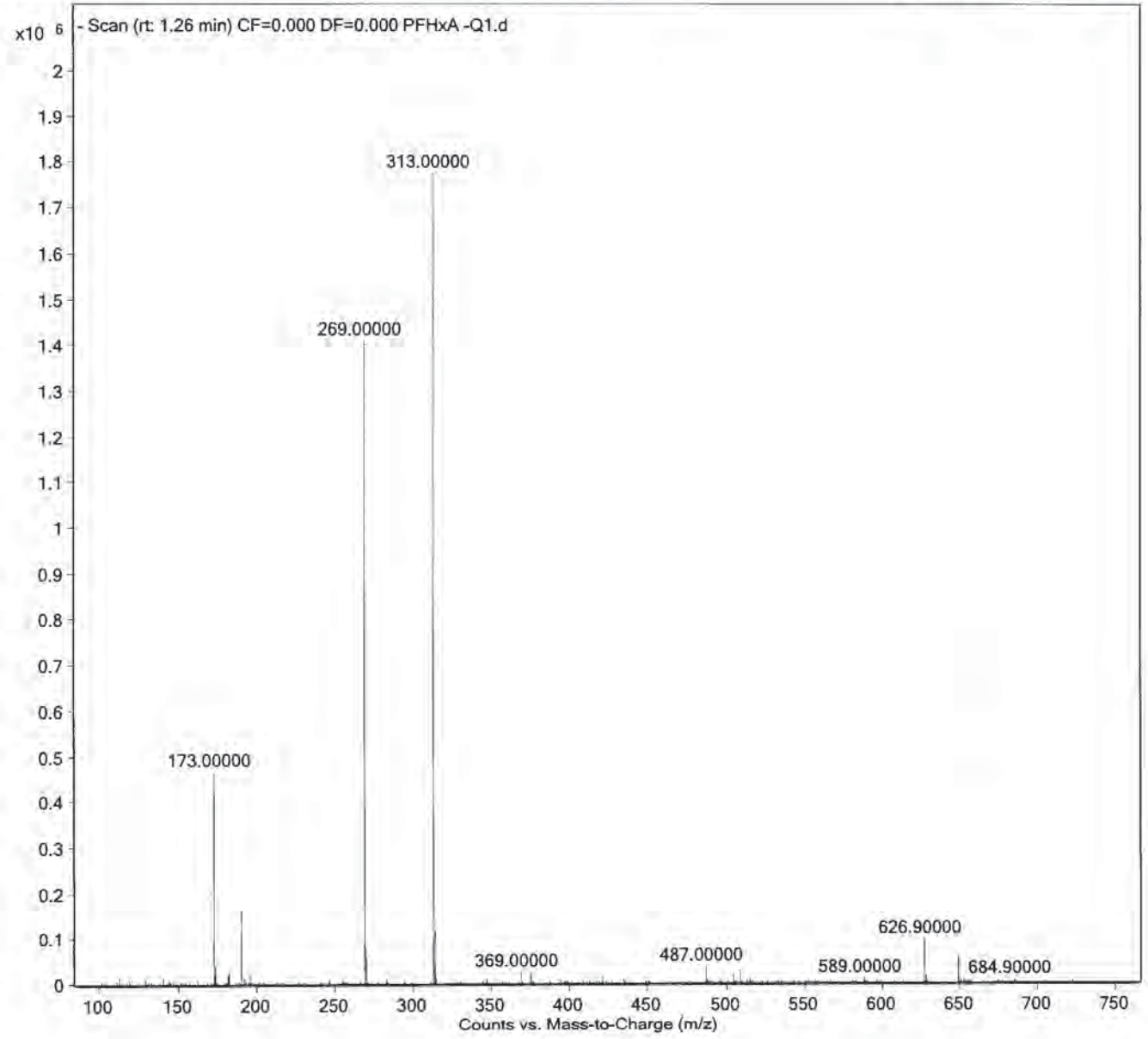
|---|---|---|---|---|---|
| **Sample Name** | PFHxA -Q1 | **Position** | P1-A4 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFHxA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 4:53:36 PM |

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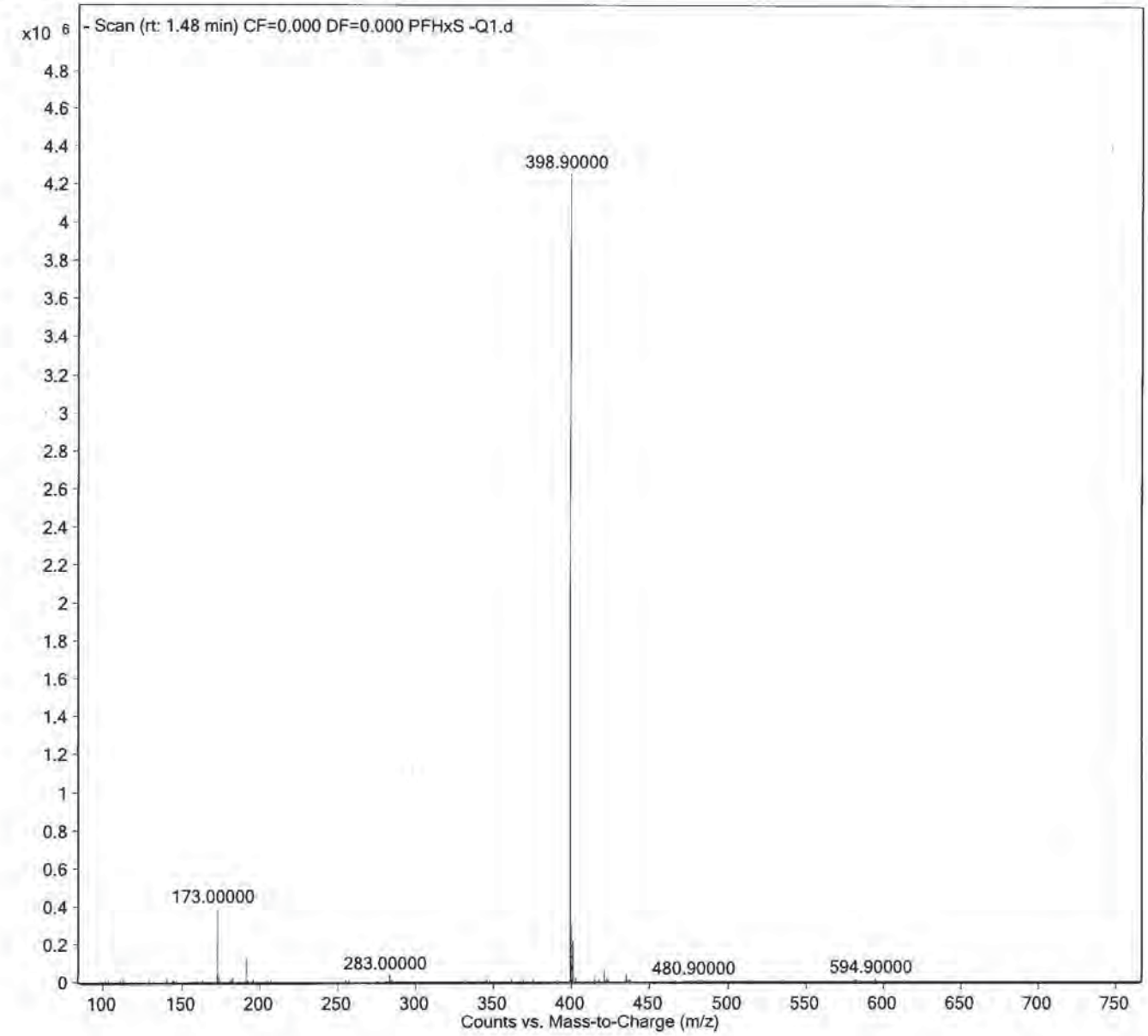
|---|---|---|---|---|---|
| **Sample Name** | PFHxS -Q1 | **Position** | P1-A5 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFHxS -Q1.d |
| **CQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 4:59:06 PM |




Maxxam Analytics

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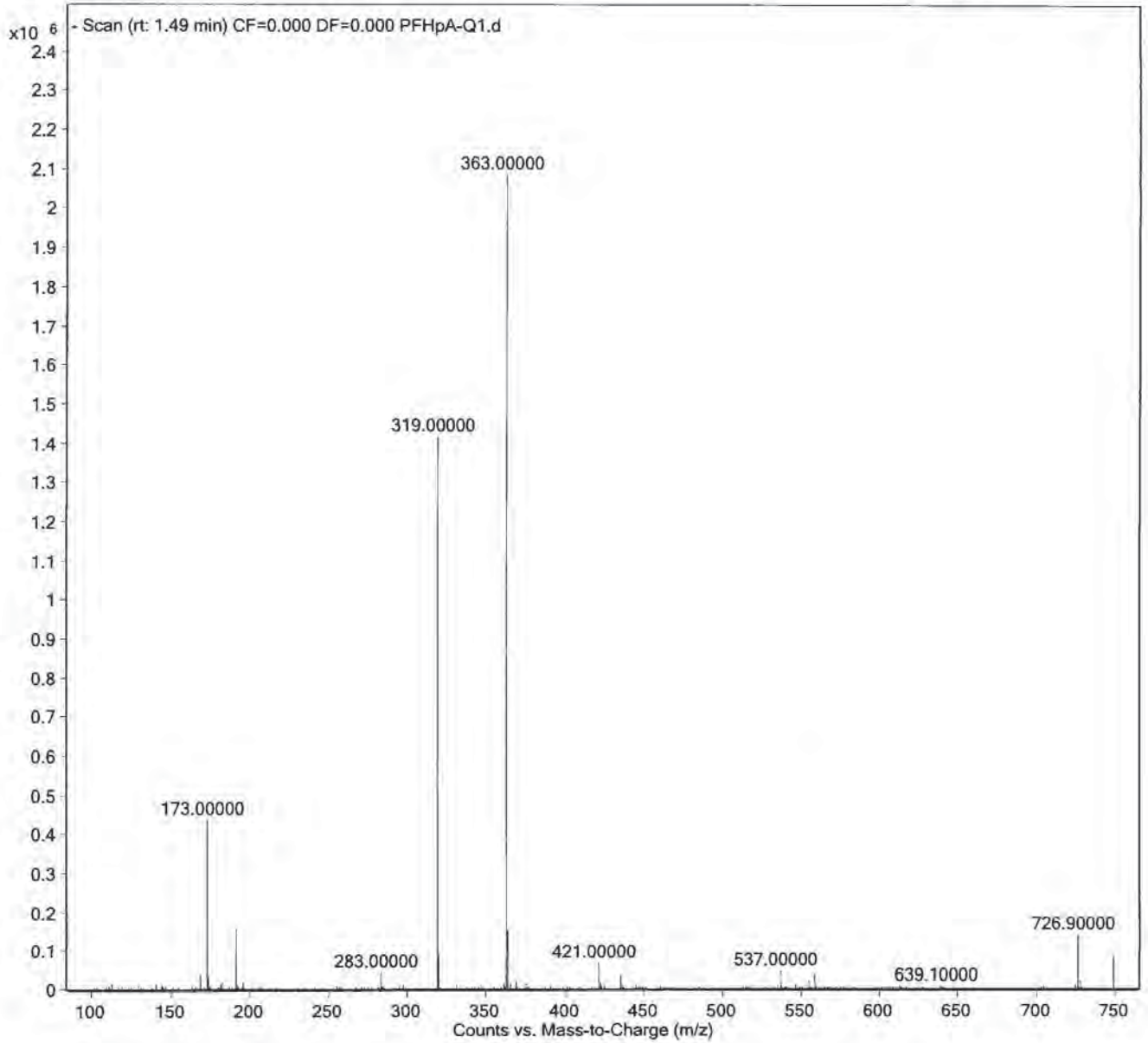
|---|---|---|---|---|---|
| **Sample Name** | PFHpA-Q1 | **Position** | P1-A6 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFHpA-Q1.d |
| **CQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 5:04:36 PM |




Maxxam Analytics

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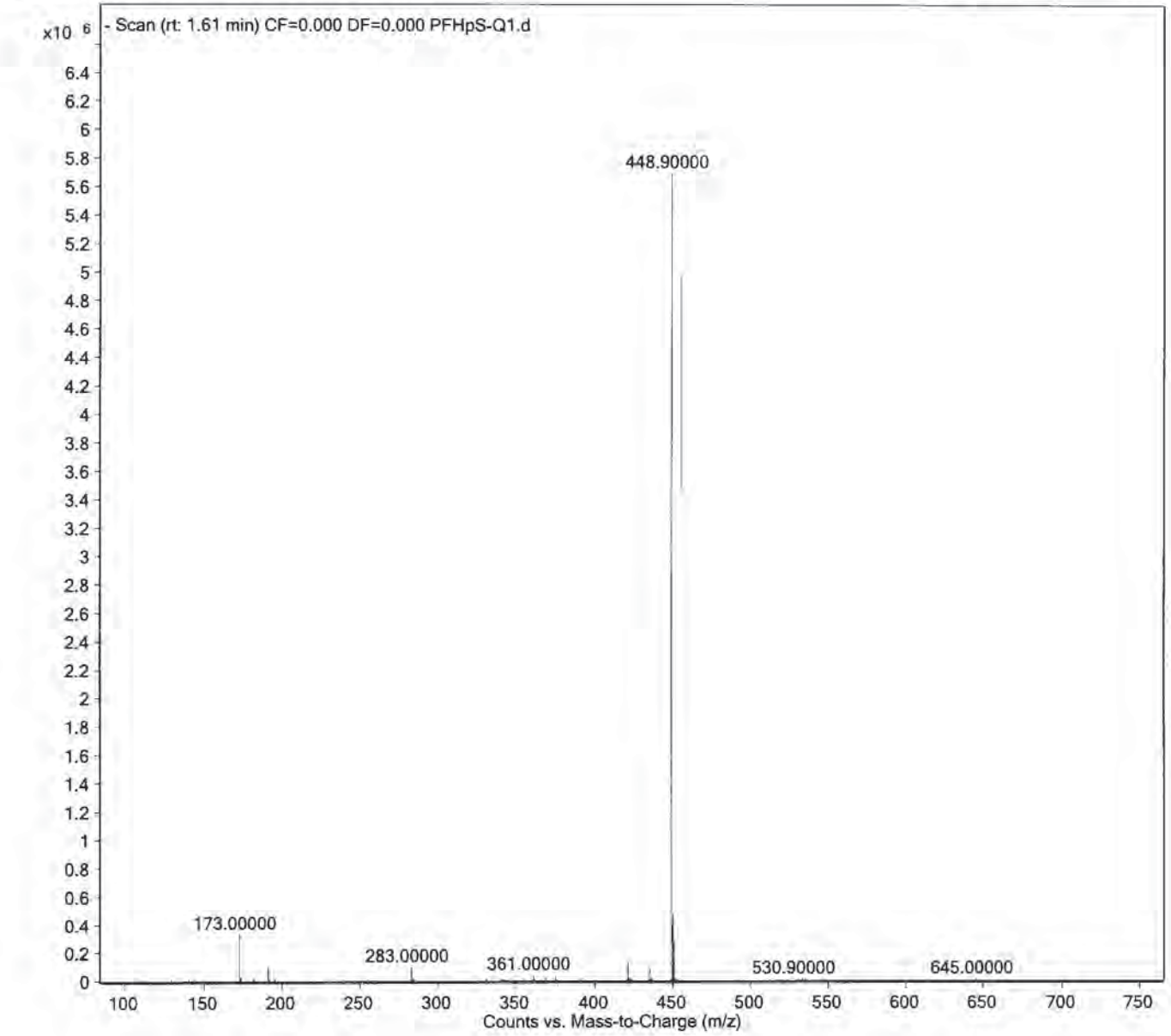
|---|---|---|---|---|---|
| **Sample Name** | PFHpS-Q1 | **Position** | P1-A7 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFHpS-Q1.d |
| **LCQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 5:10:06 PM |

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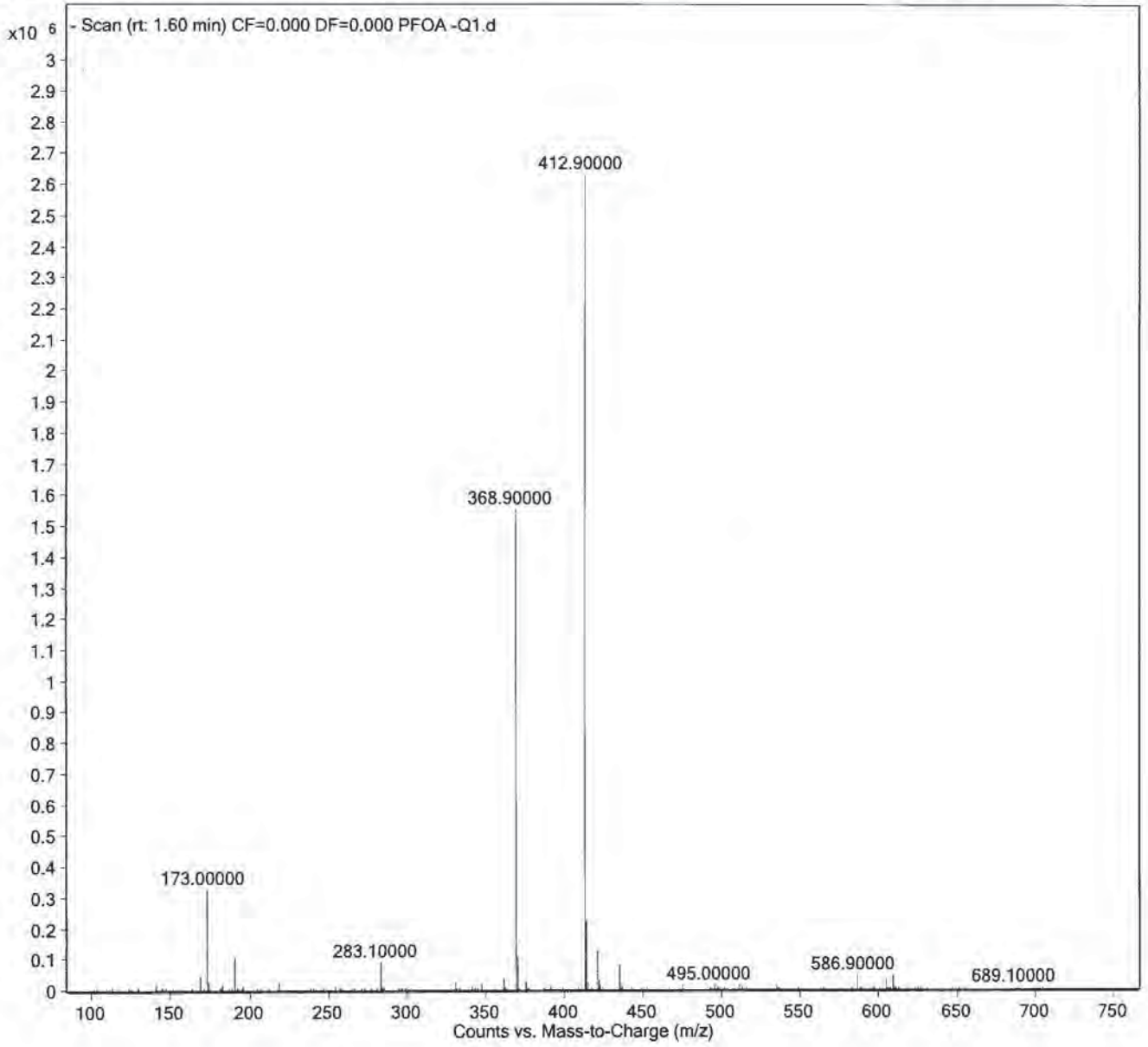
|---|---|---|---|---|---|
| **Sample Name** | PFOA -Q1 | **Position** | P1-A8 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFOA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 5:15:38 PM |

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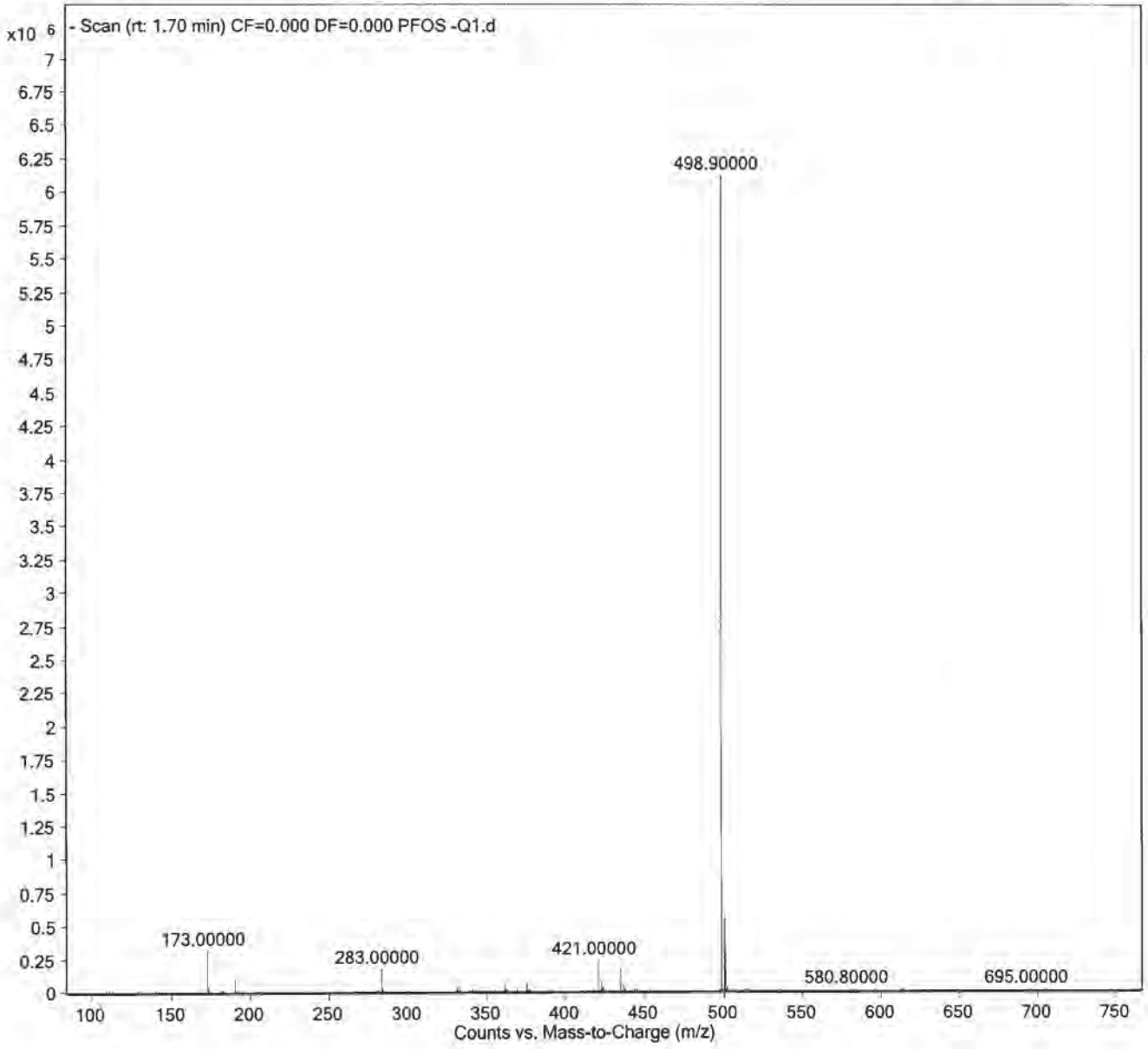
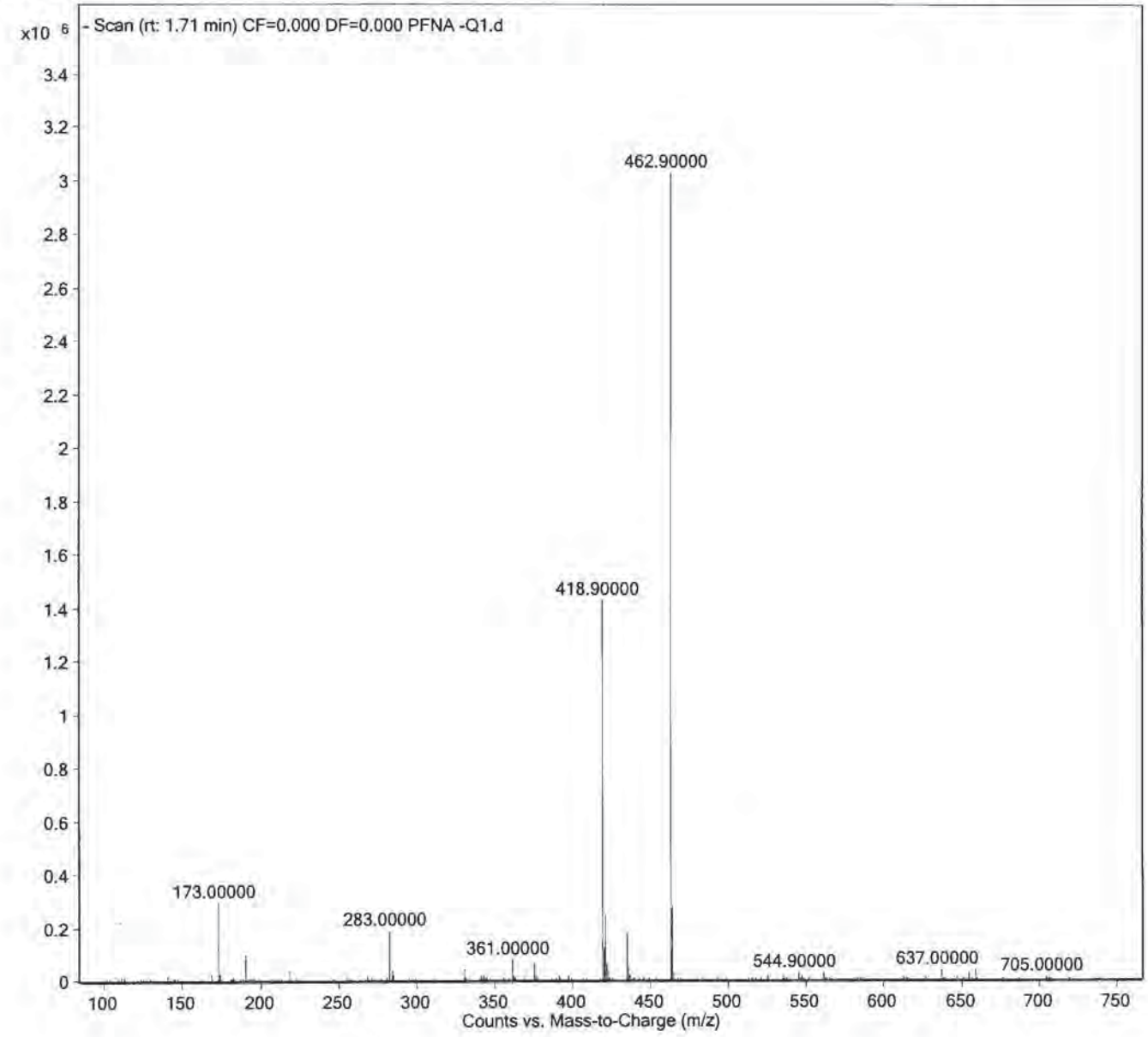
|---|---|---|---|---|---|
| **Sample Name** | PFOS -Q1 | **Position** | P1-A9 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFOS -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 5:21:10 PM |



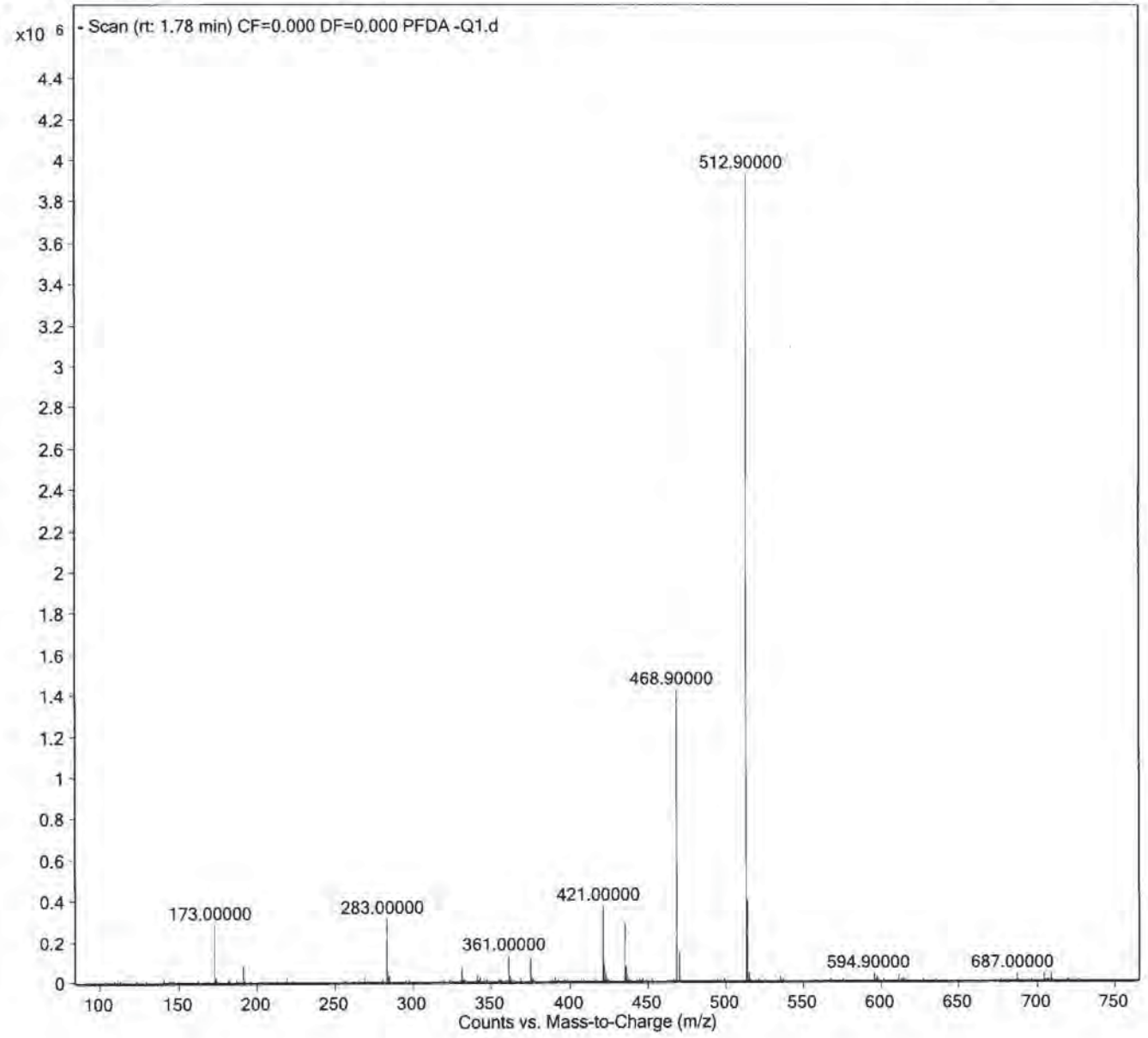

Maxxam Analytics

| | | | | | |
|---|---|---|---|---|---|
| **Sample Name** | PFNA -Q1 | **Position** | P1-B1 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFNA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 5:26:42 PM |




Maxxam Analytics

| | | | | | |
|---|---|---|---|---|---|
| **Sample Name** | PFDA -Q1 | **Position** | P1-B2 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFDA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 5:32:12 PM |




Maxxam Analytics

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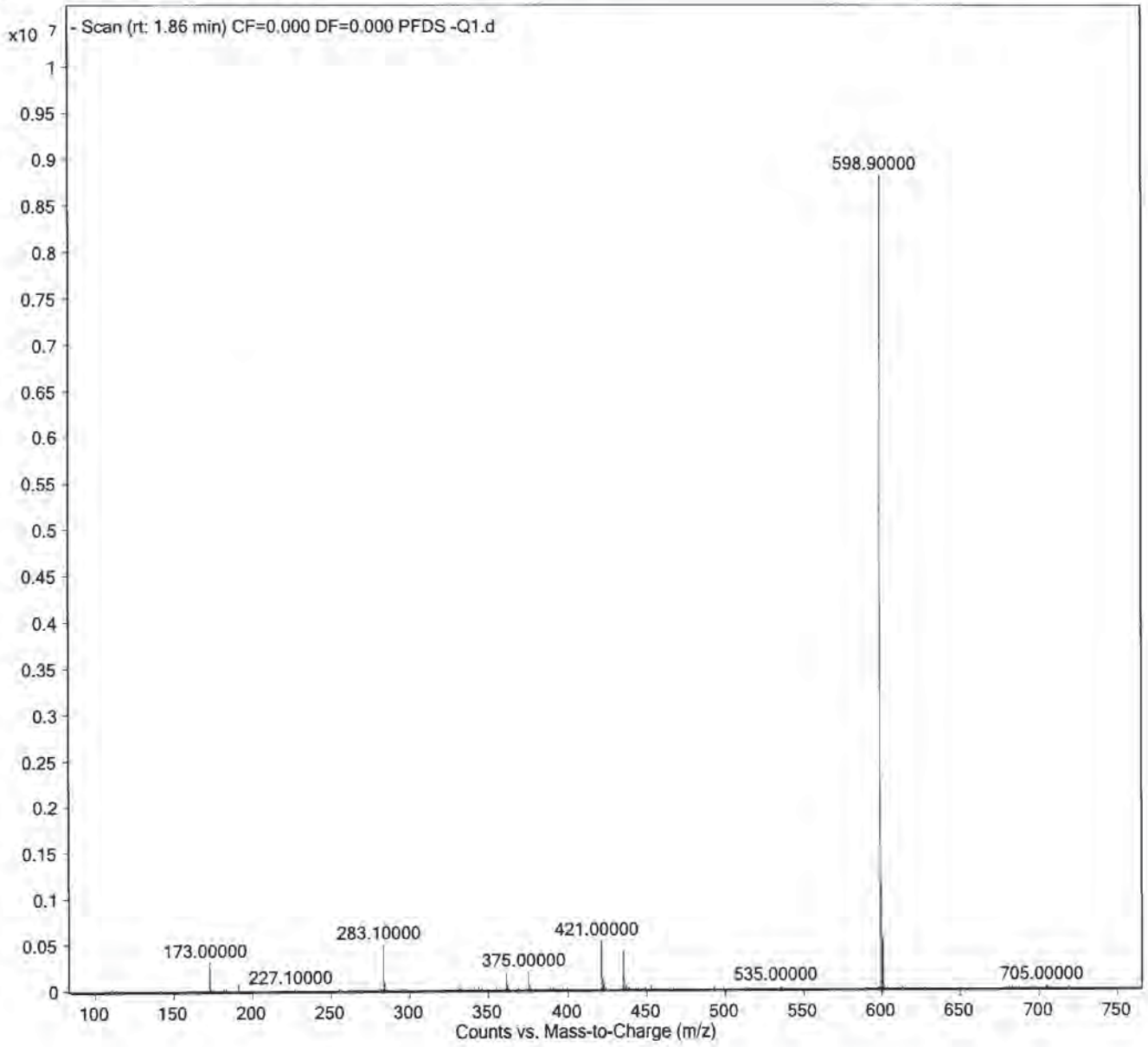
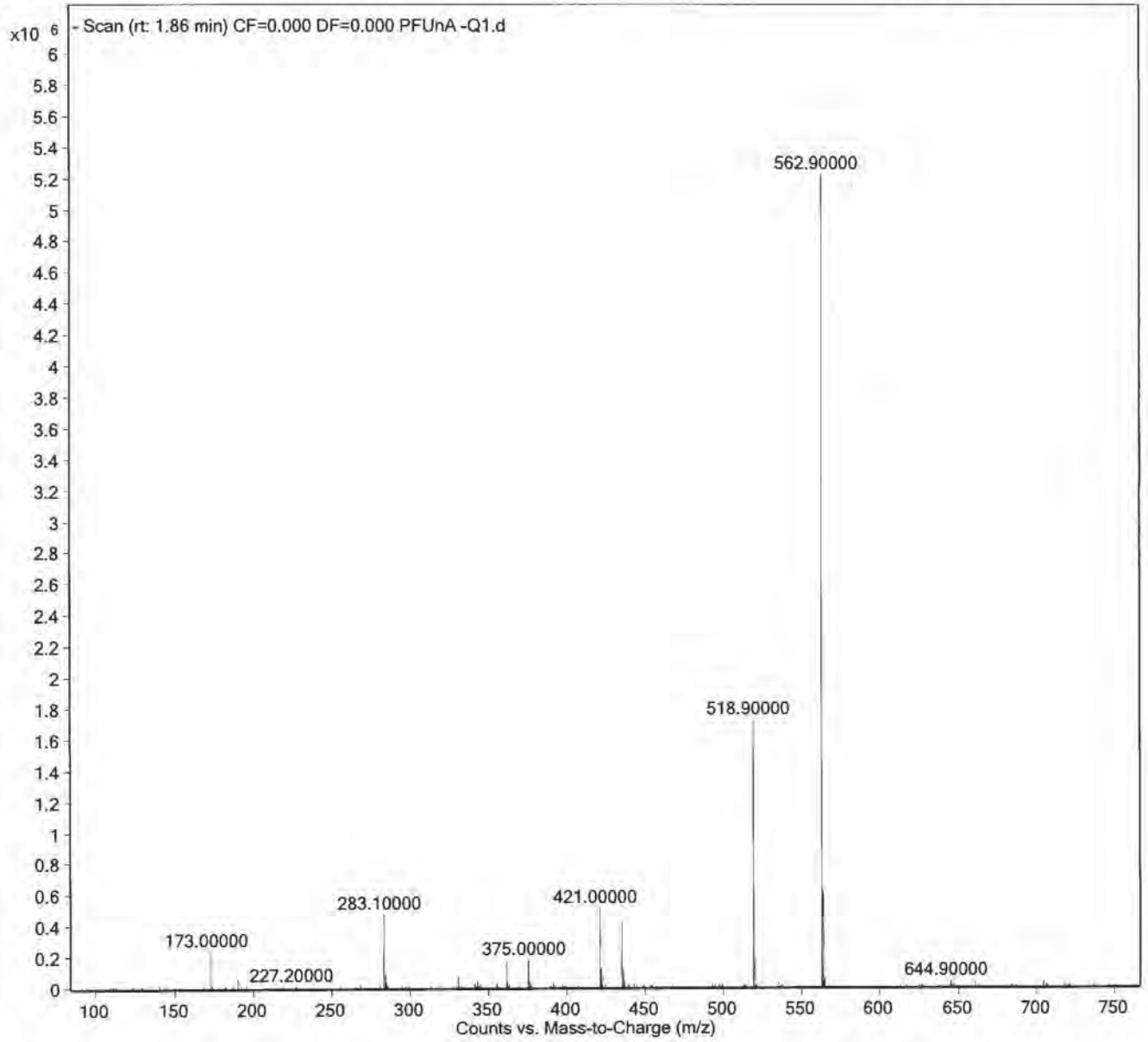
|---|---|---|---|---|---|
| **Sample Name** | PFDS -Q1 | **Position** | P1-B3 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFDS -Q1.d |
| **CQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 5:37:42 PM |



| | | | | | |
|---|---|---|---|---|---|
| **Sample Name** | PFUnA -Q1 | **Position** | P1-B4 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFUnA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 5:43:12 PM |




Maxxam Analytics

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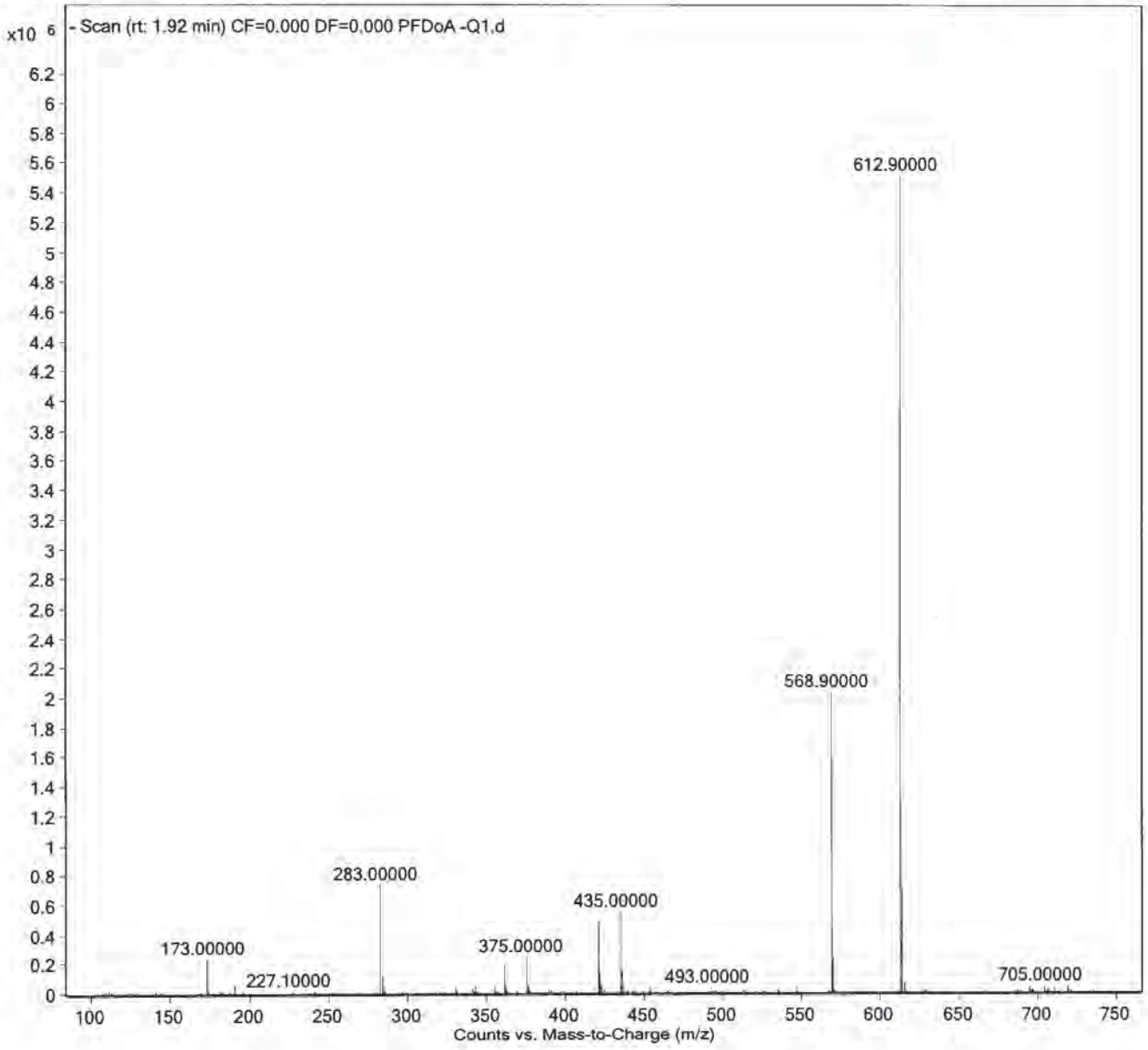
|---|---|---|---|---|---|
| **Sample Name** | PFDoA -Q1 | **Position** | P1-B5 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFDoA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 5:48:42 PM |




Maxxam Analytics

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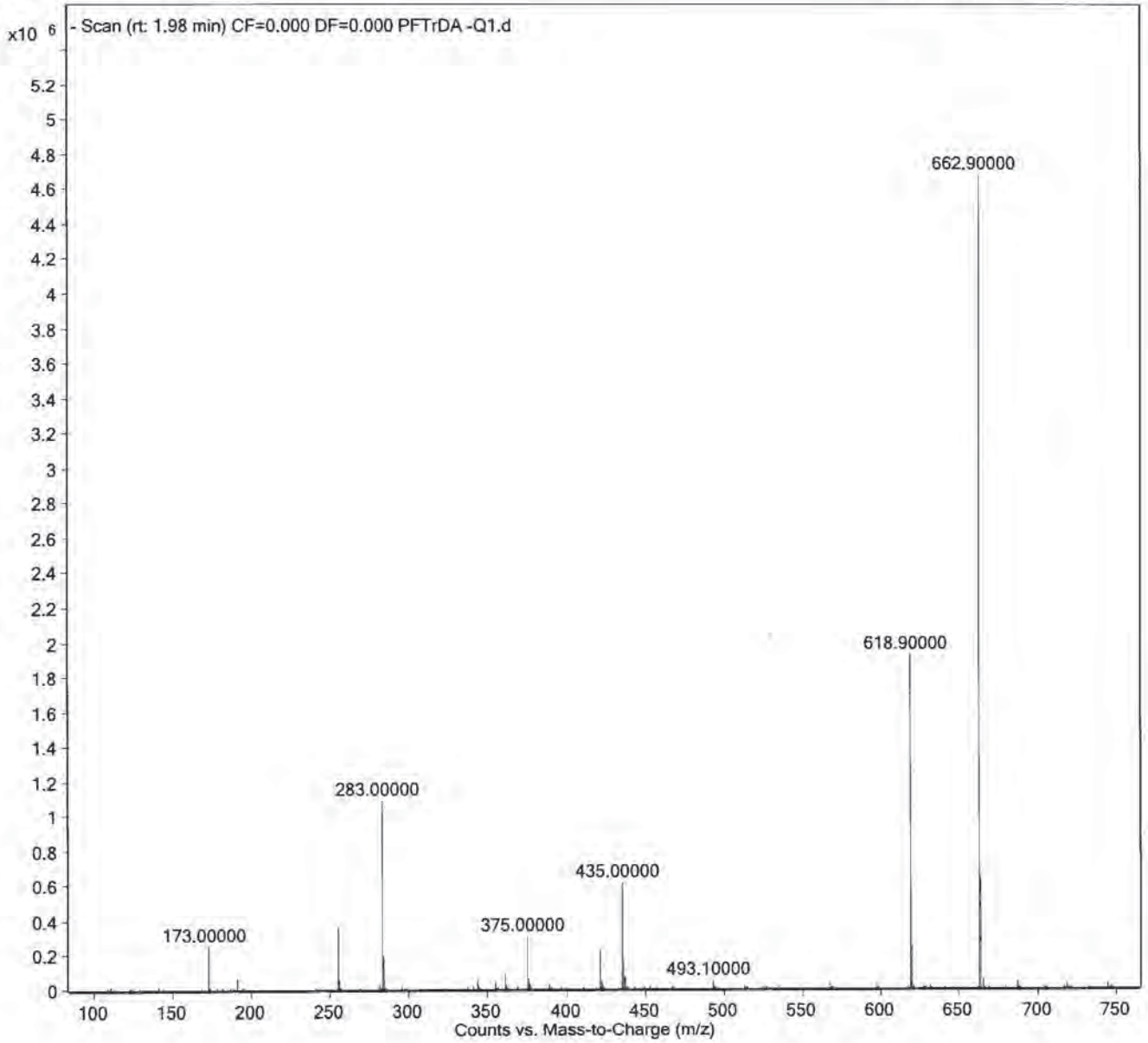
|---|---|---|---|---|---|
| **Sample Name** | PFTrDA -Q1 | **Position** | P1-B6 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFTrDA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 5:54:12 PM |




Maxxam Analytics

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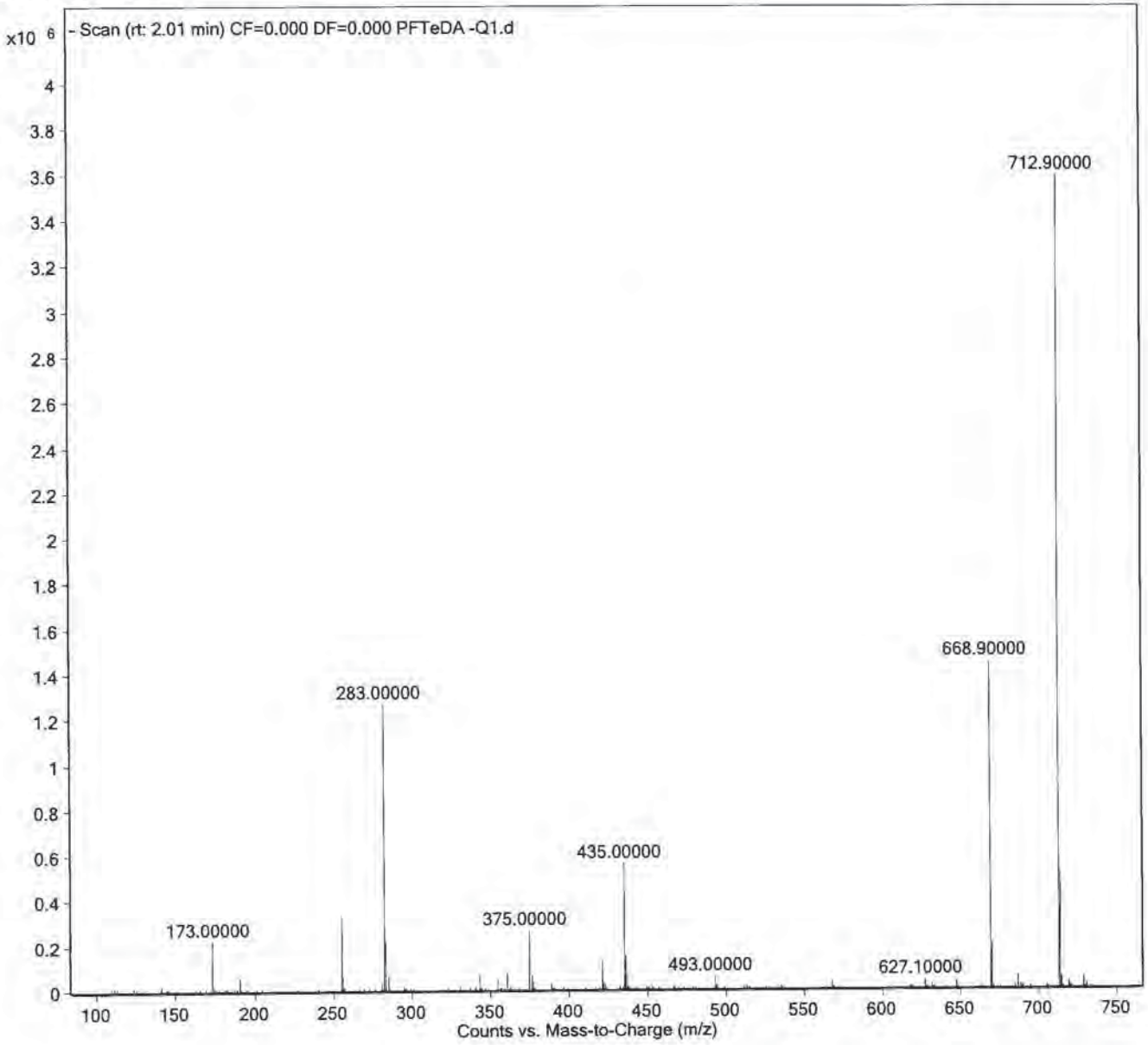
|---|---|---|---|---|---|
| **Sample Name** | PFTeDA -Q1 | **Position** | P1-B7 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFTeDA -Q1.d |
| **CQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 5:59:42 PM |




SanKam Analytics

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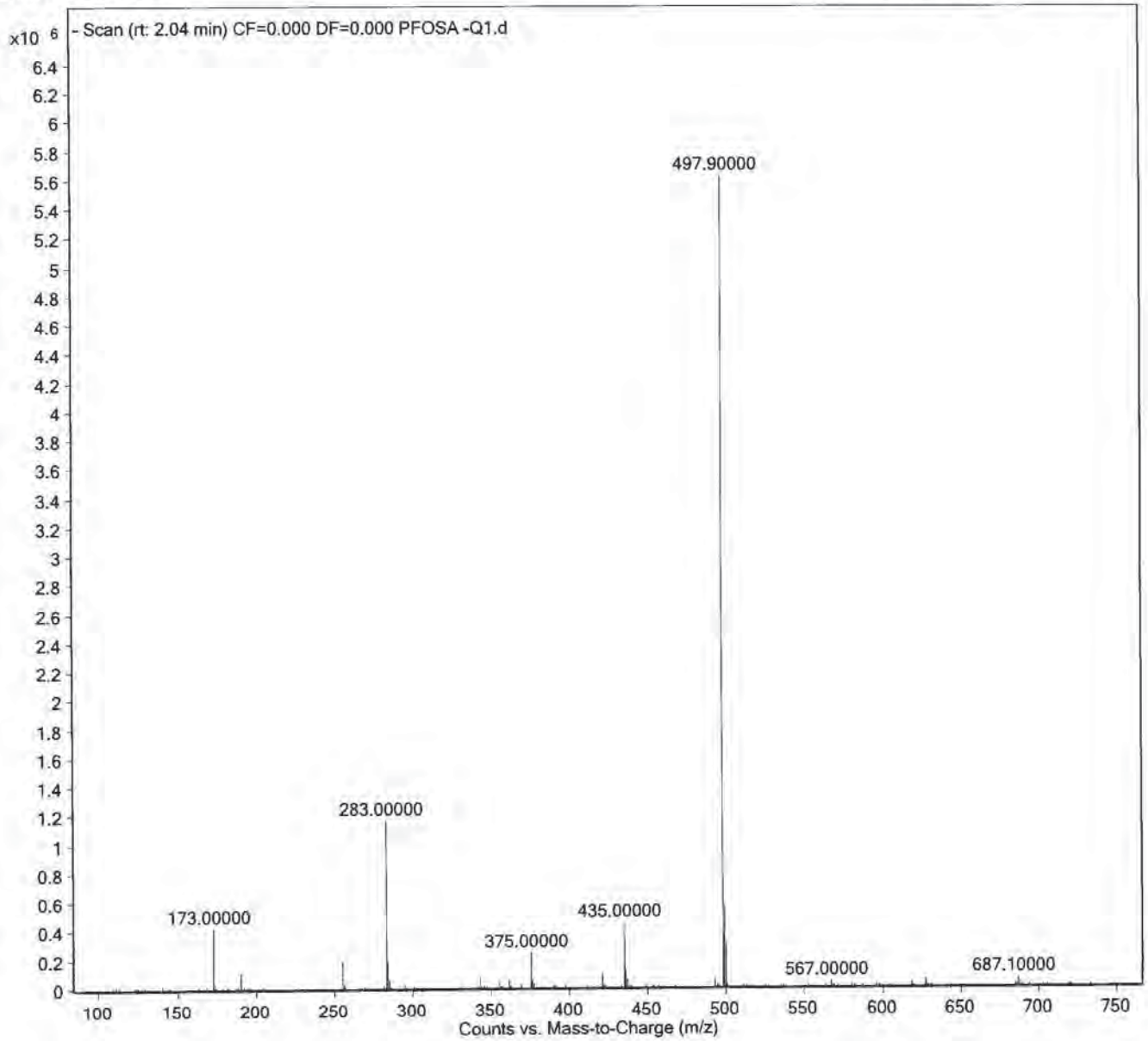
|---|---|---|---|---|---|
| **Sample Name** | PFOSA -Q1 | **Position** | P1-B8 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFOSA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 6:05:13 PM |




SaxKam Analytics

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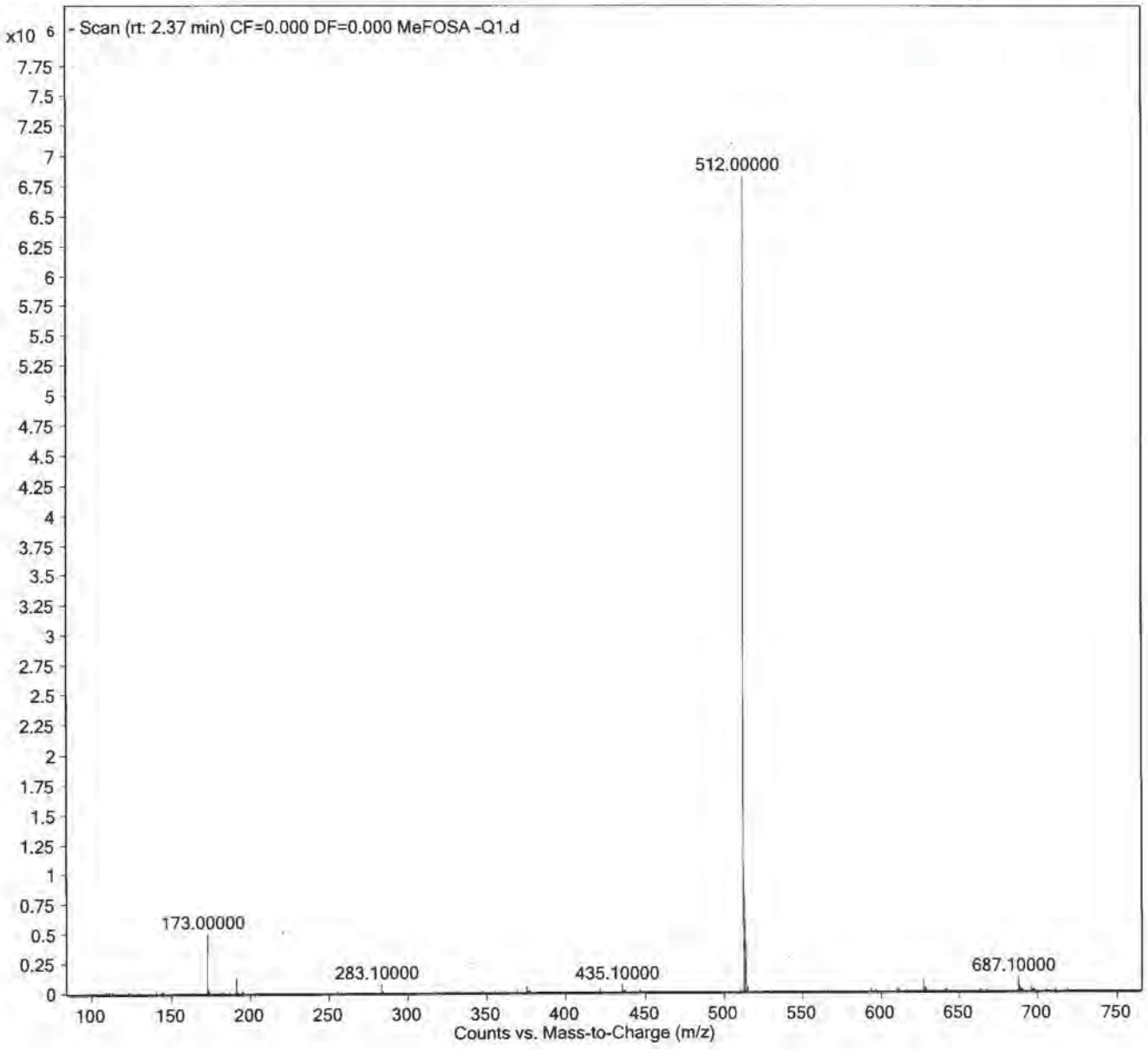
|---|---|---|---|---|---|
| **Sample Name** | MeFOSA -Q1 | **Position** | P1-B9 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MeFOSA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 6:10:45 PM |




Maxxam Analytics

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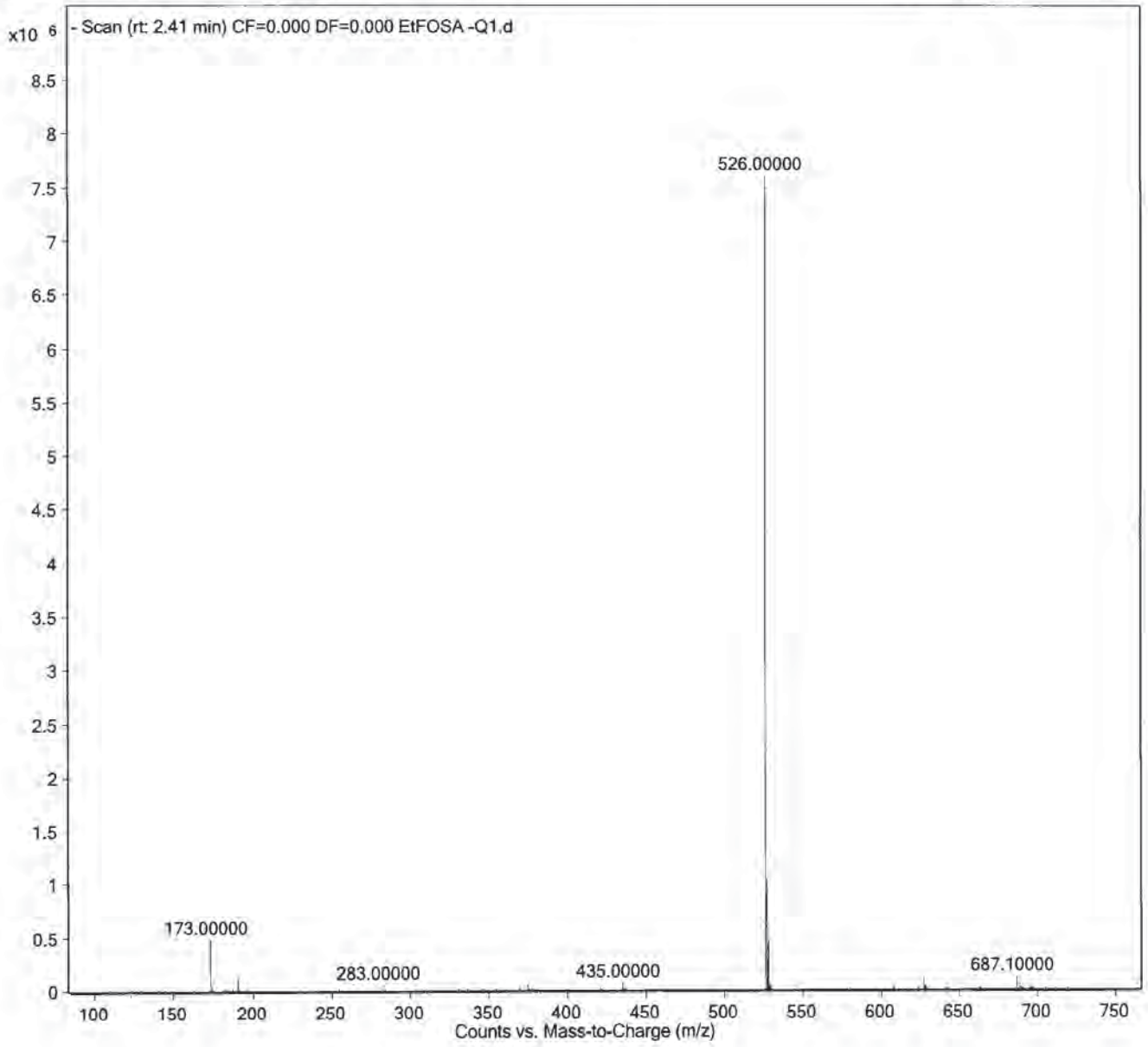
|---|---|---|---|---|---|
| **Sample Name** | EtFOSA -Q1 | **Position** | P1-C1 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | EtFOSA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 6:16:16 PM |




MaxXam Analytics

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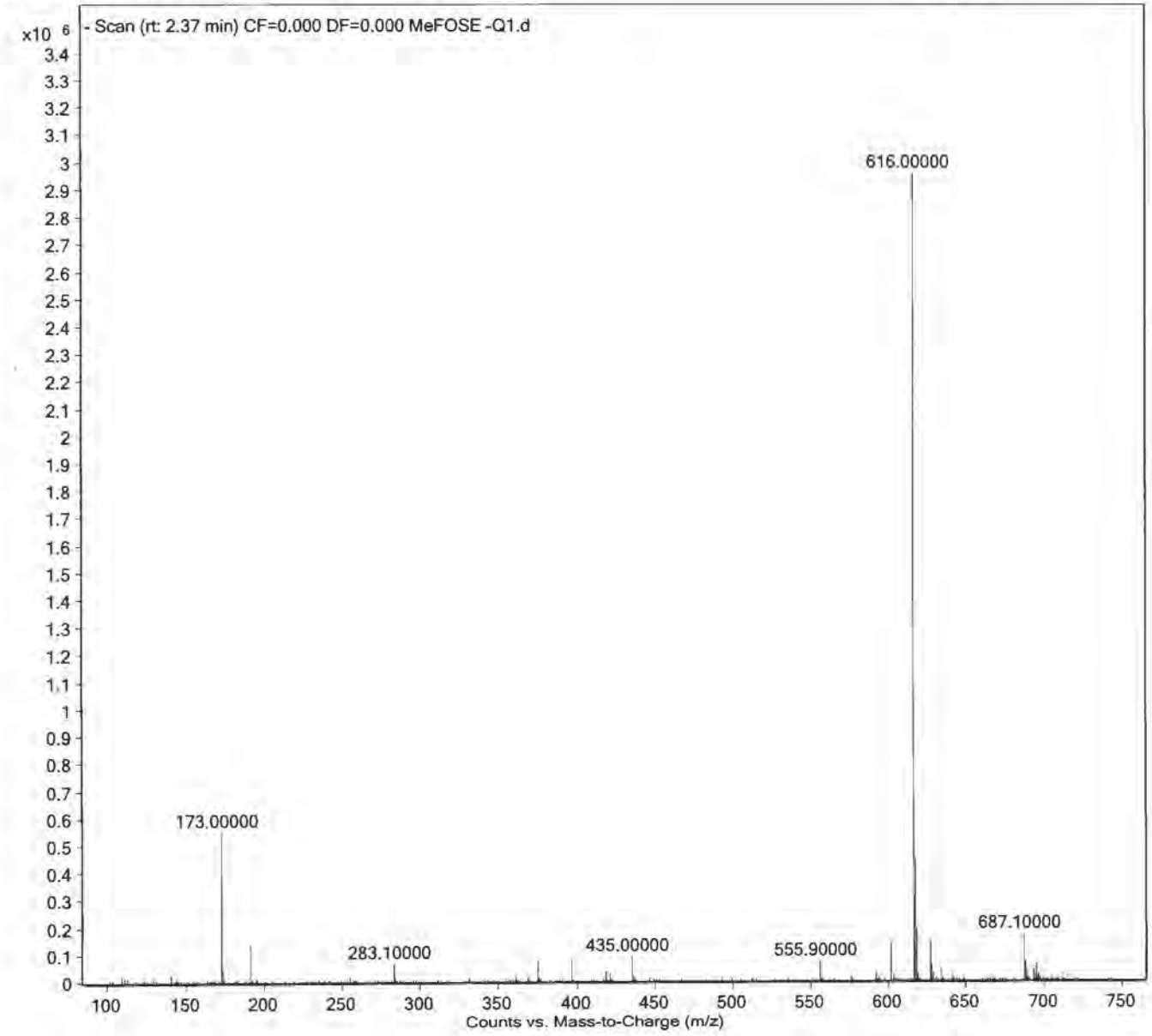
|---|---|---|---|---|---|
| **Sample Name** | MeFOSE -Q1 | **Position** | P1-C2 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MeFOSE -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 6:21:46 PM |




Maxxam Analytics

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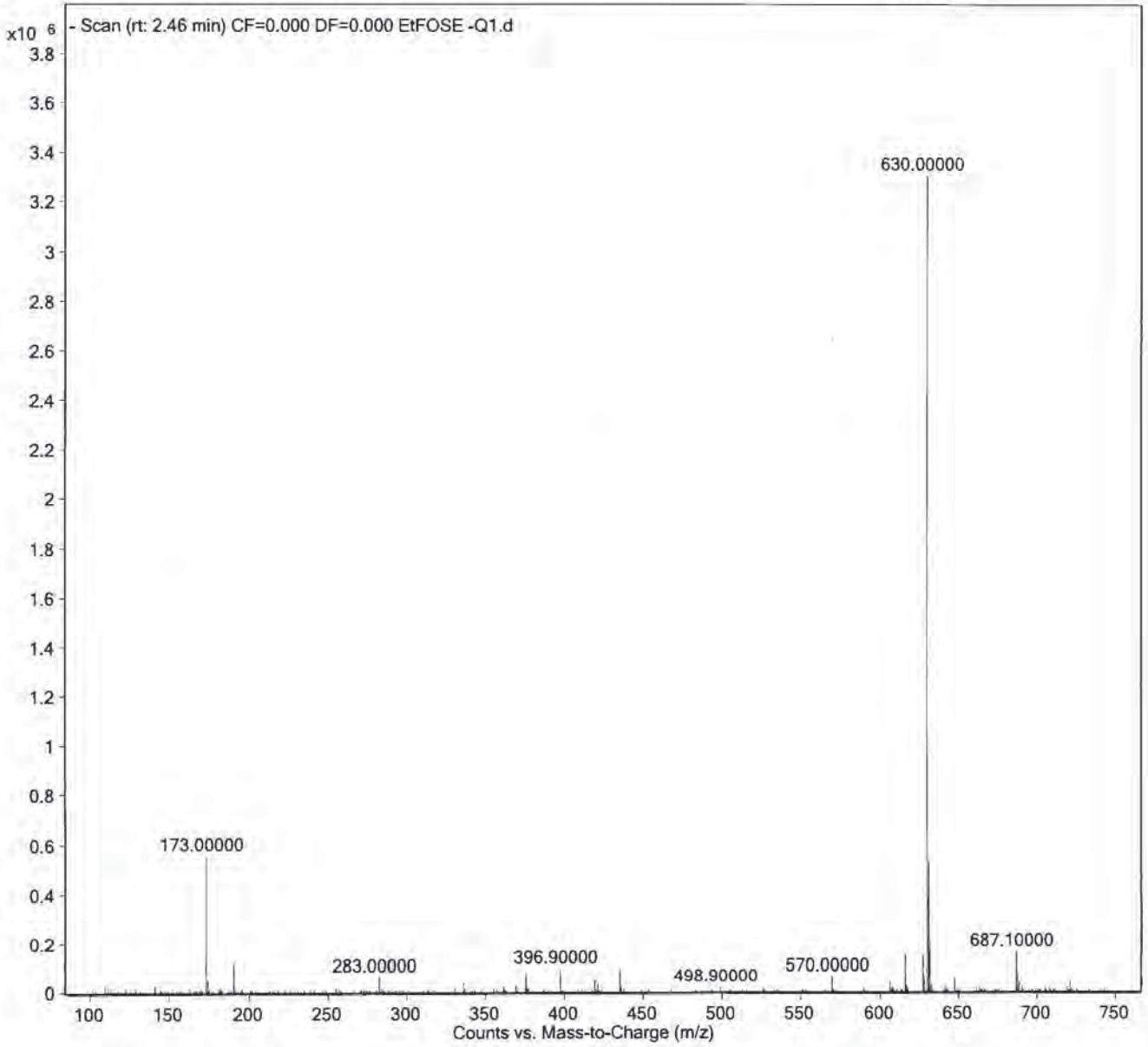
|---|---|---|---|---|---|
| **Sample Name** | EtFOSE -Q1 | **Position** | P1-C3 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | EtFOSE -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 6:27:16 PM |




MaxXam Analytics

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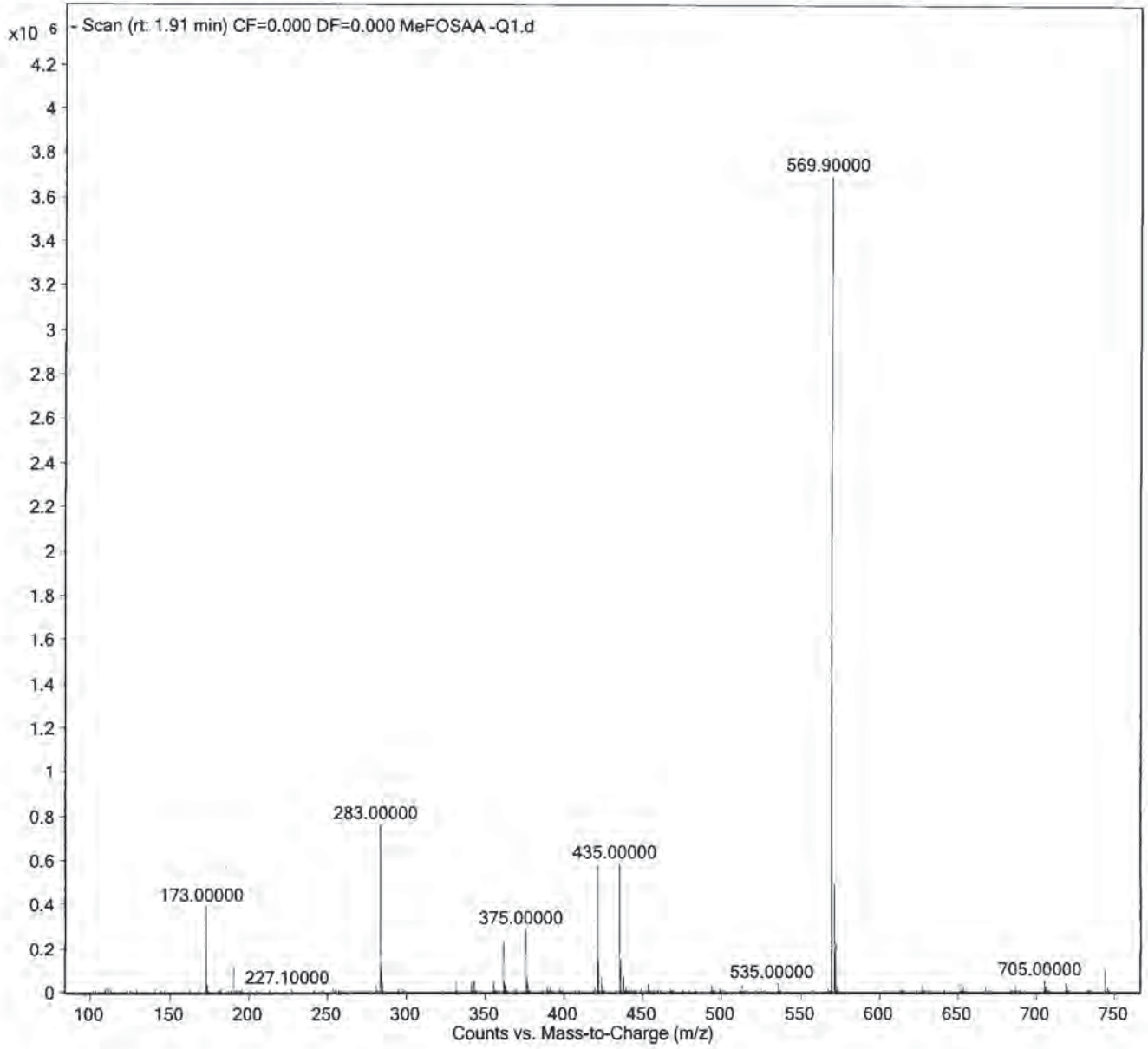
|---|---|---|---|---|---|
| **Sample Name** | MeFOSAA -Q1 | **Position** | P1-C4 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MeFOSAA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 6:32:46 PM |




Maxxam Analytics

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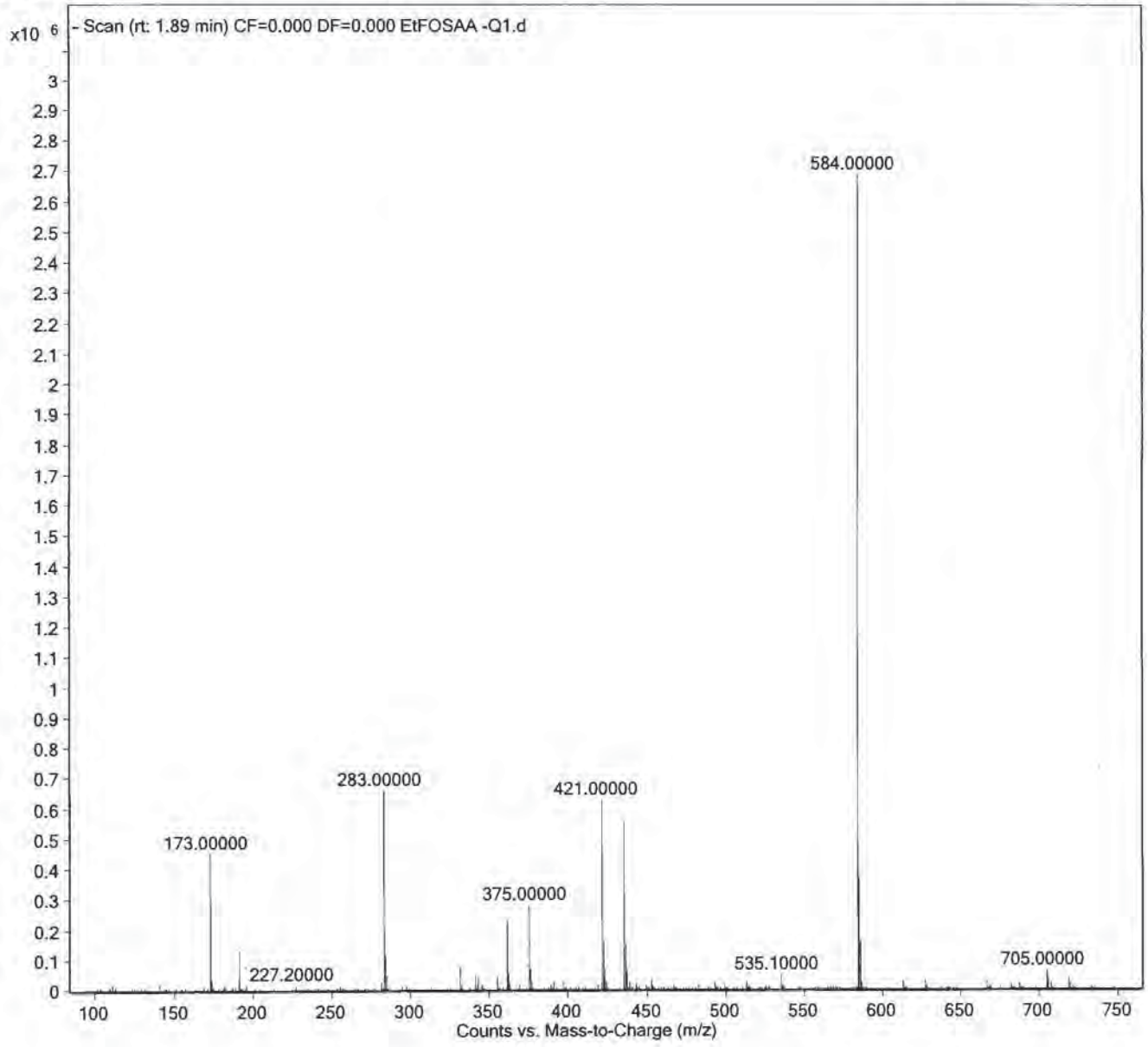
|---|---|---|---|---|---|
| **Sample Name** | EtFOSAA -Q1 | **Position** | P1-C5 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | EtFOSAA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 6:38:16 PM |




Eurofins Eaton Analytics

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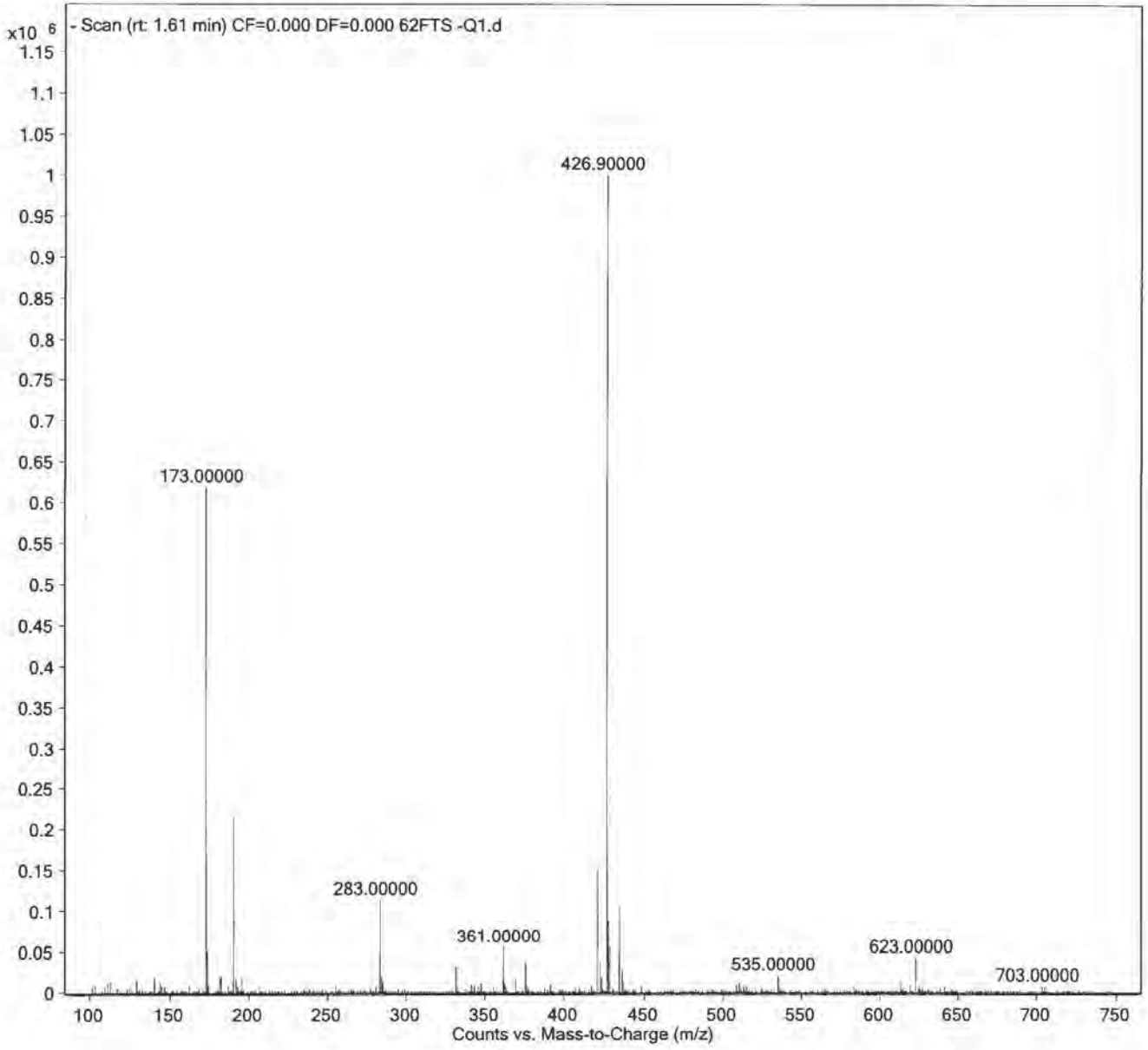
|---|---|---|---|---|---|
| **Sample Name** | 6:2FTS -Q1 | **Position** | P1-C6 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | 62FTS -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 6:43:46 PM |




Maxxam Analytics

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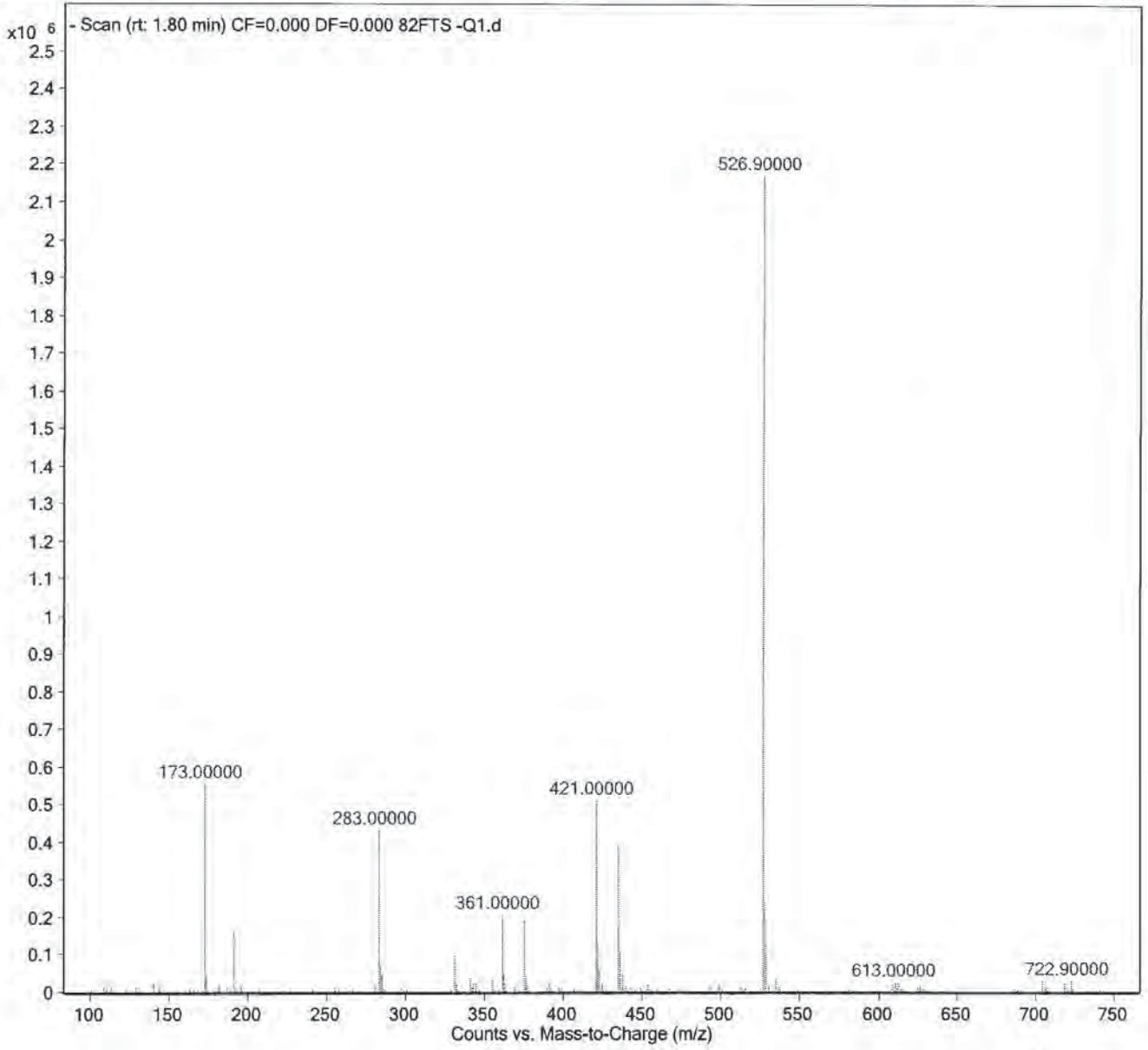
|---|---|---|---|---|---|
| **Sample Name** | 8:2FTS -Q1 | **Position** | P1-C7 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | 82FTS -Q1.d |
| **AcQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/10 6:49:16 PM |




Maxxam Analytics

# Worklist Report

Agilent Technologies

Maxxam Analytics

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFAS_MASSVER_170710.wkl

**Operator Name:** M_G
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\data\Mass Verification\20170710
**Pre-Worklist Script:** ---
**Post-Worklist Script:** ---
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** ---
**Plate Barcode:** None

**Worklist Table**

| | Sample Name | Sample Position | Method | Data File | Sample Type | Inj Vol (µl) | Sample Group |
|---|---|---|---|---|---|---|---|
| 1 | PFBA -Q1 | P1-A1 | PFC_MassVerification-Q1.m | PFBA -Q1.d | Sample | As Method | PFAS-Q1 |
| 2 | PFBS -Q1 | P1-A2 | PFC_MassVerification-Q1.m | PFBS -Q1.d | Sample | As Method | PFAS-Q1 |
| 3 | PFPeA -Q1 | P1-A3 | PFC_MassVerification-Q1.m | PFPeA -Q1.d | Sample | As Method | PFAS-Q1 |
| 4 | PFHxA -Q1 | P1-A4 | PFC_MassVerification-Q1.m | PFHxA -Q1.d | Sample | As Method | PFAS-Q1 |
| 5 | PFHxS -Q1 | P1-A5 | PFC_MassVerification-Q1.m | PFHxS -Q1.d | Sample | As Method | PFAS-Q1 |
| 6 | PFHpA-Q1 | P1-A6 | PFC_MassVerification-Q1.m | PFHpA-Q1.d | Sample | As Method | PFAS-Q1 |
| 7 | PFHpS-Q1 | P1-A7 | PFC_MassVerification-Q1.m | PFHpS-Q1.d | Sample | As Method | PFAS-Q1 |
| 8 | PFOA -Q1 | P1-A8 | PFC_MassVerification-Q1.m | PFOA -Q1.d | Sample | As Method | PFAS-Q1 |
| 9 | PFOS -Q1 | P1-A9 | PFC_MassVerification-Q1.m | PFOS -Q1.d | Sample | As Method | PFAS-Q1 |

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# Worklist Report

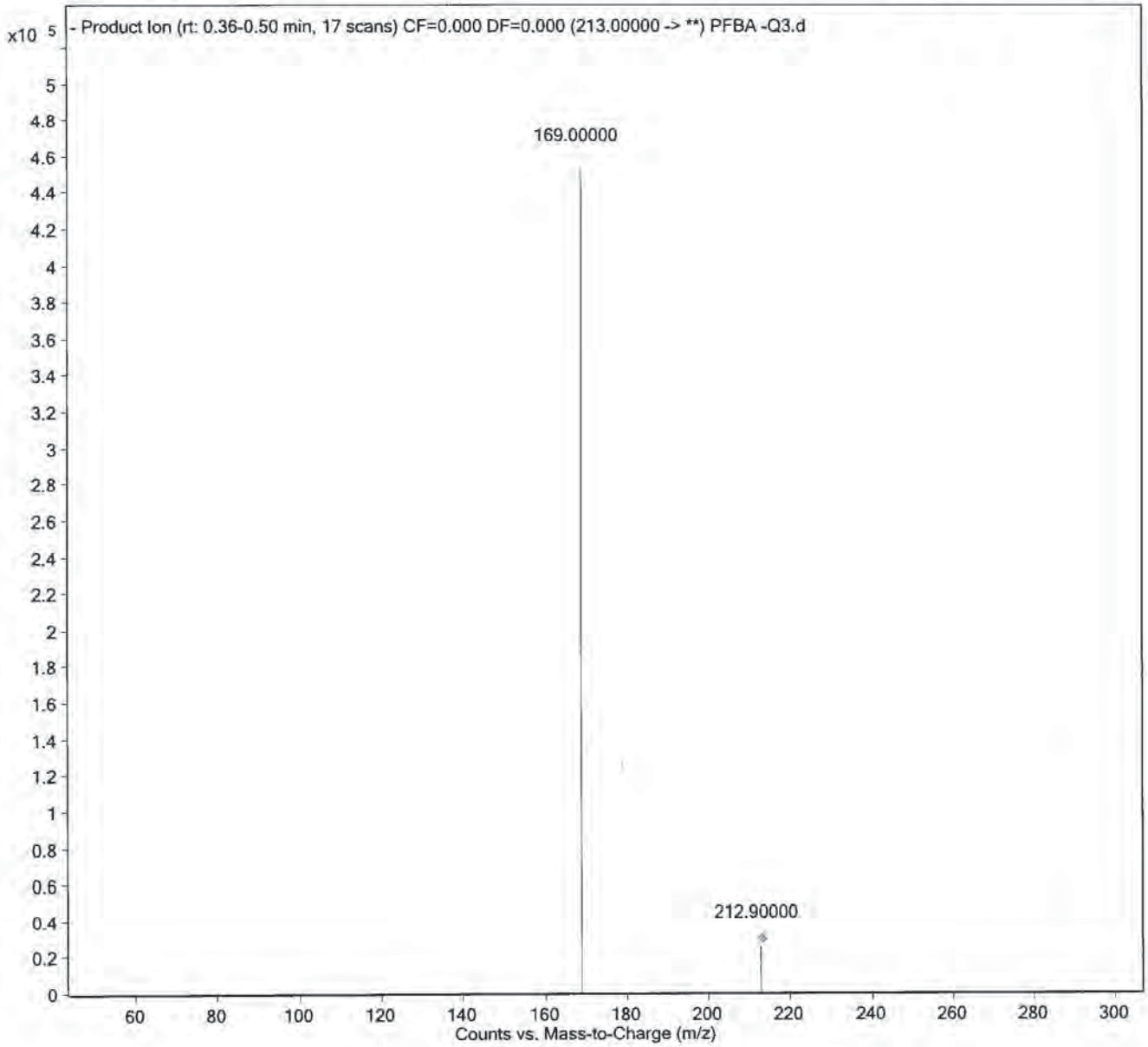
Agilent Technologies

| | Sample Name | Sample Position | Method | Data File | Sample Type | Inj Vol (µl) | Sample Group |
|---|---|---|---|---|---|---|---|
| 10 | PFNA -Q1 | P1-B1 | PFC_MassVerification-Q1.m | PFNA -Q1.d | Sample | As Method | PFAS-Q1 |
| 11 | PFDA -Q1 | P1-B2 | PFC_MassVerification-Q1.m | PFDA -Q1.d | Sample | As Method | PFAS-Q1 |
| 12 | PFDS -Q1 | P1-B3 | PFC_MassVerification-Q1.m | PFDS -Q1.d | Sample | As Method | PFAS-Q1 |
| 13 | PFUnA -Q1 | P1-B4 | PFC_MassVerification-Q1.m | PFUnA -Q1.d | Sample | As Method | PFAS-Q1 |
| 14 | PFDoA -Q1 | P1-B5 | PFC_MassVerification-Q1.m | PFDoA -Q1.d | Sample | As Method | PFAS-Q1 |
| 15 | PFTrDA -Q1 | P1-B6 | PFC_MassVerification-Q1.m | PFTrDA -Q1.d | Sample | As Method | PFAS-Q1 |
| 16 | PFTeDA -Q1 | P1-B7 | PFC_MassVerification-Q1.m | PFTeDA -Q1.d | Sample | As Method | PFAS-Q1 |
| 17 | PFOSA -Q1 | P1-B8 | PFC_MassVerification-Q1.m | PFOSA -Q1.d | Sample | As Method | PFAS-Q1 |
| 18 | MeFOSA -Q1 | P1-B9 | PFC_MassVerification-Q1.m | MeFOSA -Q1.d | Sample | As Method | PFAS-Q1 |
| 19 | EtFOSA -Q1 | P1-C1 | PFC_MassVerification-Q1.m | EtFOSA -Q1.d | Sample | As Method | PFAS-Q1 |
| 20 | MeFOSE -Q1 | P1-C2 | PFC_MassVerification-Q1.m | MeFOSE -Q1.d | Sample | As Method | PFAS-Q1 |
| 21 | EtFOSE -Q1 | P1-C3 | PFC_MassVerification-Q1.m | EtFOSE -Q1.d | Sample | As Method | PFAS-Q1 |
| 22 | MeFOSAA -Q1 | P1-C4 | PFC_MassVerification-Q1.m | MeFOSAA -Q1.d | Sample | As Method | PFAS-Q1 |
| 23 | EtFOSAA -Q1 | P1-C5 | PFC_MassVerification-Q1.m | EtFOSAA -Q1.d | Sample | As Method | PFAS-Q1 |
| 24 | 6:2FTS -Q1 | P1-C6 | PFC_MassVerification-Q1.m | 62FTS -Q1.d | Sample | As Method | PFAS-Q1 |
| 25 | 8:2FTS -Q1 | P1-C7 | PFC_MassVerification-Q1.m | 82FTS -Q1.d | Sample | As Method | PFAS-Q1 |

Maxxam Analytics

# Analyte Product Ion Verification

| | | | | | |
|---|---|---|---|---|---|
| **Sample Name** | PFBA -Q3 | **Position** | P1-A1 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFBA -Q3.d |
| **ACQ Method** | PFC_MassVerification-PFBA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 6:54:46 PM |




SAExam Analytics

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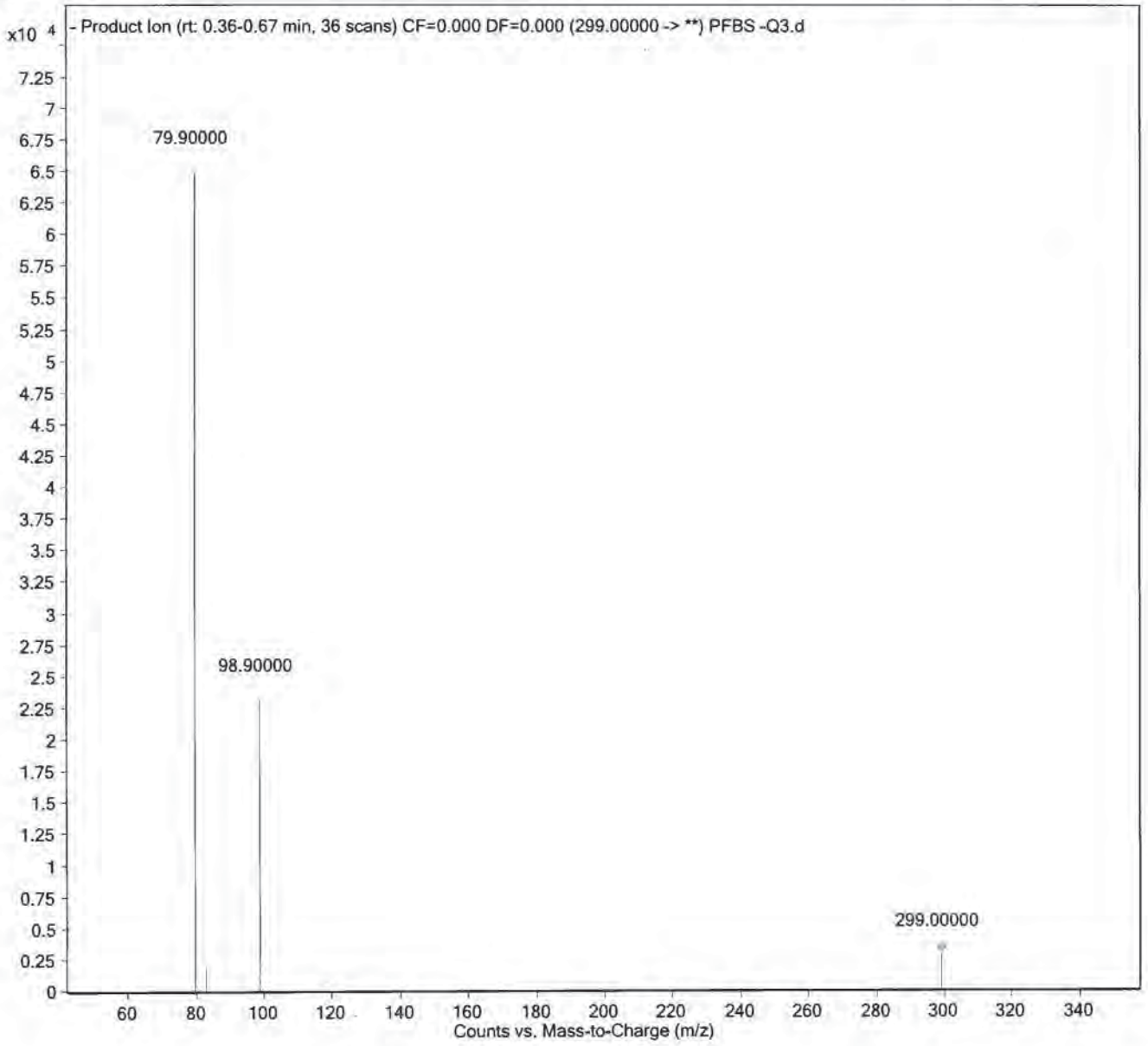
|---|---|---|---|---|---|
| **Sample Name** | PFBS -Q3 | **Position** | P1-A2 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFBS -Q3.d |
| **ACQ Method** | PFC_MassVerification-PFBS-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 7:00:16 PM |




Maxxam Analytics

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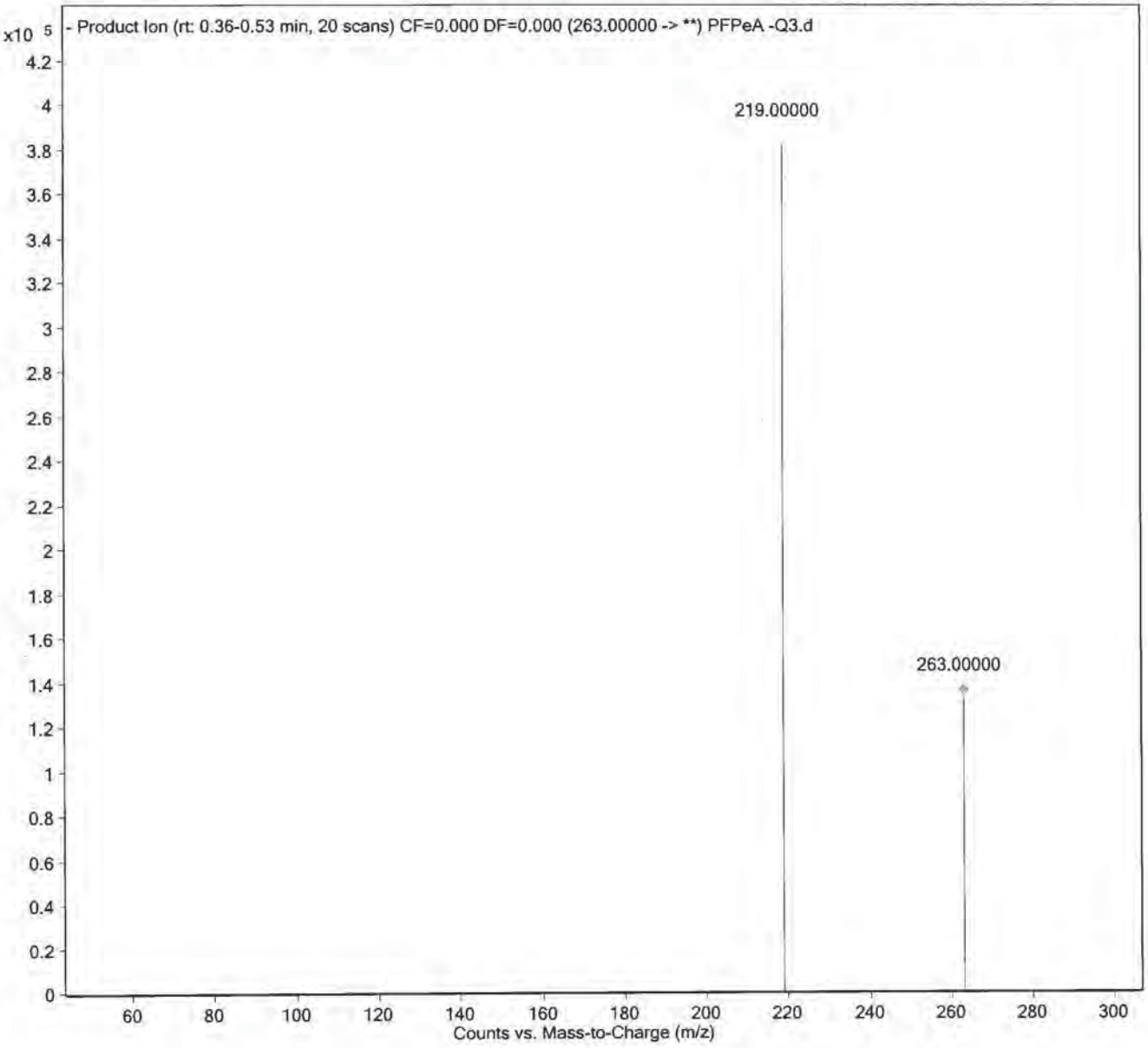
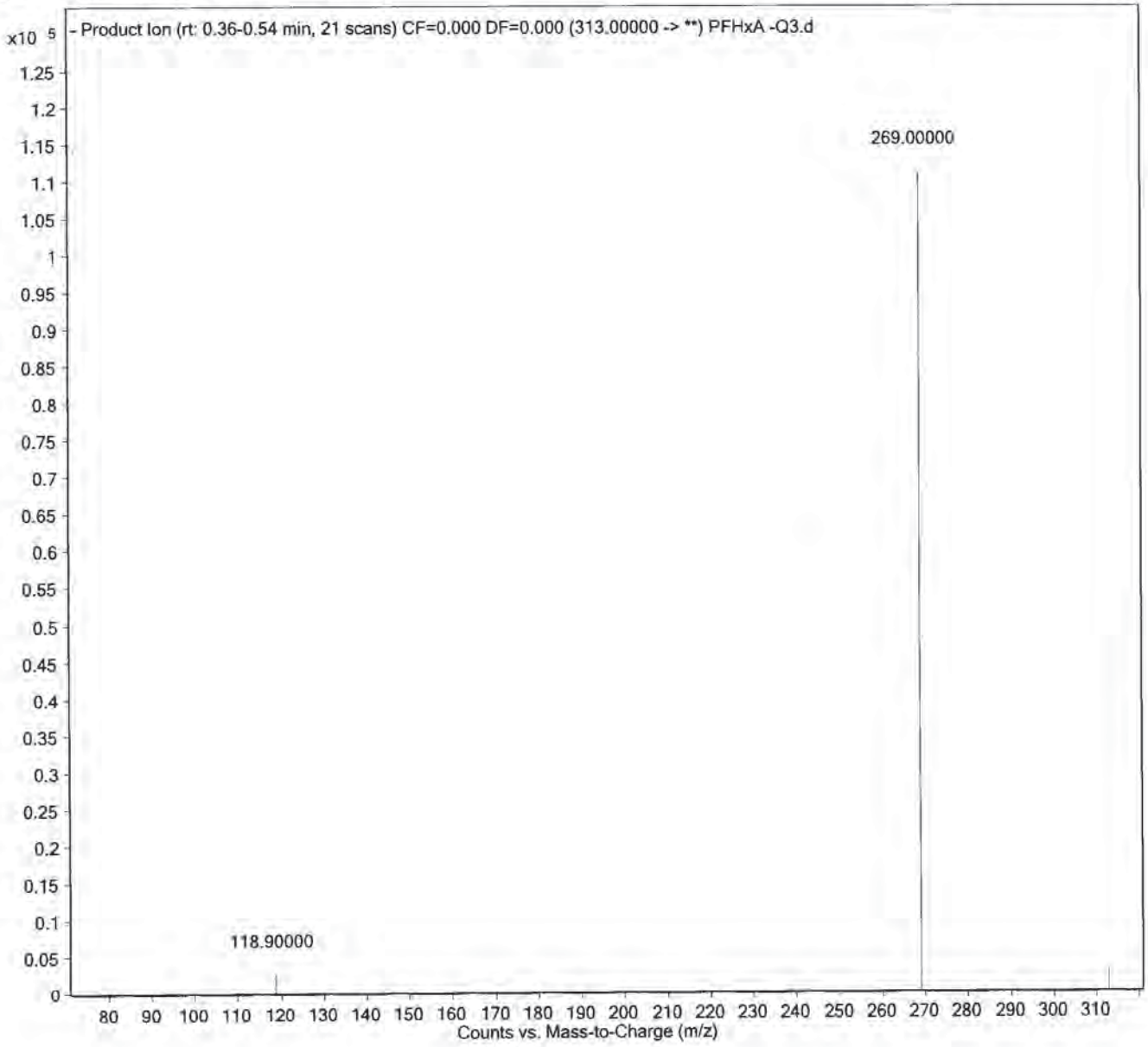
|---|---|---|---|---|---|
| **Sample Name** | PFPeA -Q3 | **Position** | P1-A3 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFPeA -Q3.d |
| **ACQ Method** | PFC_MassVerification-PFPeA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 7:05:46 PM |



| | | | | | |
|---|---|---|---|---|---|
| **Sample Name** | PFHxA -Q3 | **Position** | P1-A4 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFHxA -Q3.d |
| **CQ Method** | PFC_MassVerification-PFHxA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 7:11:16 PM |




Saxcam Analytics

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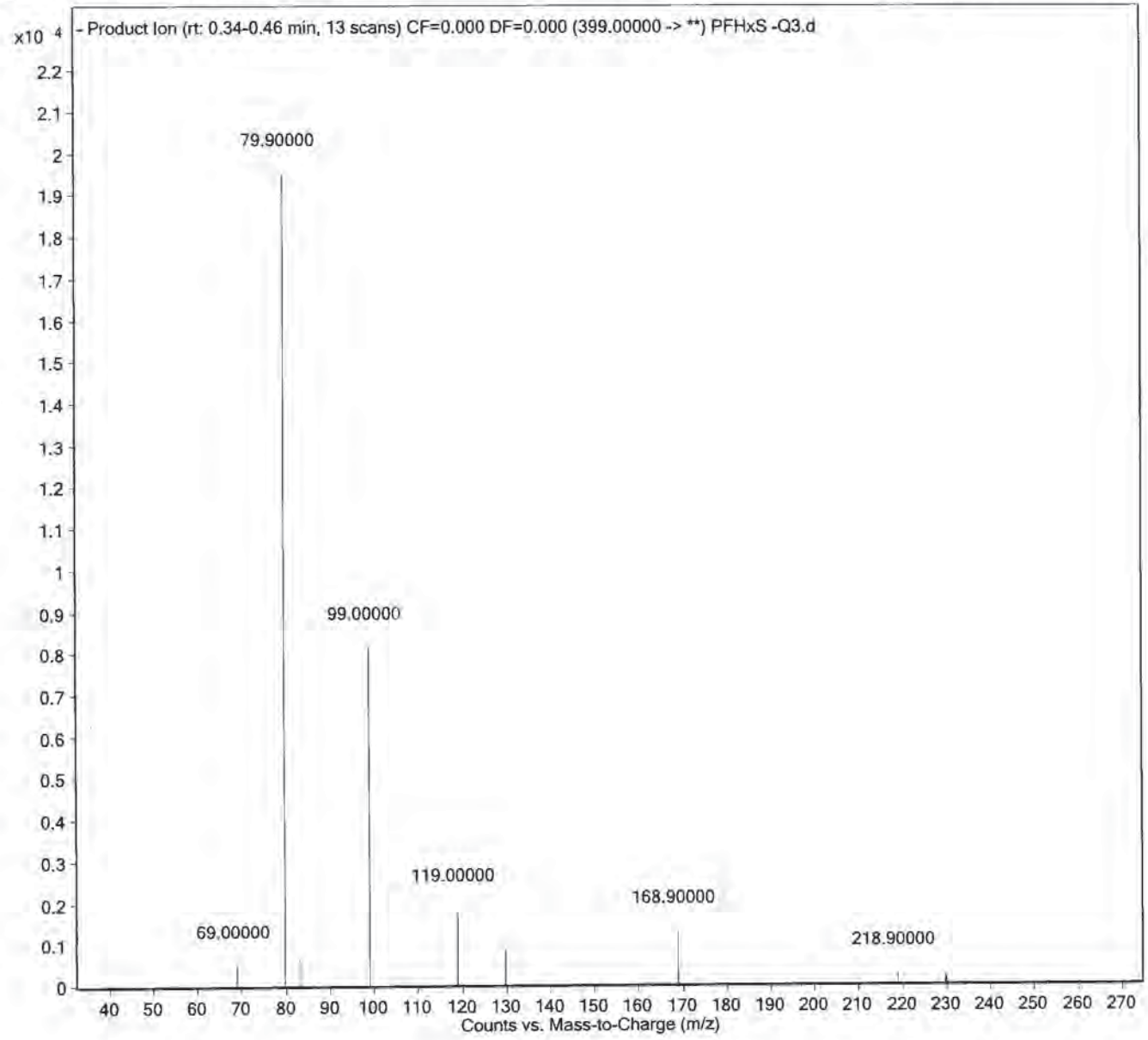
|---|---|---|---|---|---|
| **Sample Name** | PFHxS -Q3 | **Position** | P1-A5 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFHxS -Q3.d |
| **ACQ Method** | PFC_MassVerification-PFHxS-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 7:16:46 PM |




Saxcam Analytics

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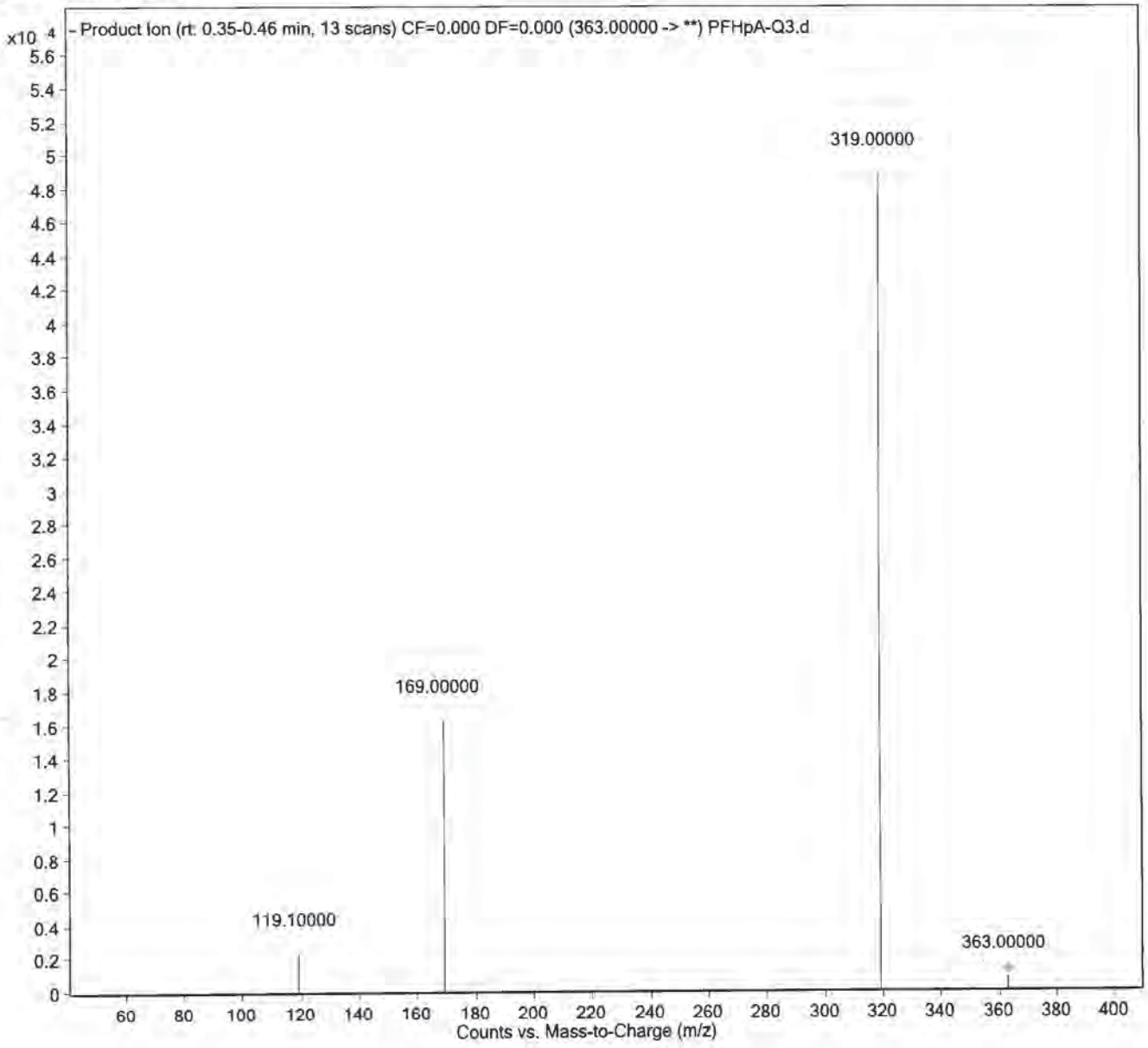
|---|---|---|---|---|---|
| **Sample Name** | PFHpA-Q3 | **Position** | P1-A6 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFHpA-Q3.d |
| **ACQ Method** | PFC_MassVerification-PFHpA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 7:22:16 PM |




Maxxam Analytics

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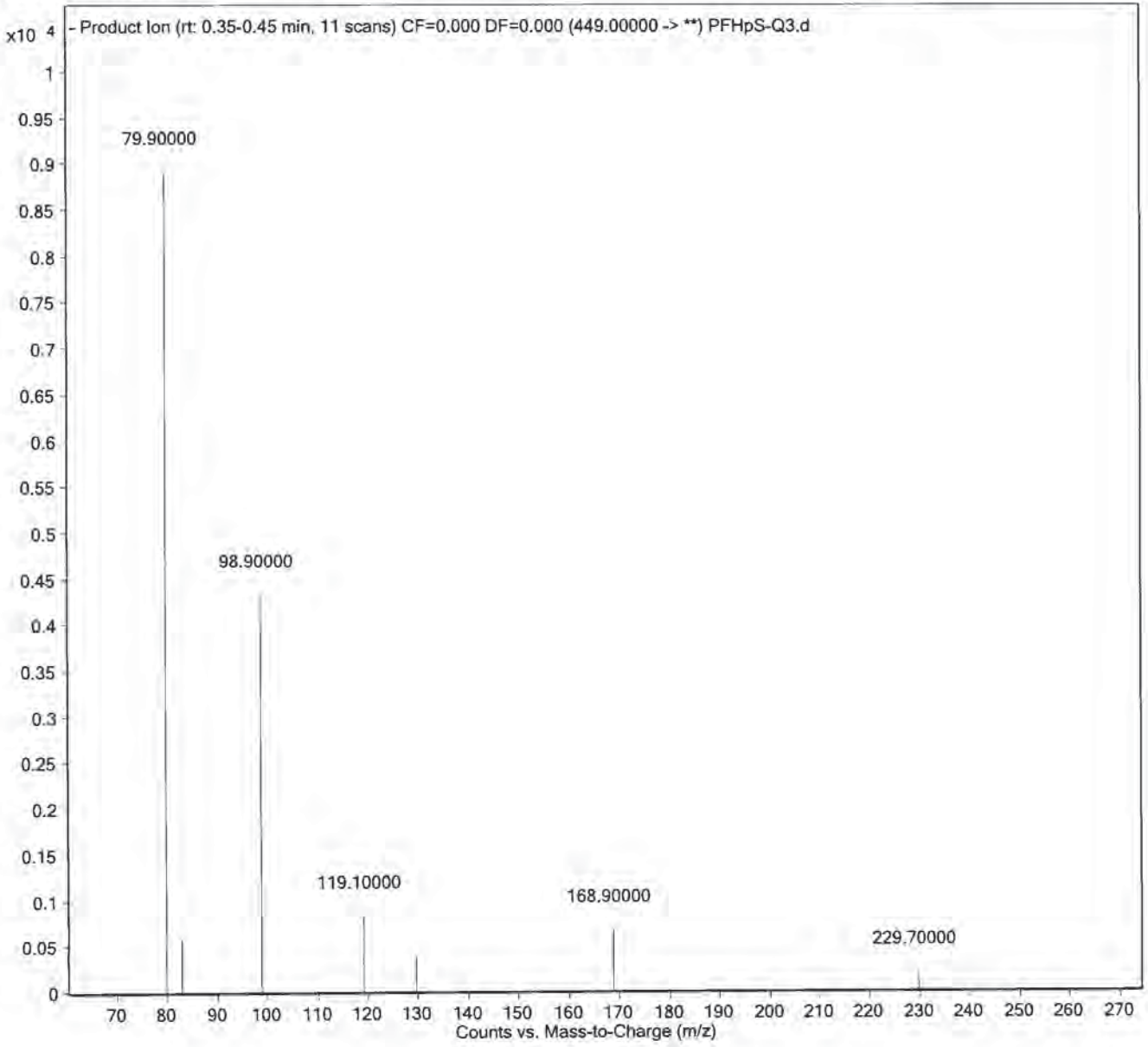
|---|---|---|---|---|---|
| **Sample Name** | PFHpS-Q3 | **Position** | P1-A7 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFHpS-Q3.d |
| **ACQ Method** | PFC_MassVerification-PFHpS-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 7:27:47 PM |




Maxxam Analytics

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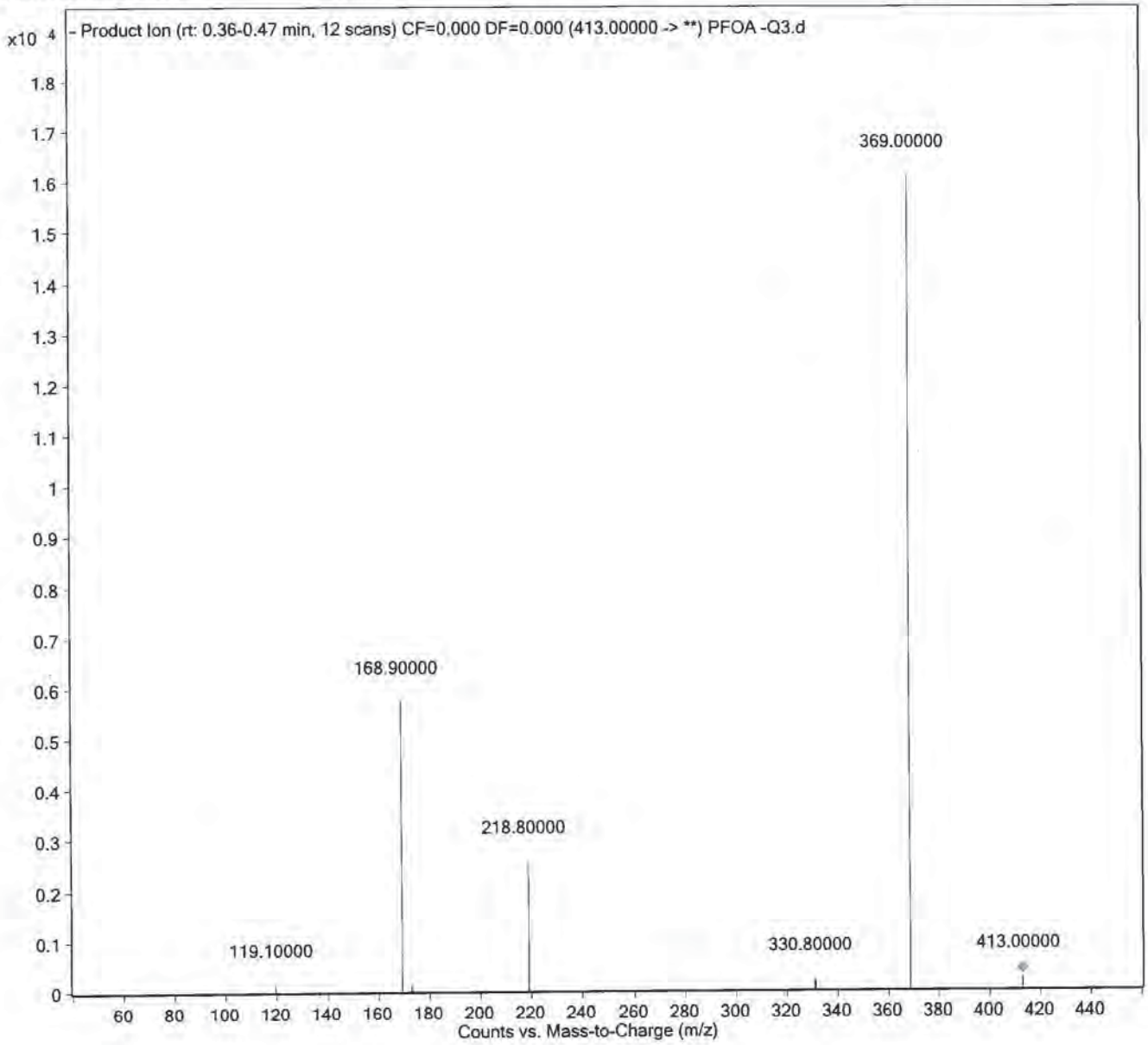
|---|---|---|---|---|---|
| **Sample Name** | PFOA -Q3 | **Position** | P1-A8 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFOA -Q3.d |
| **CQ Method** | PFC_MassVerification-PFOA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 7:33:19 PM |




Saxcam Analytics

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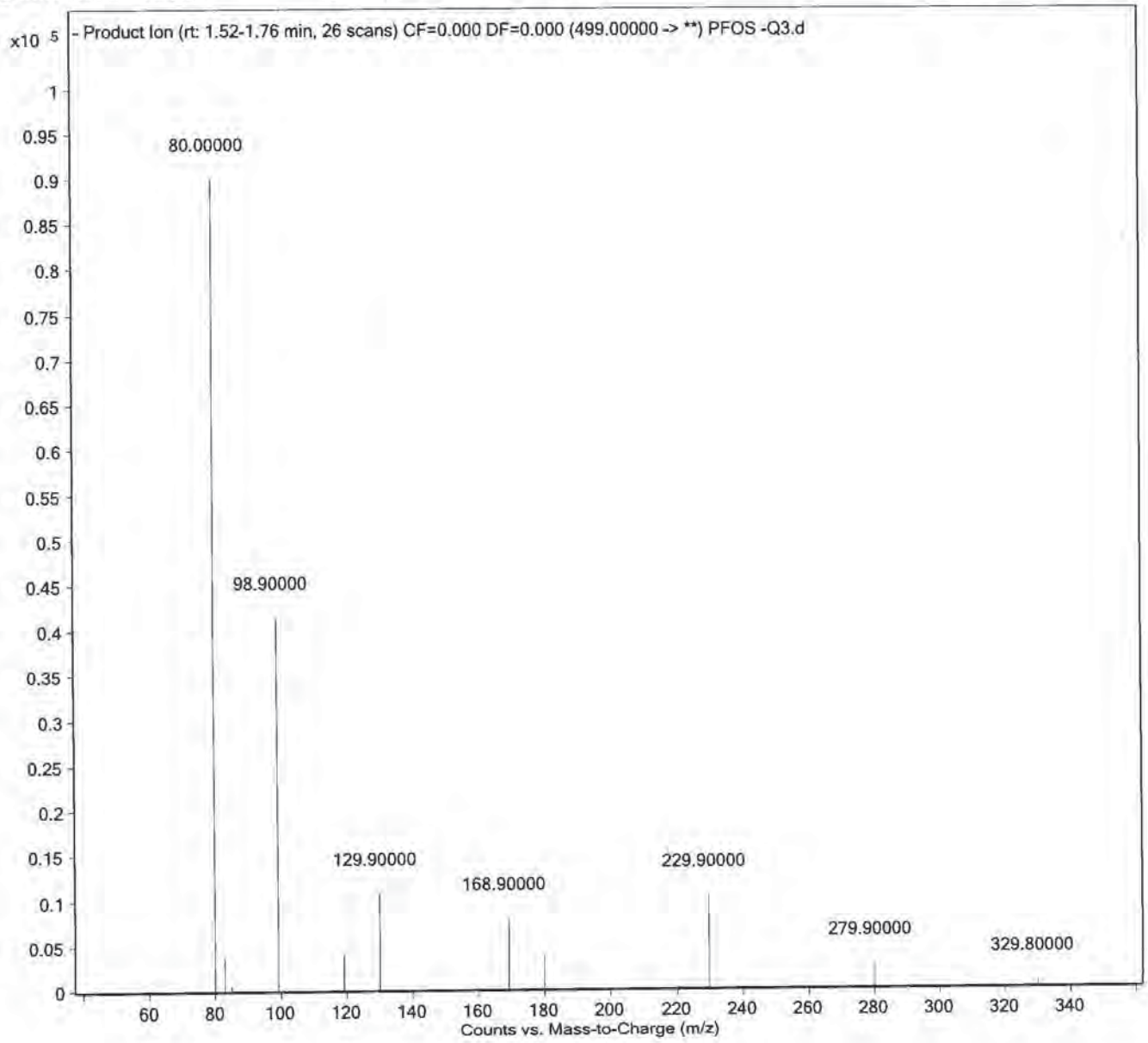
|---|---|---|---|---|---|
| **Sample Name** | PFOS -Q3 | **Position** | P1-A9 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFOS -Q3.d |
| **CQ Method** | PFC_MassVerification-PFOS-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 7:38:51 PM |




Maxxam Analytics

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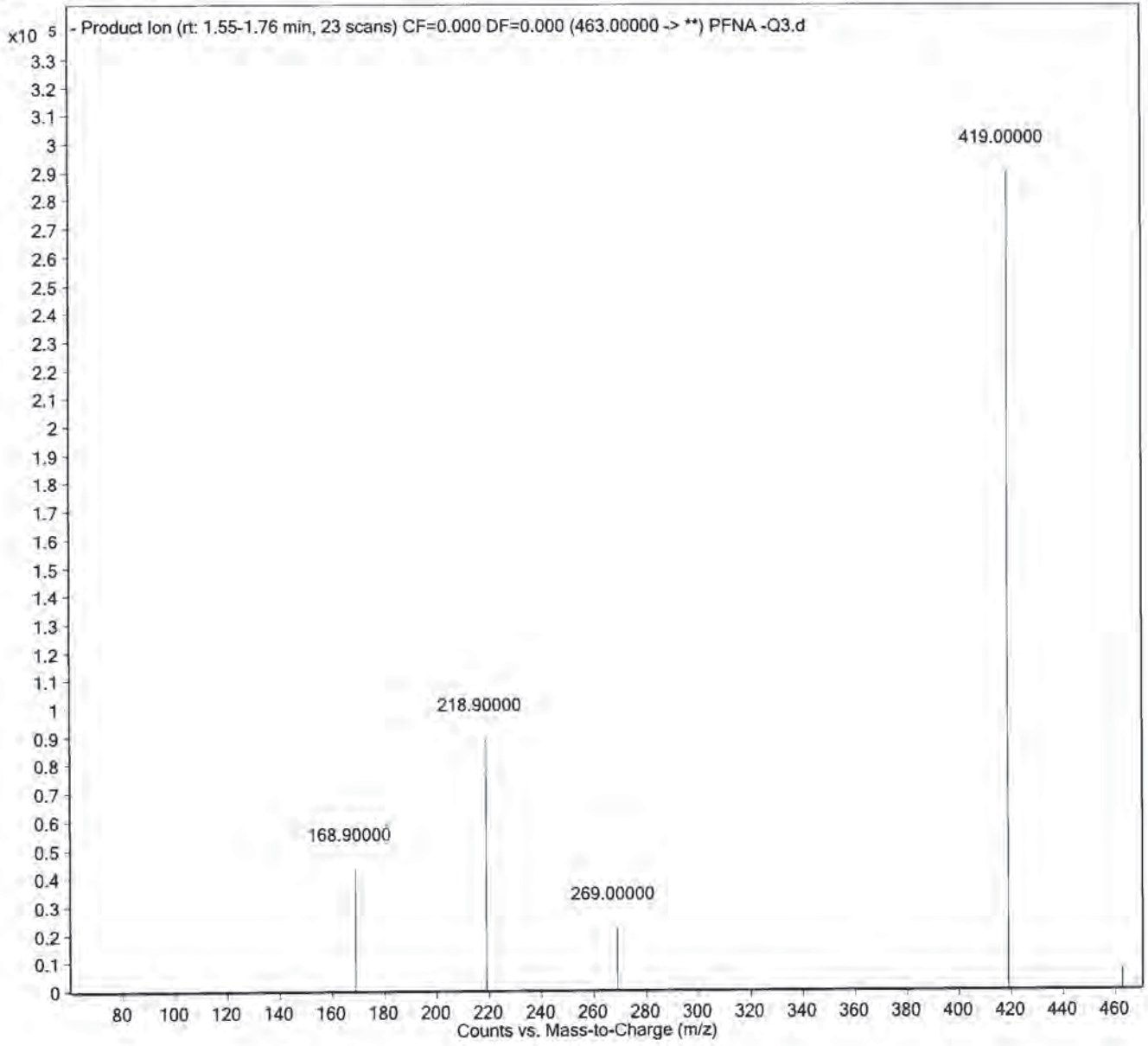
|---|---|---|---|---|---|
| **Sample Name** | PFNA -Q3 | **Position** | P1-B1 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFNA -Q3.d |
| **CQ Method** | PFC_MassVerification-PFNA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 7:44:22 PM |




Saxam Analytics

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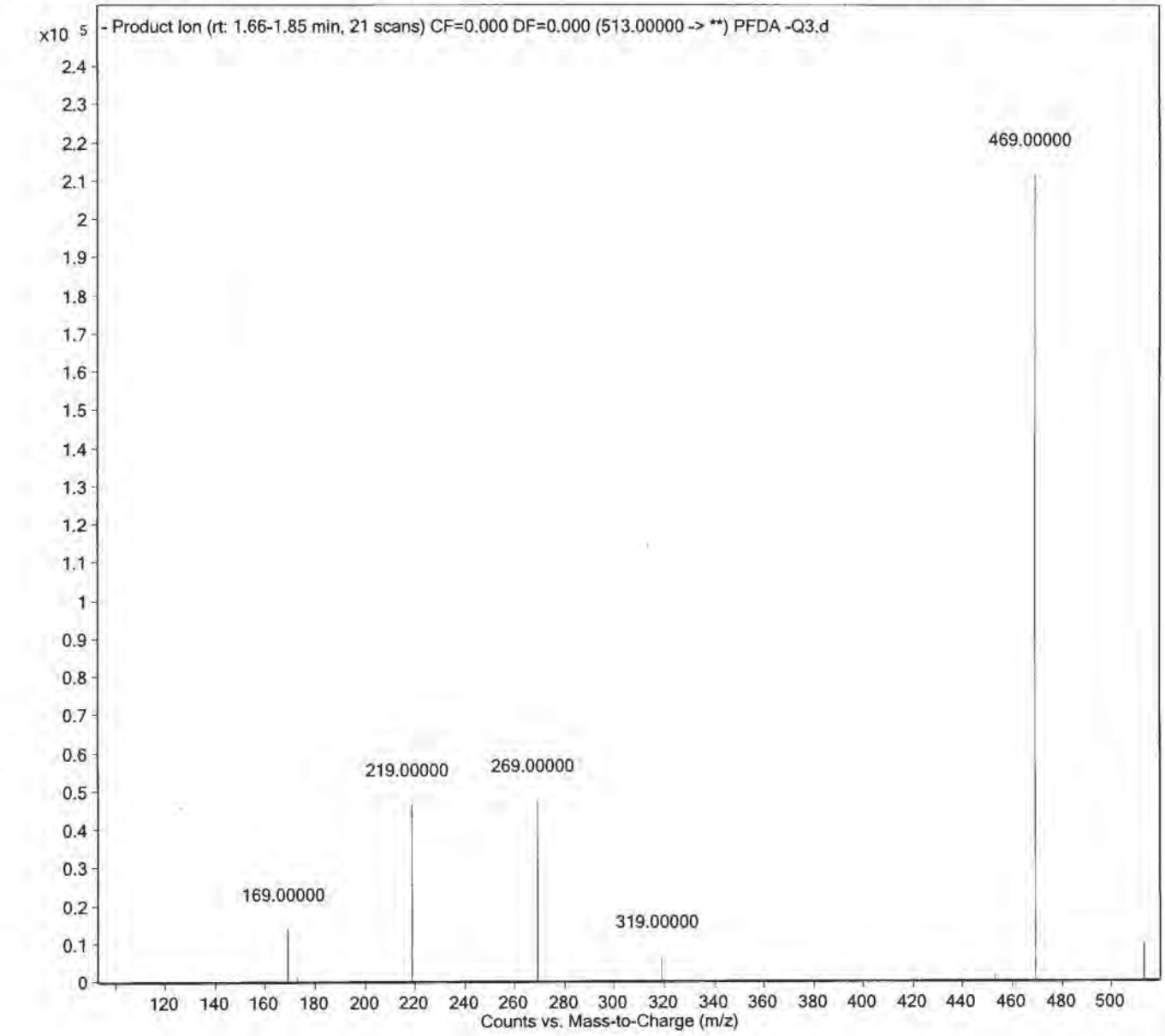
|---|---|---|---|---|---|
| **Sample Name** | PFDA -Q3 | **Position** | P1-B2 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFDA -Q3.d |
| **ACQ Method** | PFC_MassVerification-PFDA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 7:49:52 PM |




Maxxam Analytics

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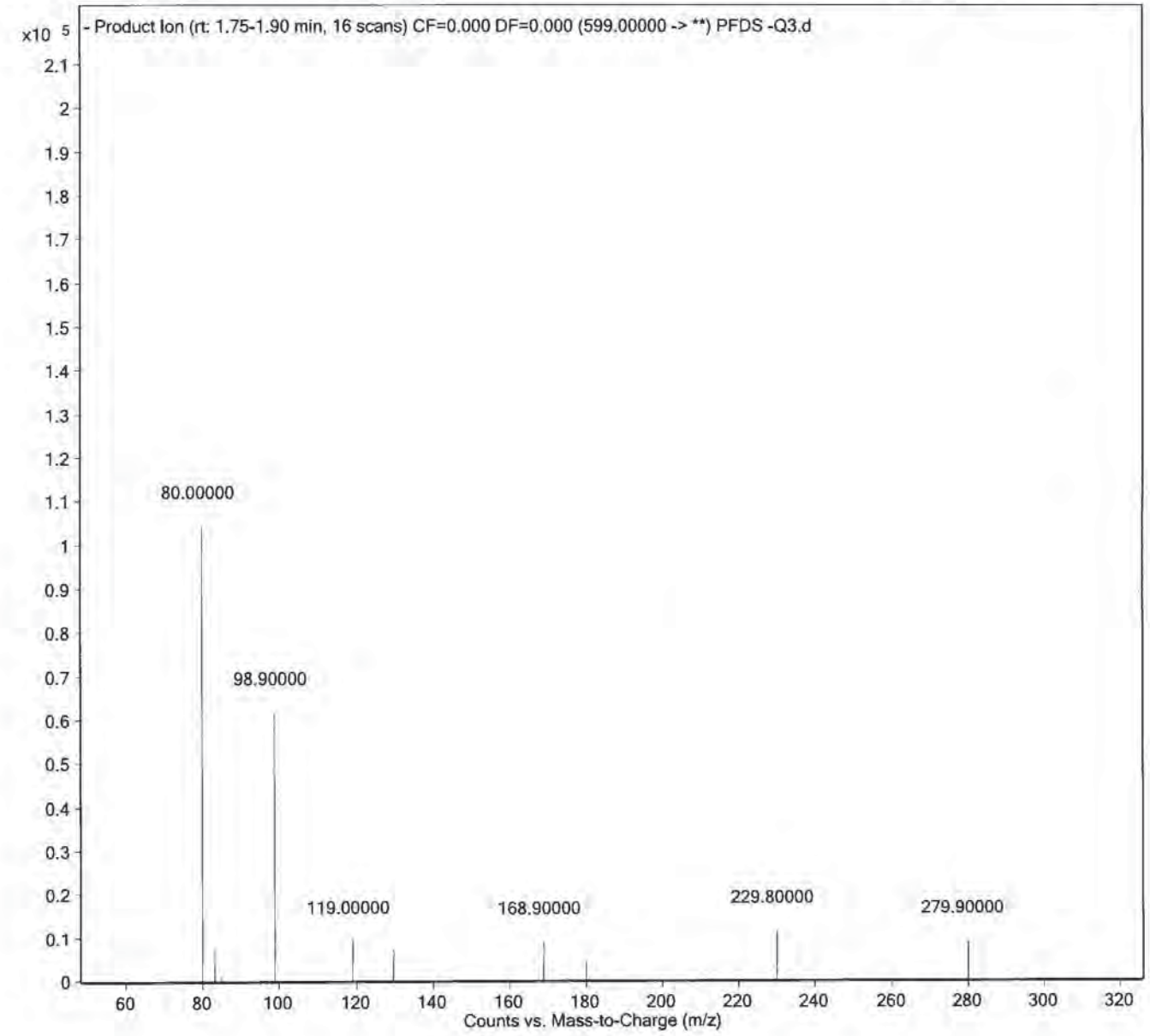
|---|---|---|---|---|---|
| **Sample Name** | PFDS -Q3 | **Position** | P1-B3 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFDS -Q3.d |
| **ACQ Method** | PFC_MassVerification-PFDS-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 7:55:22 PM |




Maxxam Analytics

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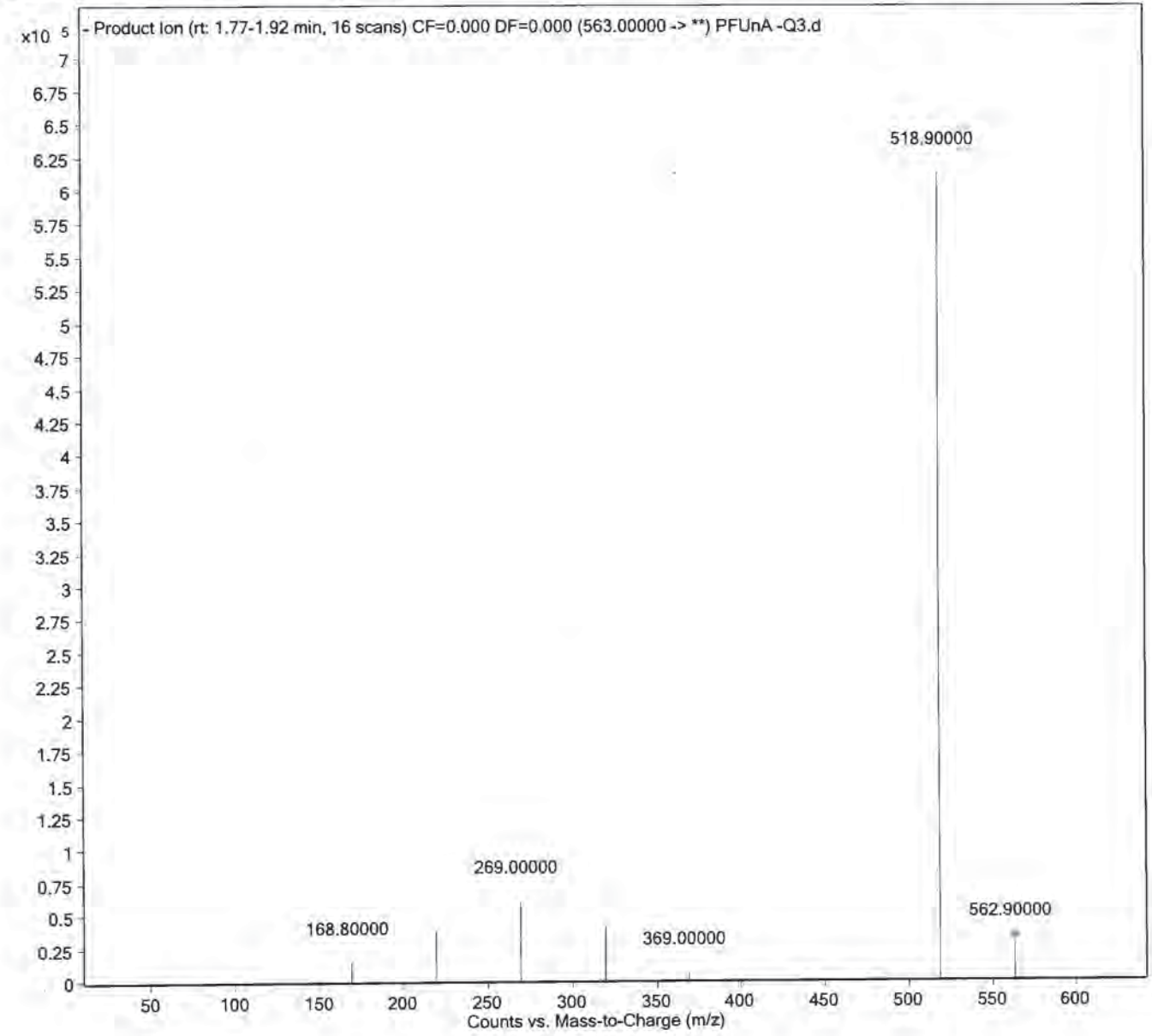
|---|---|---|---|---|---|
| **Sample Name** | PFUnA -Q3 | **Position** | P1-B4 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFUnA -Q3.d |
| **LCQ Method** | PFC_MassVerification-PFUnA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 8:00:52 PM |




Maxxam Analytics

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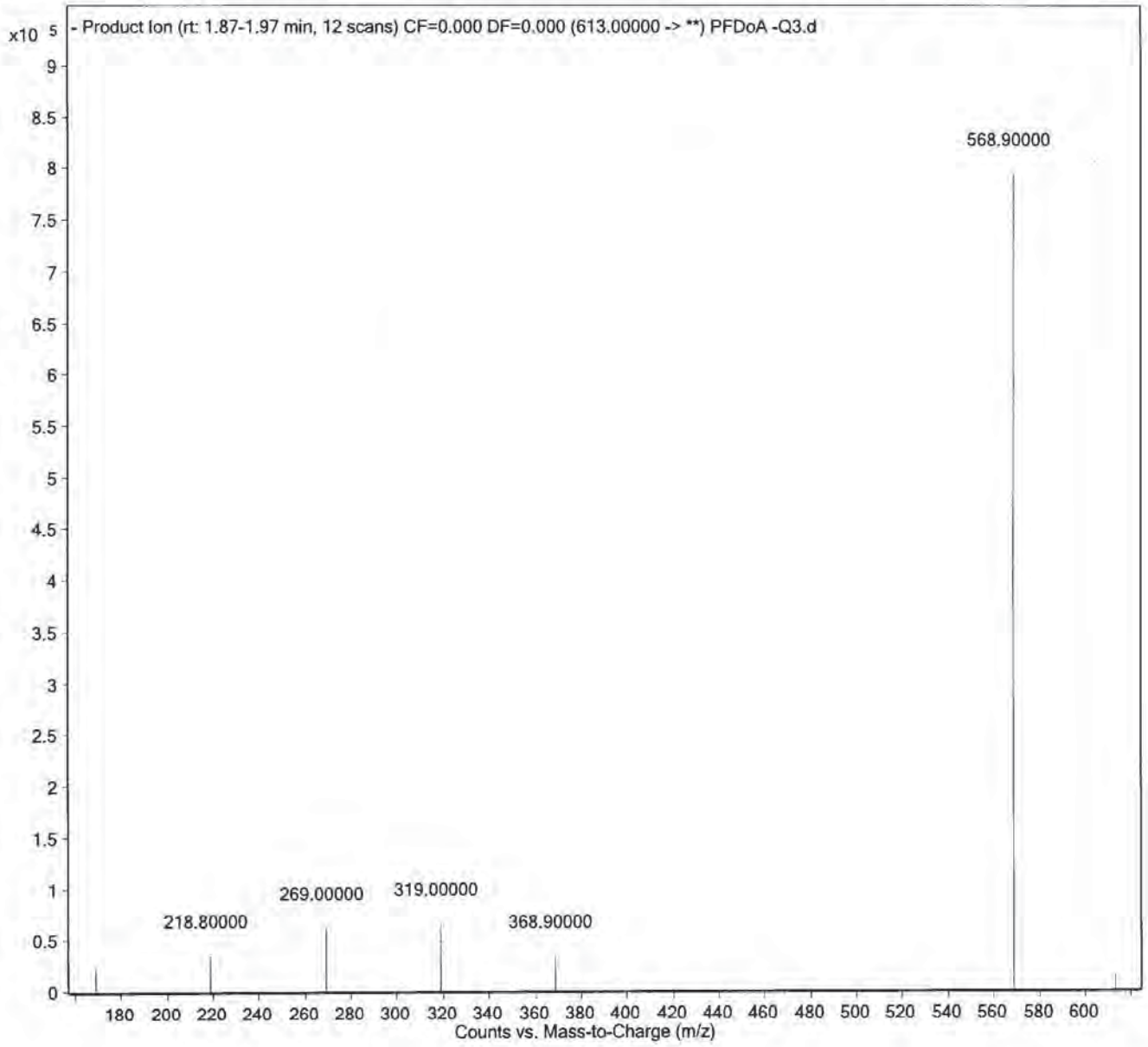
|---|---|---|---|---|---|
| **Sample Name** | PFDoA -Q3 | **Position** | P1-B5 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFDoA -Q3.d |
| **ACQ Method** | PFC_MassVerification-PFDoA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 8:06:23 PM |




Saram Analytics

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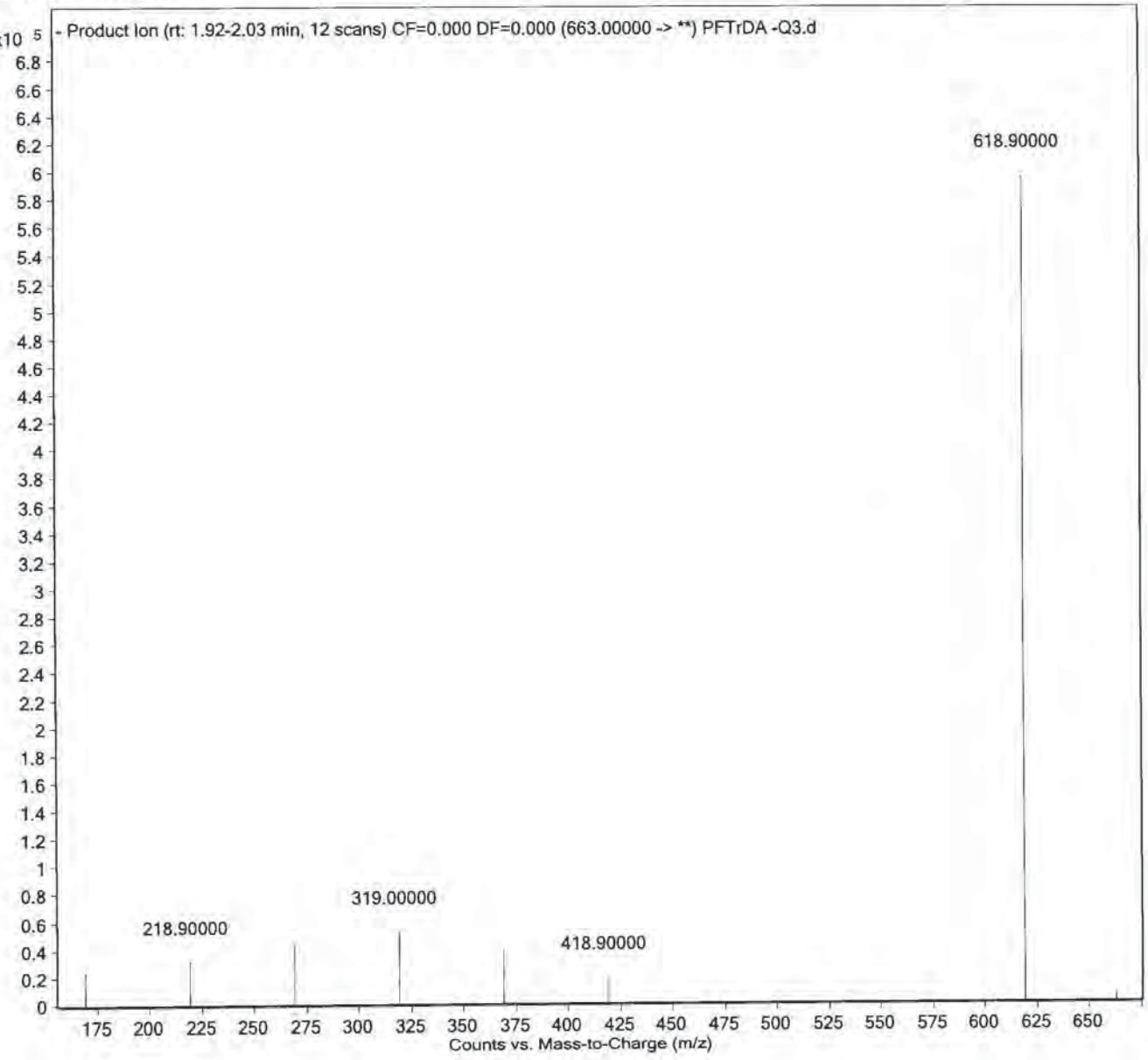
|---|---|---|---|---|---|
| **Sample Name** | PFTrDA -Q3 | **Position** | P1-B6 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFTrDA -Q3.d |
| **LCQ Method** | PFC_MassVerification-PFTrDA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 8:11:53 PM |




Maxxam Analytics

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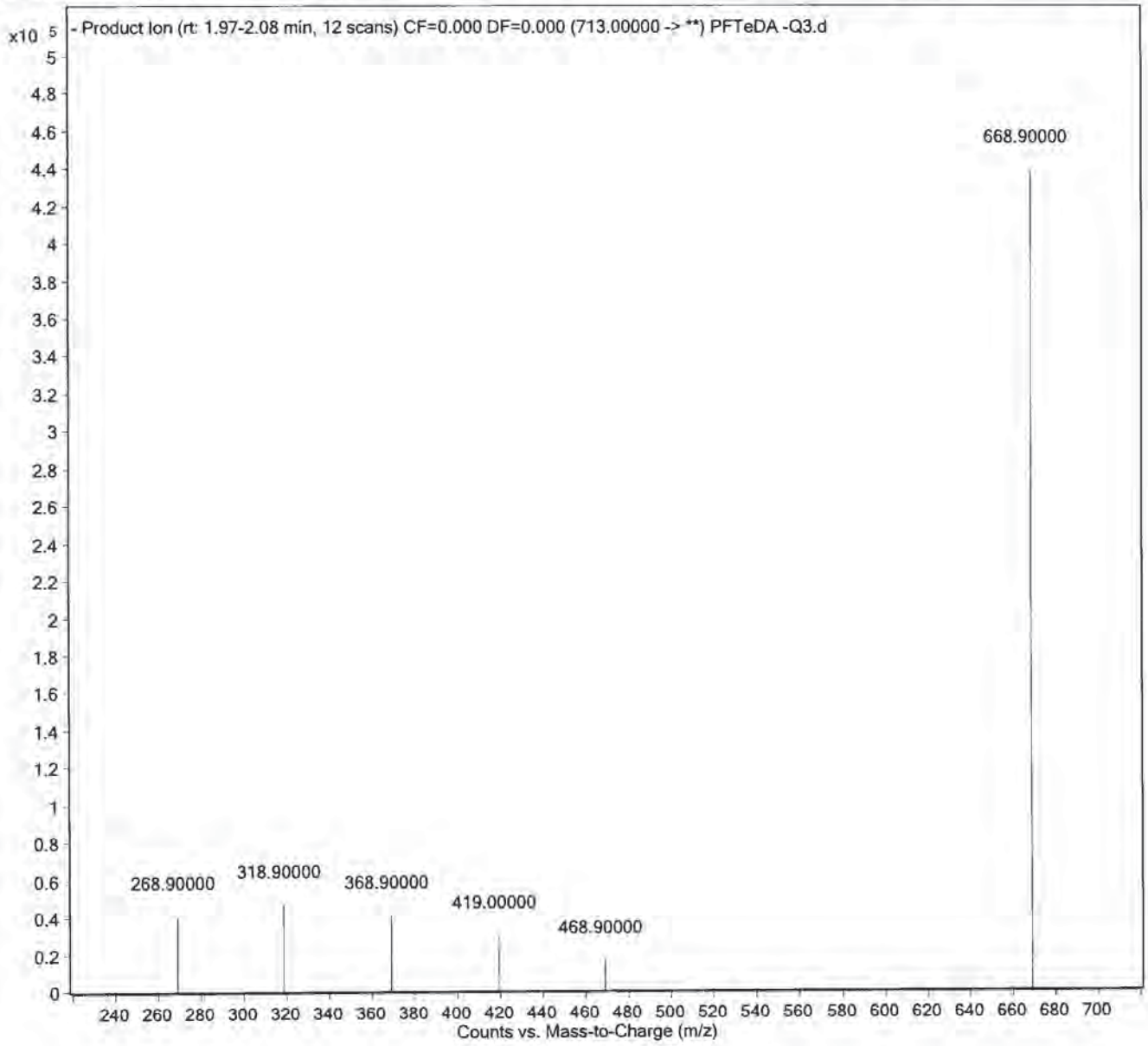
|---|---|---|---|---|---|
| **Sample Name** | PFTeDA -Q3 | **Position** | P1-B7 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFTeDA -Q3.d |
| **Acq Method** | PFC_MassVerification-PFTeDA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 8:17:23 PM |




SAExam Analytics

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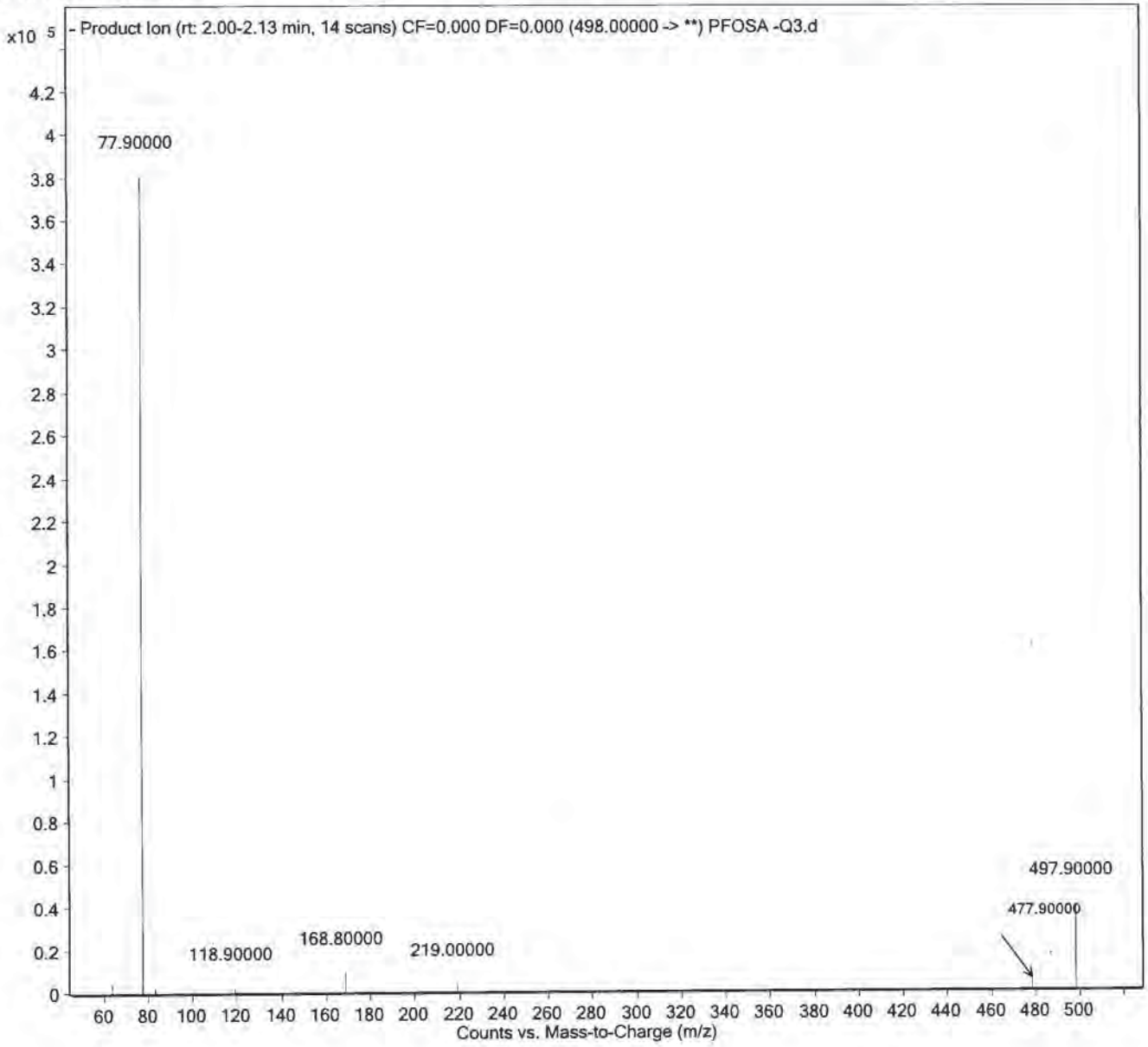
|---|---|---|---|---|---|
| **Sample Name** | PFOSA -Q3 | **Position** | P1-B8 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | PFOSA -Q3.d |
| **ACQ Method** | PFC_MassVerification-PFOSA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 8:22:55 PM |




Maxxam Analytics

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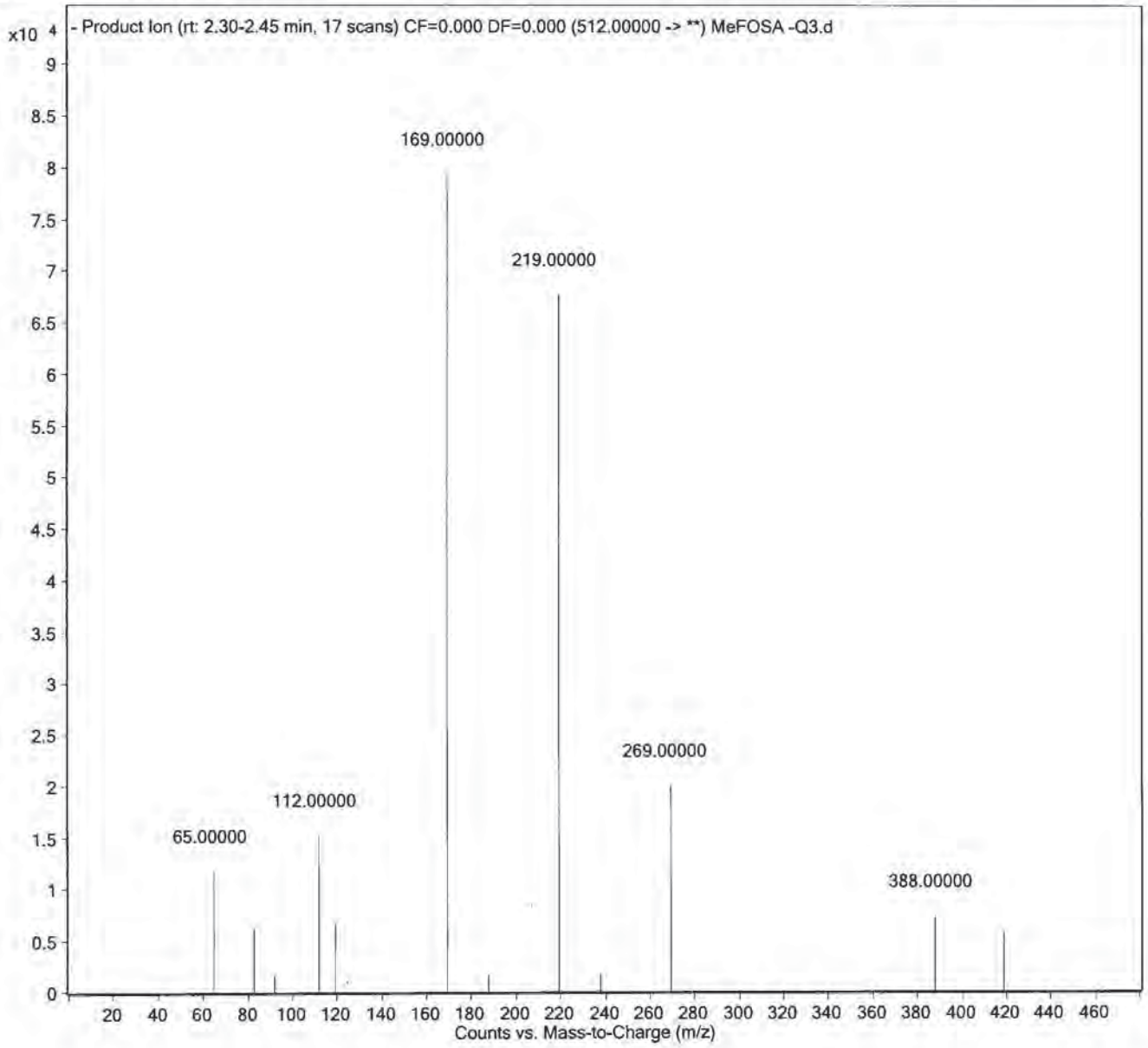
|---|---|---|---|---|---|
| **Sample Name** | MeFOSA -Q3 | **Position** | P1-B9 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MeFOSA -Q3.d |
| **ACQ Method** | PFC_MassVerification-MeFOSA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 8:28:25 PM |




Alaska Analytics

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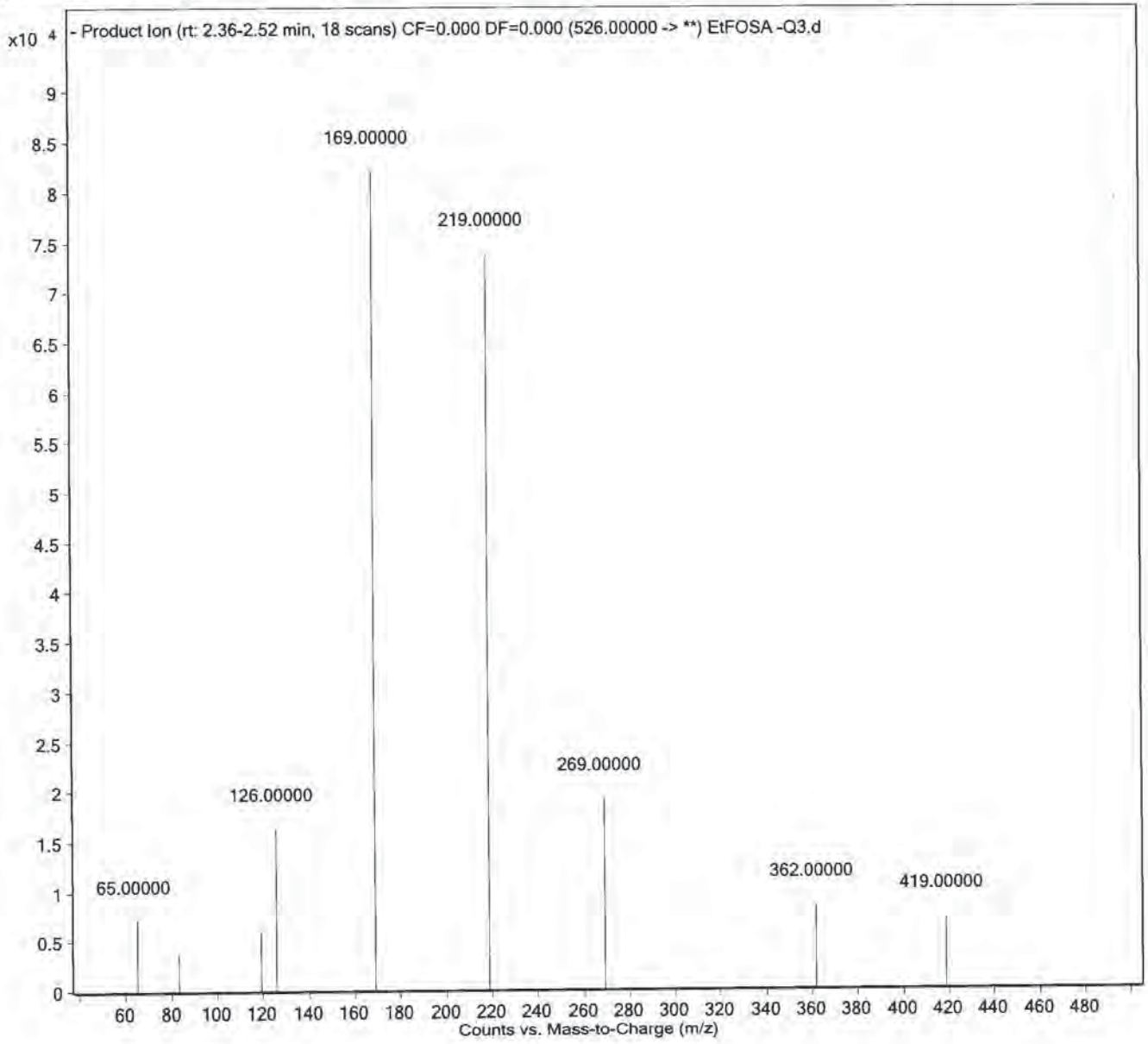
|---|---|---|---|---|---|
| **Sample Name** | EtFOSA -Q3 | **Position** | P1-C1 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | EtFOSA -Q3.d |
| **CQ Method** | PFC_MassVerification-EtFOSA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 8:33:57 PM |




Maxxam Analytics

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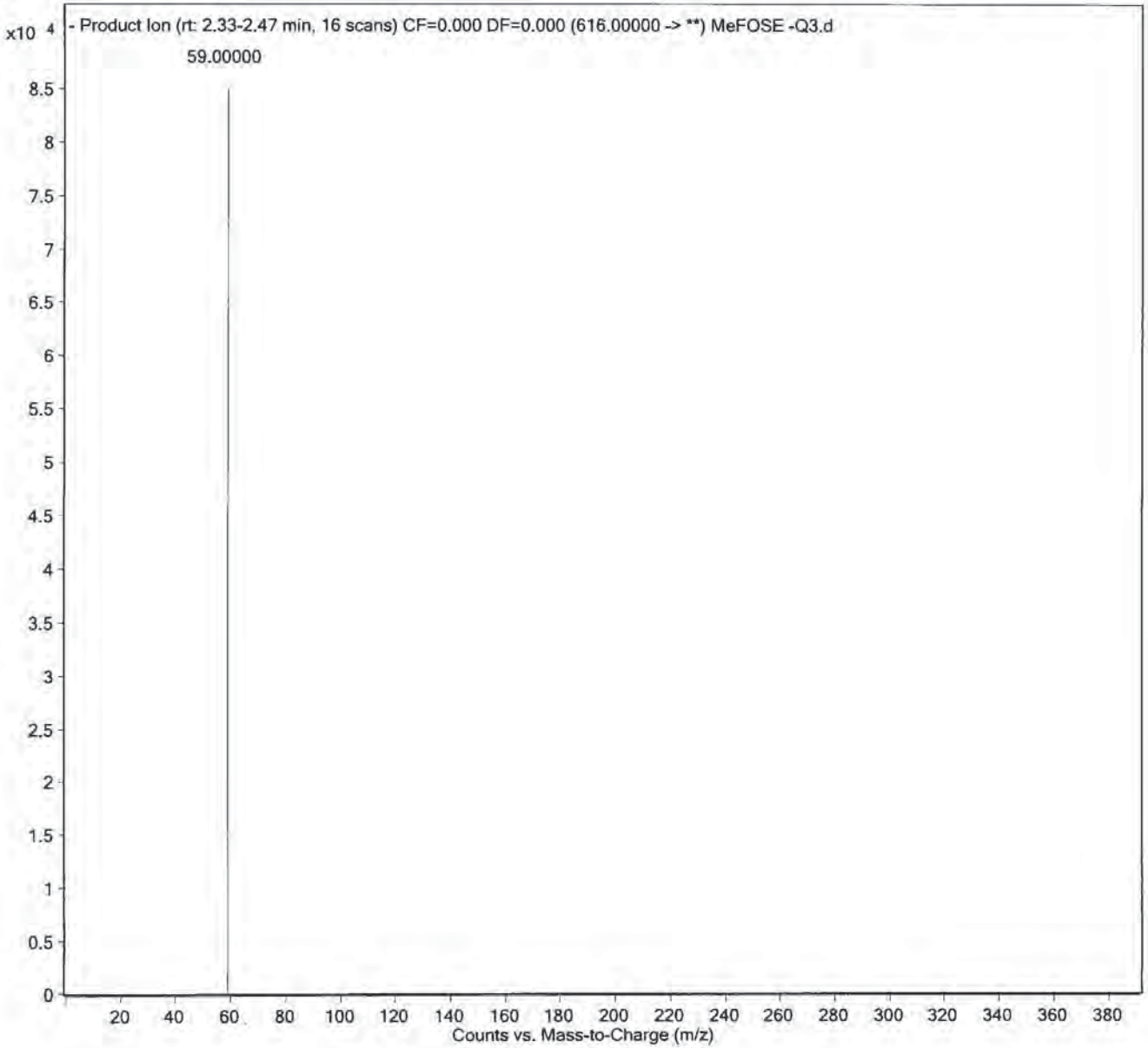
|---|---|---|---|---|---|
| **Sample Name** | MeFOSE -Q3 | **Position** | P1-C2 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MeFOSE -Q3.d |
| **ACQ Method** | PFC_MassVerification-MeFOSE-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 8:39:26 PM |




Maxxam Analytics

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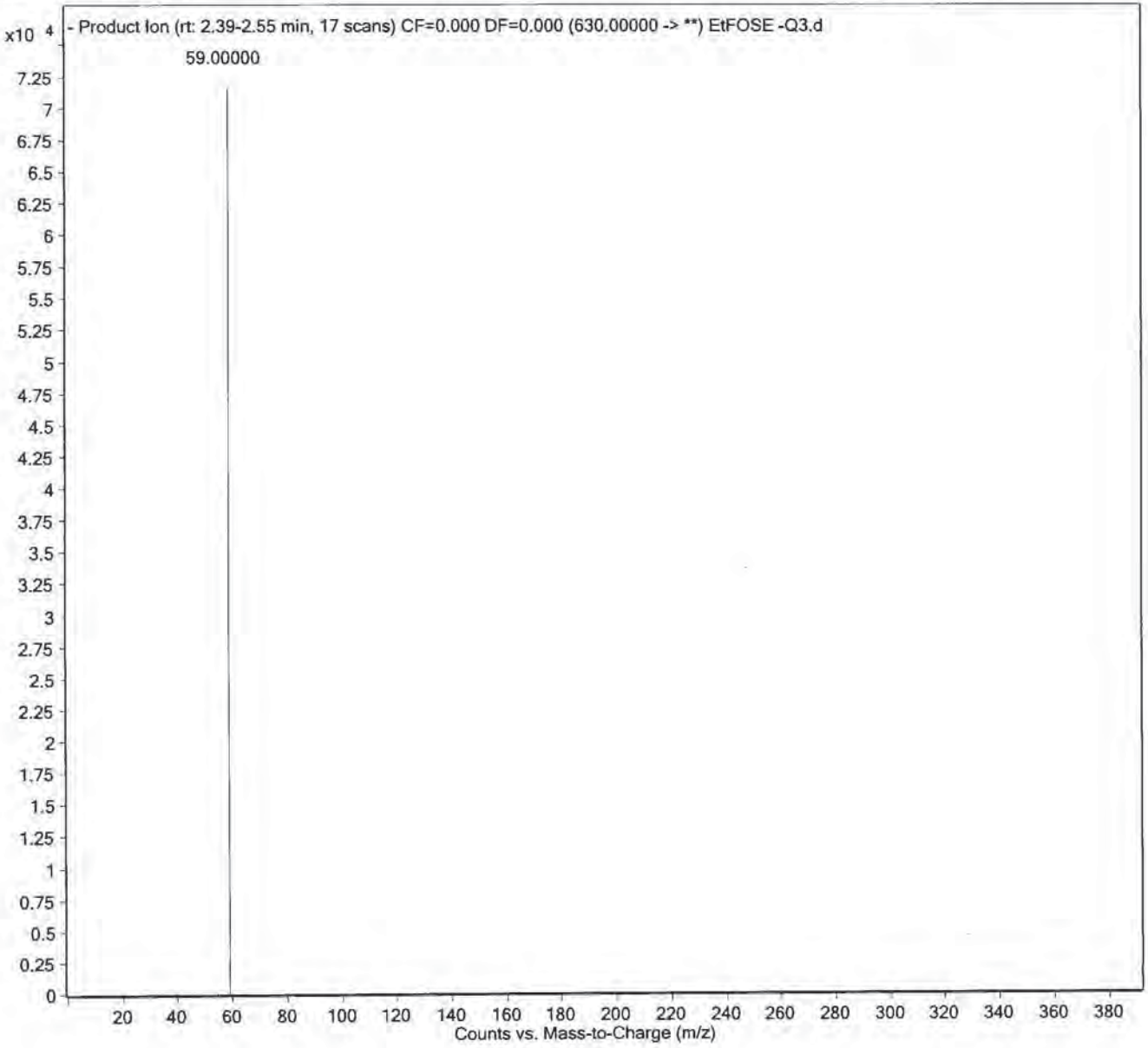
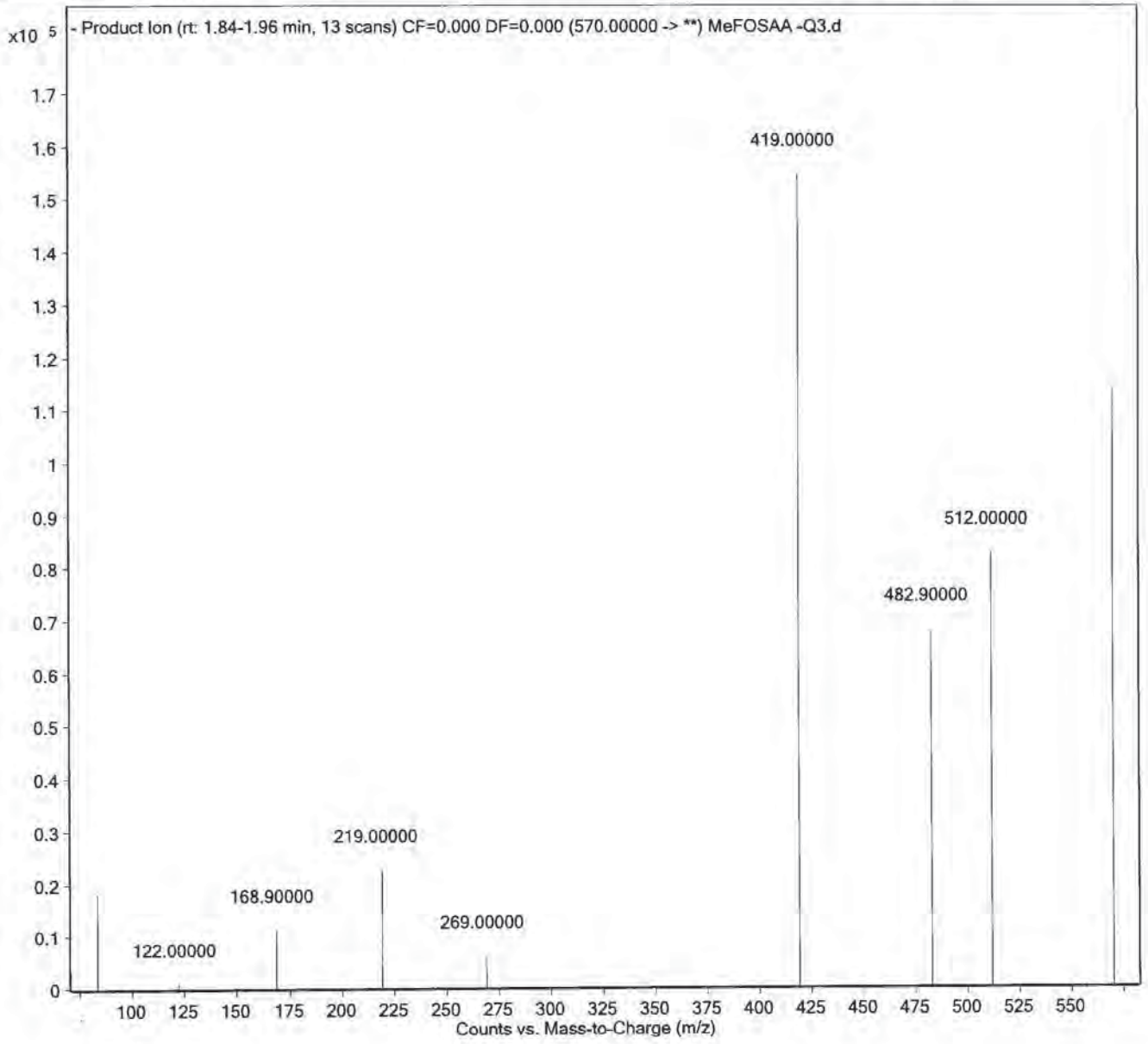
|---|---|---|---|---|---|
| **Sample Name** | EtFOSE -Q3 | **Position** | P1-C3 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | EtFOSE -Q3.d |
| **ACQ Method** | PFC_MassVerification-EtFOSE-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 8:44:57 PM |



| | | | | | |
|---|---|---|---|---|---|
| **Sample Name** | MeFOSAA -Q3 | **Position** | P1-C4 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MeFOSAA -Q3.d |
| **ACQ Method** | PFC_MassVerification-MeFOSAA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 8:50:27 PM |




SAExam Analytics

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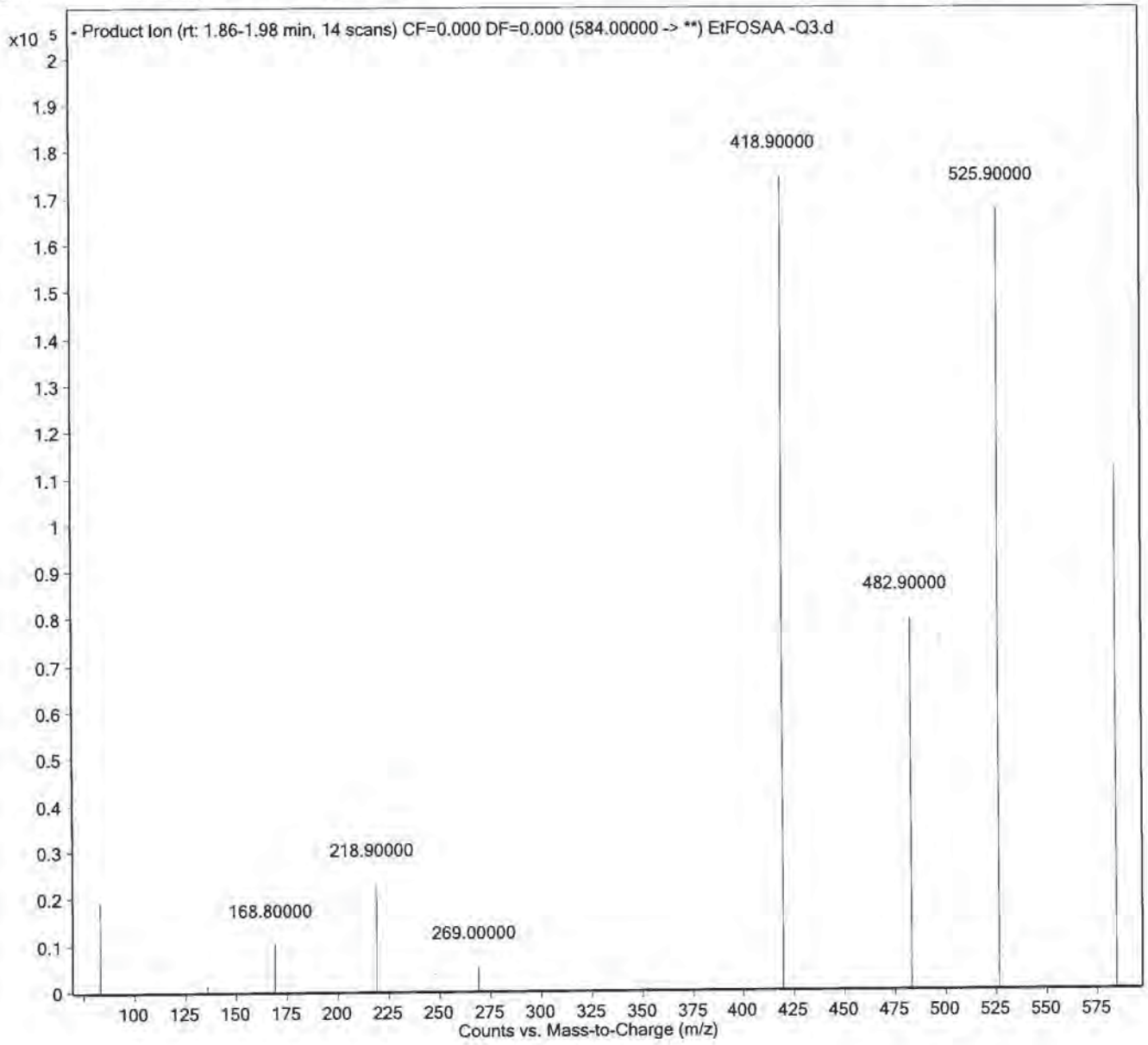
|---|---|---|---|---|---|
| **Sample Name** | EtFOSAA -Q3 | **Position** | P1-C5 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | EtFOSAA -Q3.d |
| **LCQ Method** | PFC_MassVerification-EtFOSAA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 8:55:57 PM |



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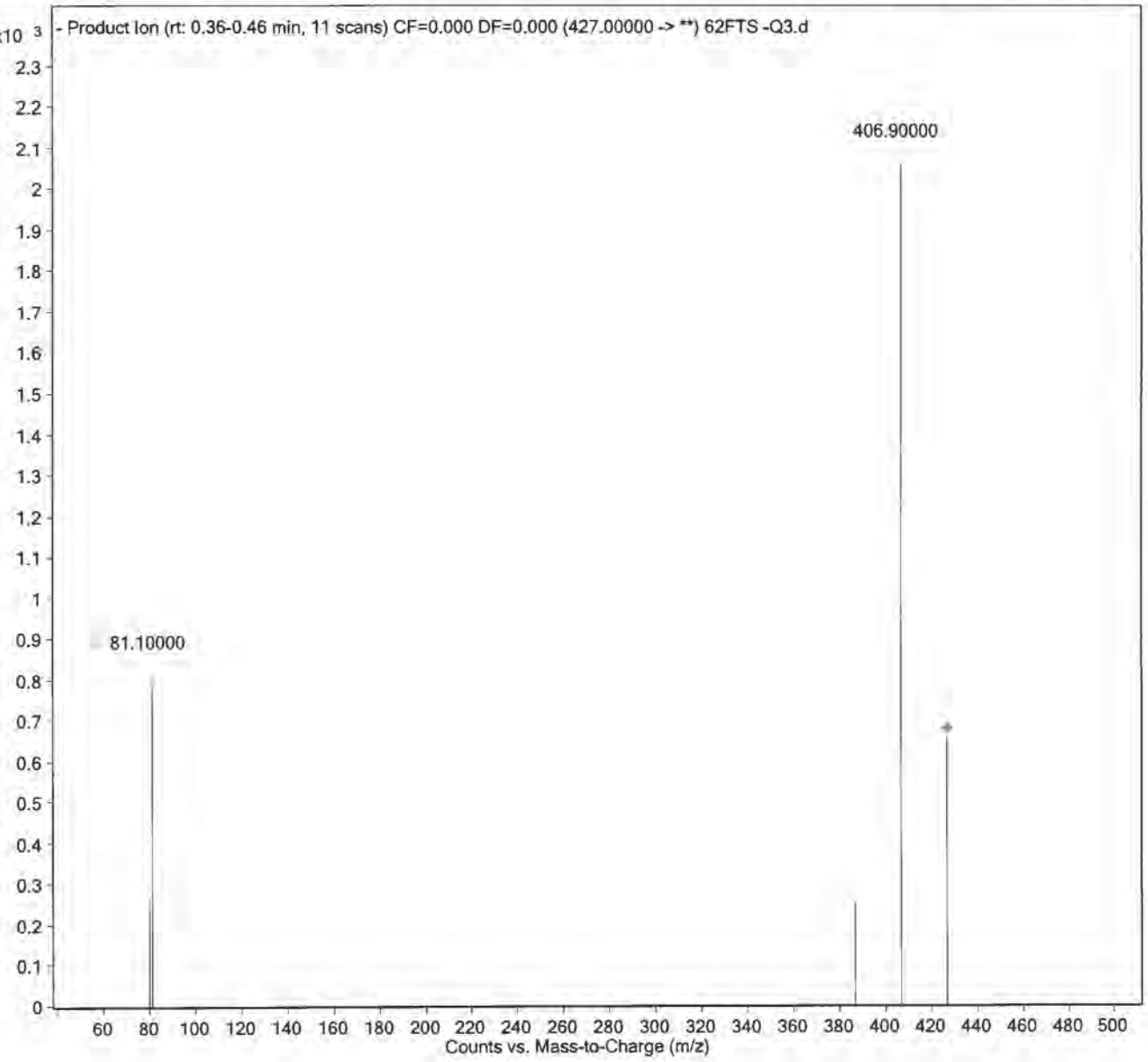
|---|---|---|---|---|---|
| **Sample Name** | 6:2FTS -Q3 | **Position** | P1-C6 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | 62FTS -Q3.d |
| **AcQ Method** | PFC_MassVerification-6-2FTS-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 9:01:27 PM |




SGS AXYS Analytics

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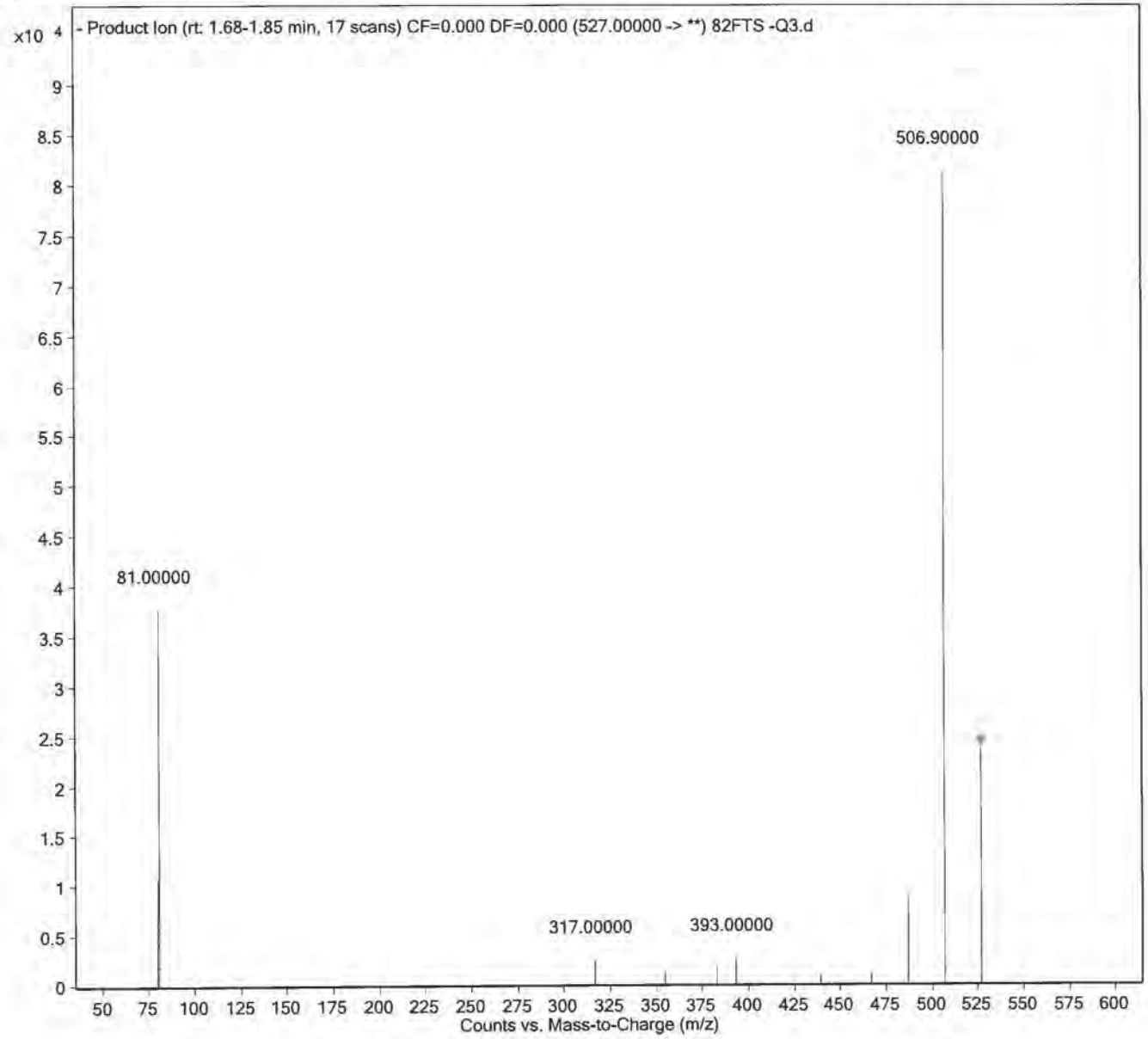
|---|---|---|---|---|---|
| **Sample Name** | 8:2FTS -Q3 | **Position** | P1-C7 | **Instrument Name** | LCMS04 |
| **User Name** | M_G | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | 82FTS -Q3.d |
| **ACQ Method** | PFC_MassVerification-8-2FTS-Q3.m | **Comment** | | **Acquired Time** | 2017/07/10 9:06:57 PM |




Maxxam Analytics

# Worklist Report

Agilent Technologies

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**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFAS_MASSVER_170710_Q3.wkl

**Operator Name:** M_G
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\data\Mass Verification\20170710_Q3
**Pre-Worklist Script:** —
**Post-Worklist Script:** —
**Acquisition Clean Up Script:** —
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** —

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P1 | |

**Worklist Table**

| | Sample Name | Sample Position | Method | Data File | Sample Type | Inj Vol (µl) | Sample Group |
|---|---|---|---|---|---|---|---|
| 1 | PFBA -Q3 | P1-A1 | PFC_MassVerification-PFBA-Q3.m | PFBA -Q3.d | Sample | As Method | PFAS-Q3 |
| 2 | PFBS -Q3 | P1-A2 | PFC_MassVerification-PFBS-Q3.m | PFBS -Q3.d | Sample | As Method | PFAS-Q3 |
| 3 | PFPeA -Q3 | P1-A3 | PFC_MassVerification-PFPeA-Q3.m | PFPeA -Q3.d | Sample | As Method | PFAS-Q3 |
| 4 | PFHxA -Q3 | P1-A4 | PFC_MassVerification-PFHxA-Q3.m | PFHxA -Q3.d | Sample | As Method | PFAS-Q3 |
| 5 | PFHxS -Q3 | P1-A5 | PFC_MassVerification-PFHxS-Q3.m | PFHxS -Q3.d | Sample | As Method | PFAS-Q3 |
| 6 | PFHpA-Q3 | P1-A6 | PFC_MassVerification-PFHpA-Q3.m | PFHpA-Q3.d | Sample | As Method | PFAS-Q3 |
| 7 | PFHpS-Q3 | P1-A7 | PFC_MassVerification-PFHpS-Q3.m | PFHpS-Q3.d | Sample | As Method | PFAS-Q3 |
| 8 | PFOA -Q3 | P1-A8 | PFC_MassVerification-PFOA-Q3.m | PFOA -Q3.d | Sample | As Method | PFAS-Q3 |
| 9 | PFOS -Q3 | P1-A9 | PFC_MassVerification-PFOS-Q3.m | PFOS -Q3.d | Sample | As Method | PFAS-Q3 |

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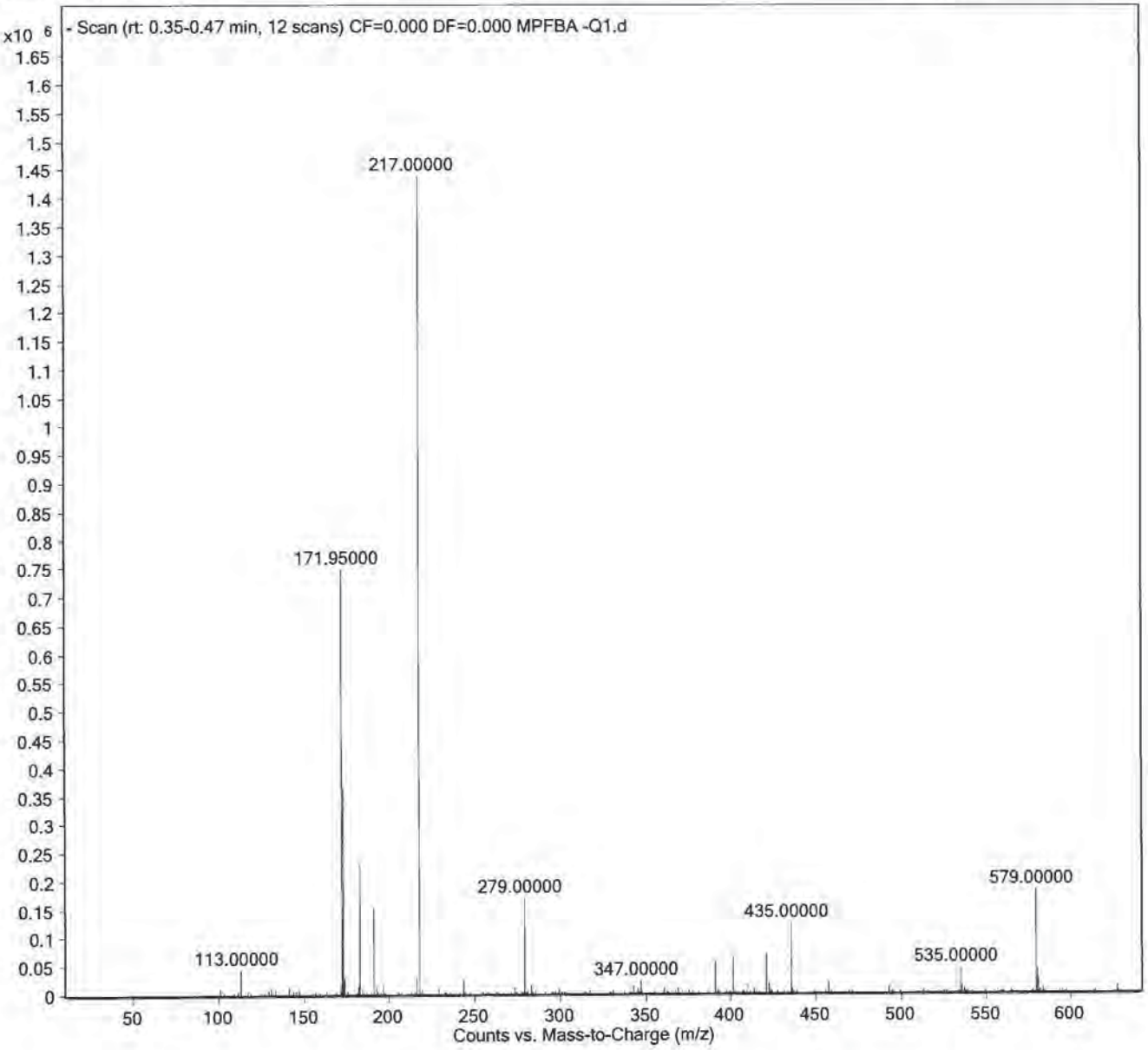
| | Sample Name | Sample Position | Method | Data File | Sample Type | Inj Vol (µl) | Sample Group |
|---|---|---|---|---|---|---|---|
| 10 | PFNA -Q3 | P1-B1 | PFC_MassVerification-PFNA-Q3.m | PFNA -Q3.d | Sample | As Method | PFAS-Q3 |
| 11 | PFDA -Q3 | P1-B2 | PFC_MassVerification-PFDA-Q3.m | PFDA -Q3.d | Sample | As Method | PFAS-Q3 |
| 12 | PFDS -Q3 | P1-B3 | PFC_MassVerification-PFDS-Q3.m | PFDS -Q3.d | Sample | As Method | PFAS-Q3 |
| 13 | PFUnA -Q3 | P1-B4 | PFC_MassVerification-PFUnA-Q3.m | PFUnA -Q3.d | Sample | As Method | PFAS-Q3 |
| 14 | PFDoA -Q3 | P1-B5 | PFC_MassVerification-PFDoA-Q3.m | PFDoA -Q3.d | Sample | As Method | PFAS-Q3 |
| 15 | PFTrDA -Q3 | P1-B6 | PFC_MassVerification-PFTrDA-Q3.m | PFTrDA -Q3.d | Sample | As Method | PFAS-Q3 |
| 16 | PFTeDA -Q3 | P1-B7 | PFC_MassVerification-PFTeDA-Q3.m | PFTeDA -Q3.d | Sample | As Method | PFAS-Q3 |
| 17 | PFOSA -Q3 | P1-B8 | PFC_MassVerification-PFOSA-Q3.m | PFOSA -Q3.d | Sample | As Method | PFAS-Q3 |
| 18 | MeFOSA -Q3 | P1-B9 | PFC_MassVerification-MeFOSA-Q3.m | MeFOSA -Q3.d | Sample | As Method | PFAS-Q3 |
| 19 | EtFOSA -Q3 | P1-C1 | PFC_MassVerification-EtFOSA-Q3.m | EtFOSA -Q3.d | Sample | As Method | PFAS-Q3 |
| 20 | MeFOSE -Q3 | P1-C2 | PFC_MassVerification-MeFOSE-Q3.m | MeFOSE -Q3.d | Sample | As Method | PFAS-Q3 |
| 21 | EtFOSE -Q3 | P1-C3 | PFC_MassVerification-EtFOSE-Q3.m | EtFOSE -Q3.d | Sample | As Method | PFAS-Q3 |
| 22 | MeFOSAA -Q3 | P1-C4 | PFC_MassVerification-MeFOSAA-Q3.m | MeFOSAA -Q3.d | Sample | As Method | PFAS-Q3 |
| 23 | EtFOSAA -Q3 | P1-C5 | PFC_MassVerification-EtFOSAA-Q3.m | EtFOSAA -Q3.d | Sample | As Method | PFAS-Q3 |
| 24 | 6:2FTS -Q3 | P1-C6 | PFC_MassVerification-6-2FTS-Q3.m | 62FTS -Q3.d | Sample | As Method | PFAS-Q3 |
| 25 | 8:2FTS -Q3 | P1-C7 | PFC_MassVerification-8-2FTS-Q3.m | 82FTS -Q3.d | Sample | As Method | PFAS-Q3 |

# Extracted and Injection Internal Standard Precursor Ion Verification

| | | | | | |
|---|---|---|---|---|---|
| **Sample Name** | MPFBA | **Position** | P2-A1 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFBA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 1:00:45 PM |




Saxam Analytics

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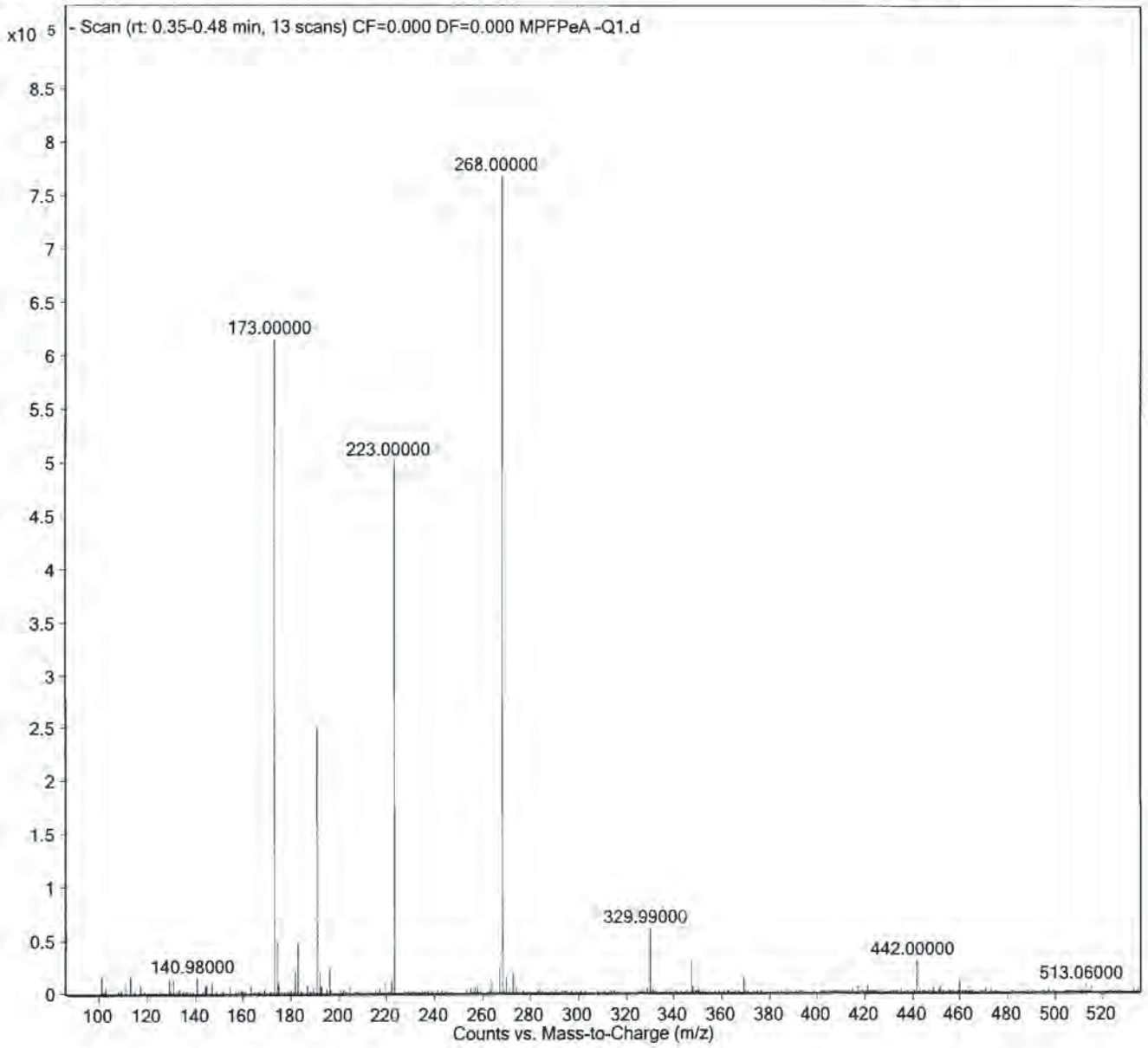
|---|---|---|---|---|---|
| **Sample Name** | MPFPeA | **Position** | P2-A2 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFPeA -Q1.d |
| **AcQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 1:06:18 PM |




Alpha Analytics

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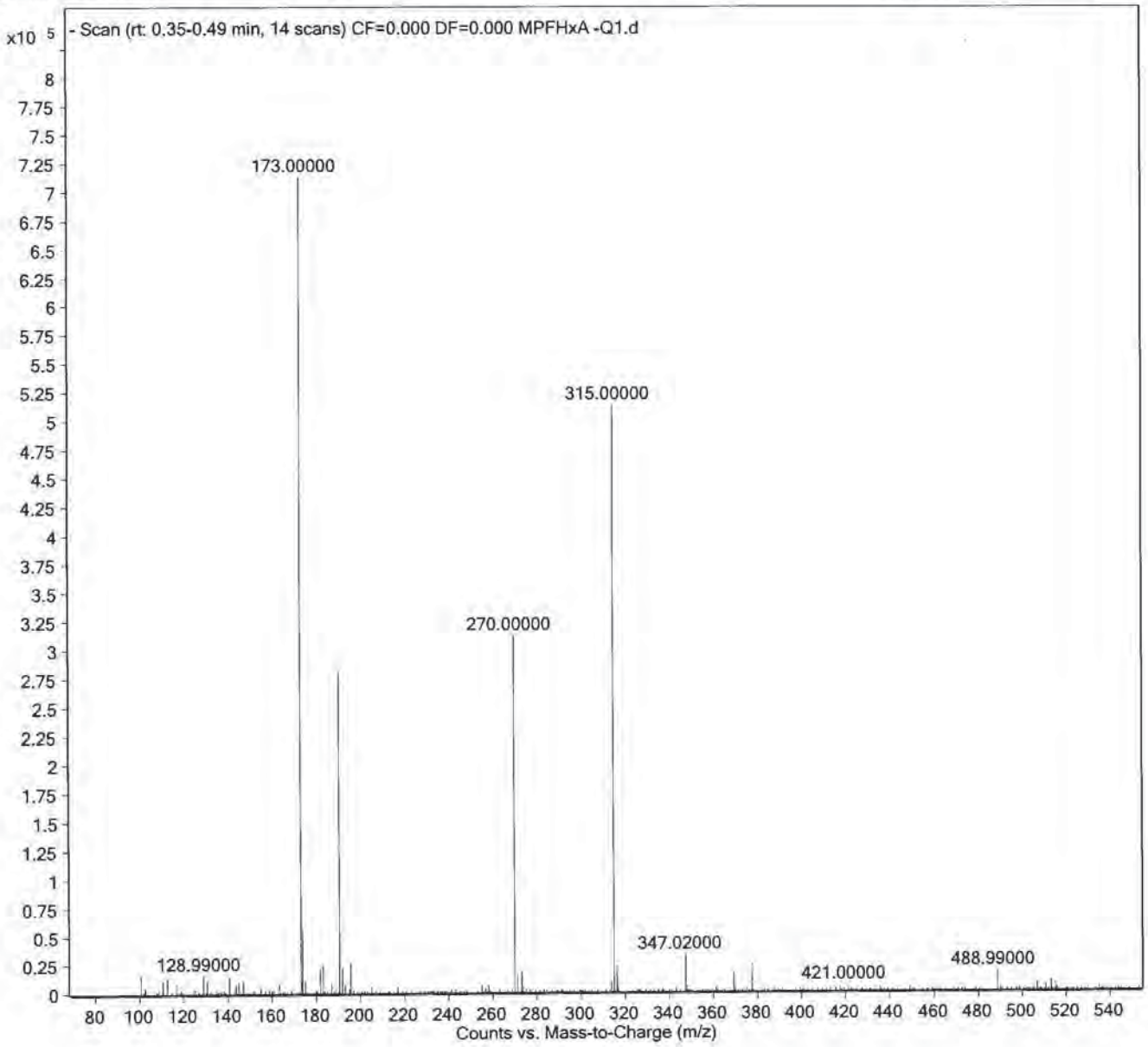
|---|---|---|---|---|---|
| **Sample Name** | MPFHxA | **Position** | P2-A3 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFHxA -Q1.d |
| **AQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 1:11:48 PM |




Maxxam Analytics

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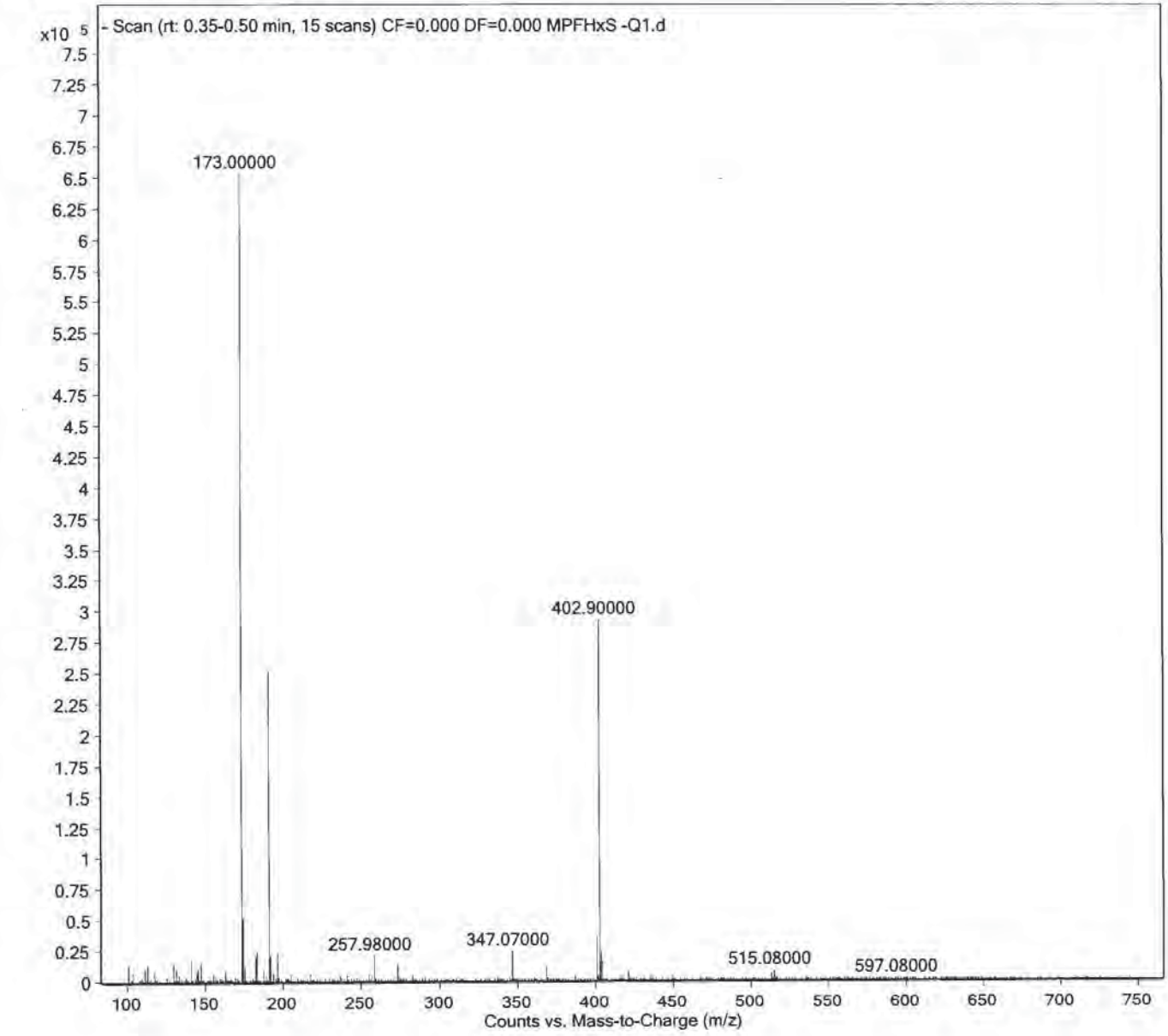
|---|---|---|---|---|---|
| **Sample Name** | MPFHxS | **Position** | P2-A4 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFHxS -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 1:17:18 PM |




Battelle Analytics

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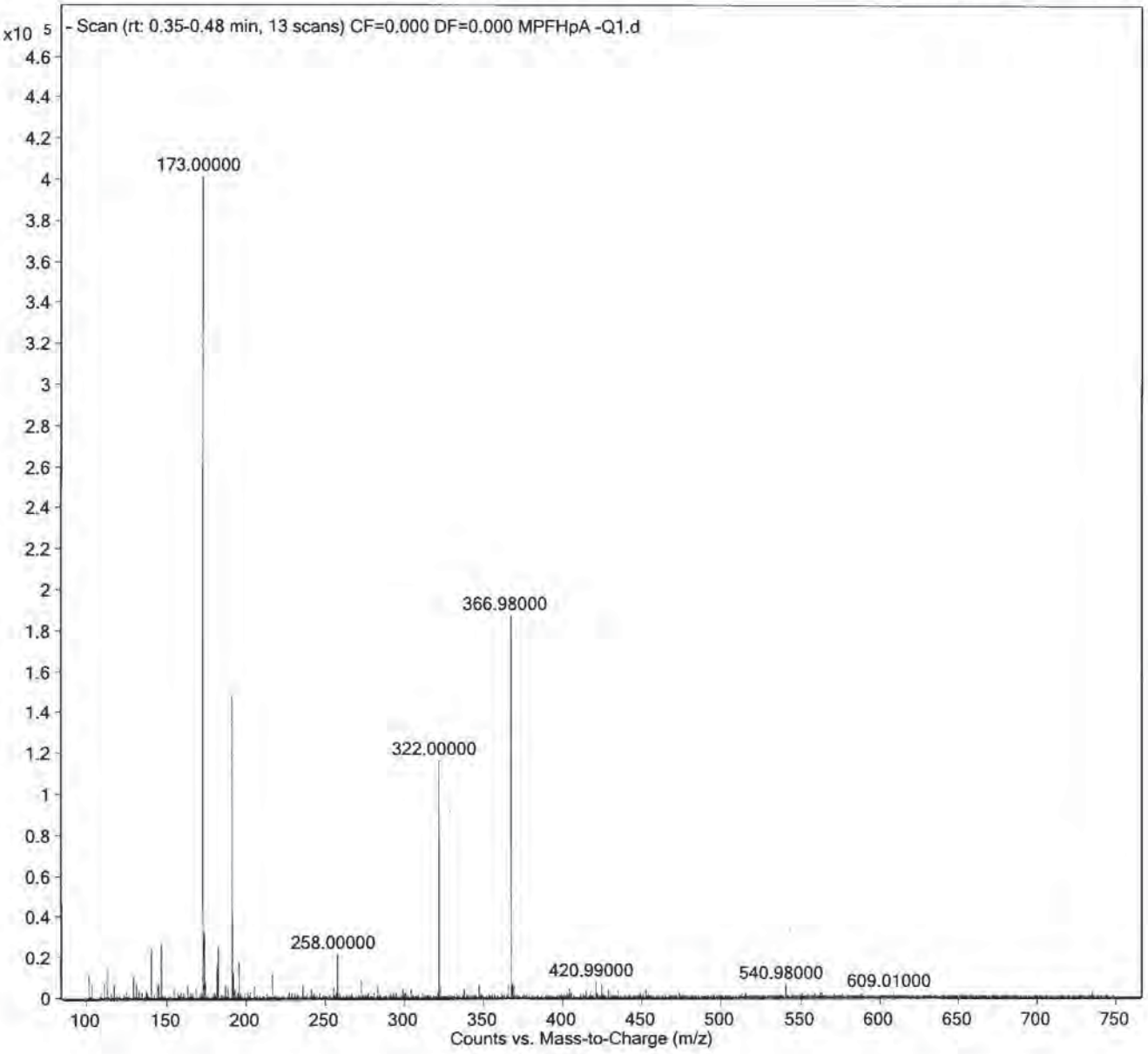
|---|---|---|---|---|---|
| **Sample Name** | MPFHpA | **Position** | P2-A5 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFHpA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 1:22:48 PM |




MaxXam Analytics

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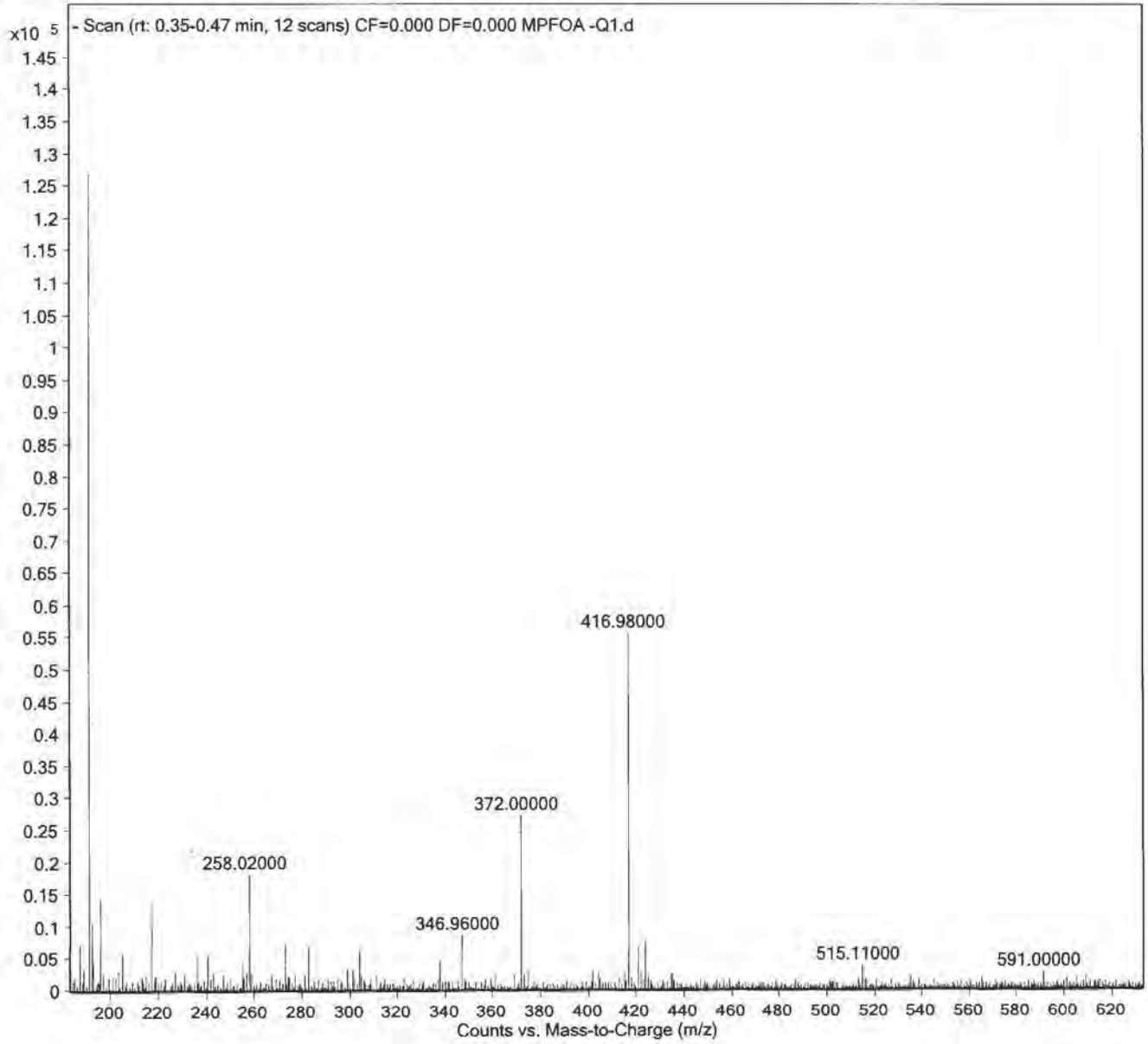
|---|---|---|---|---|---|
| **Sample Name** | MPFOA | **Position** | P2-A6 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFOA -Q1.d |
| **Acq Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 1:28:18 PM |




SaxAm Analytics

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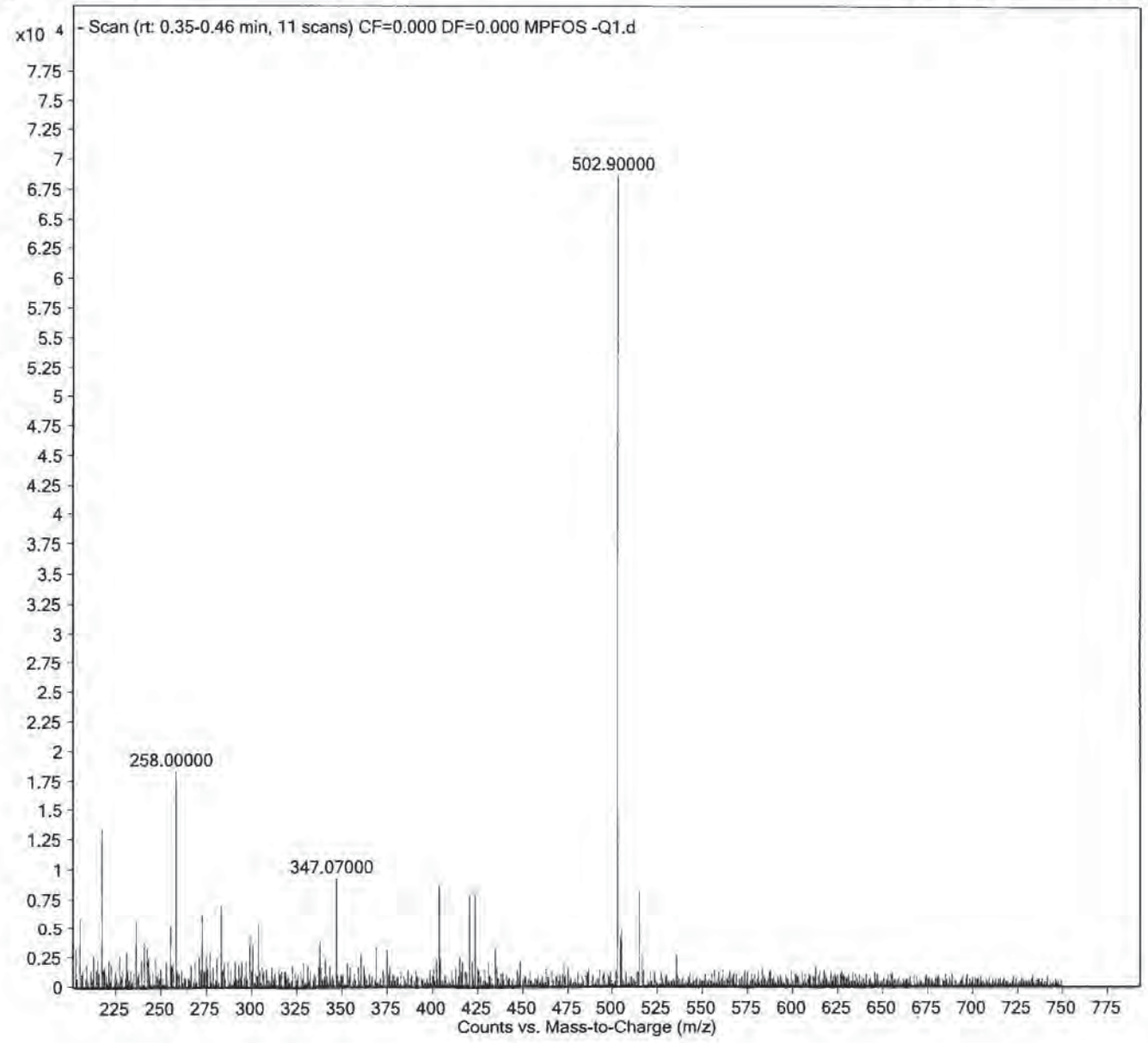
|---|---|---|---|---|---|
| **Sample Name** | MPFOS | **Position** | P2-A7 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFOS -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 1:33:49 PM |




Maxxam Analytics

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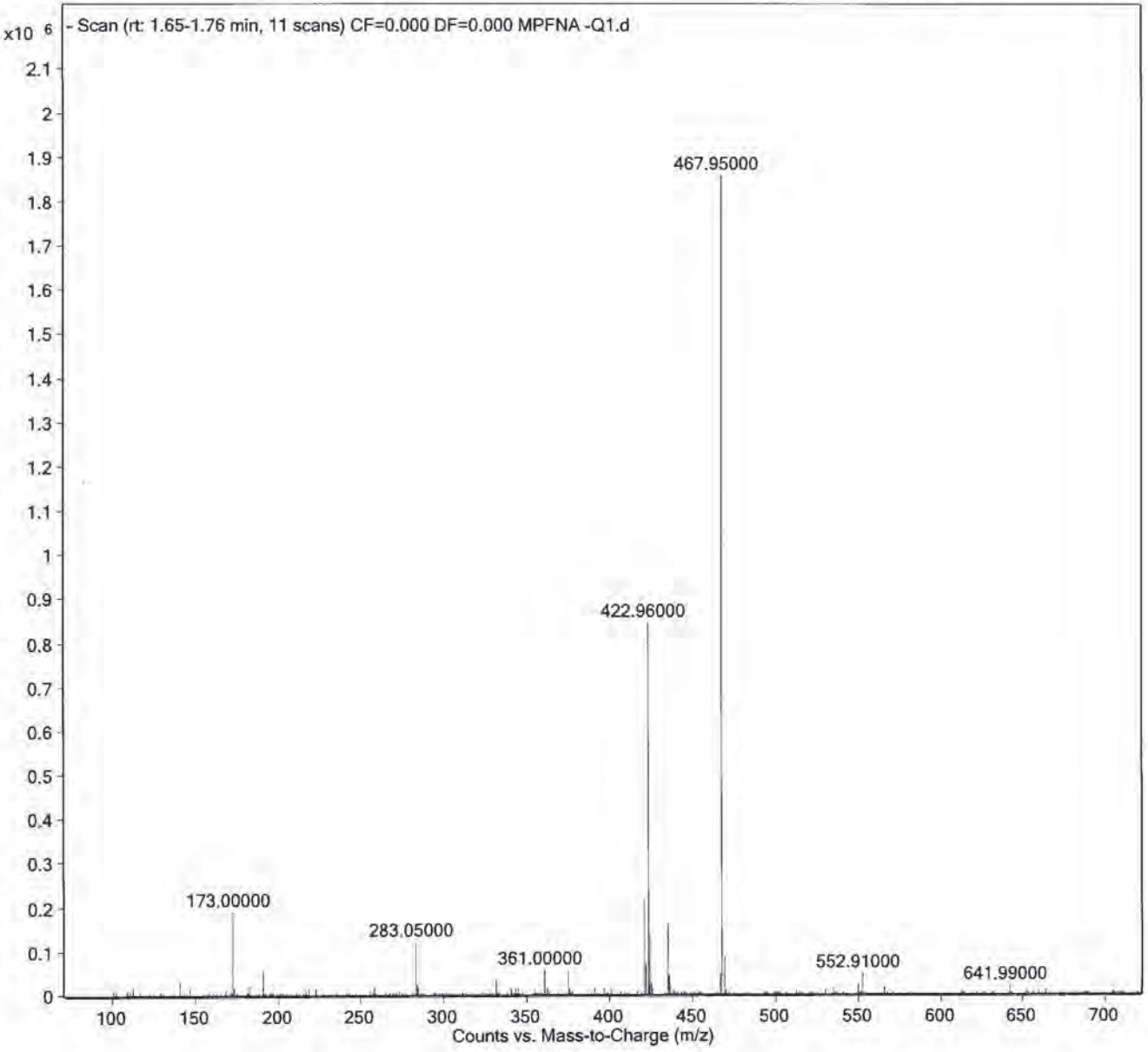
|---|---|---|---|---|---|
| **Sample Name** | MPFNA | **Position** | P2-A8 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFNA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 1:39:21 PM |




Alaxam Analytics

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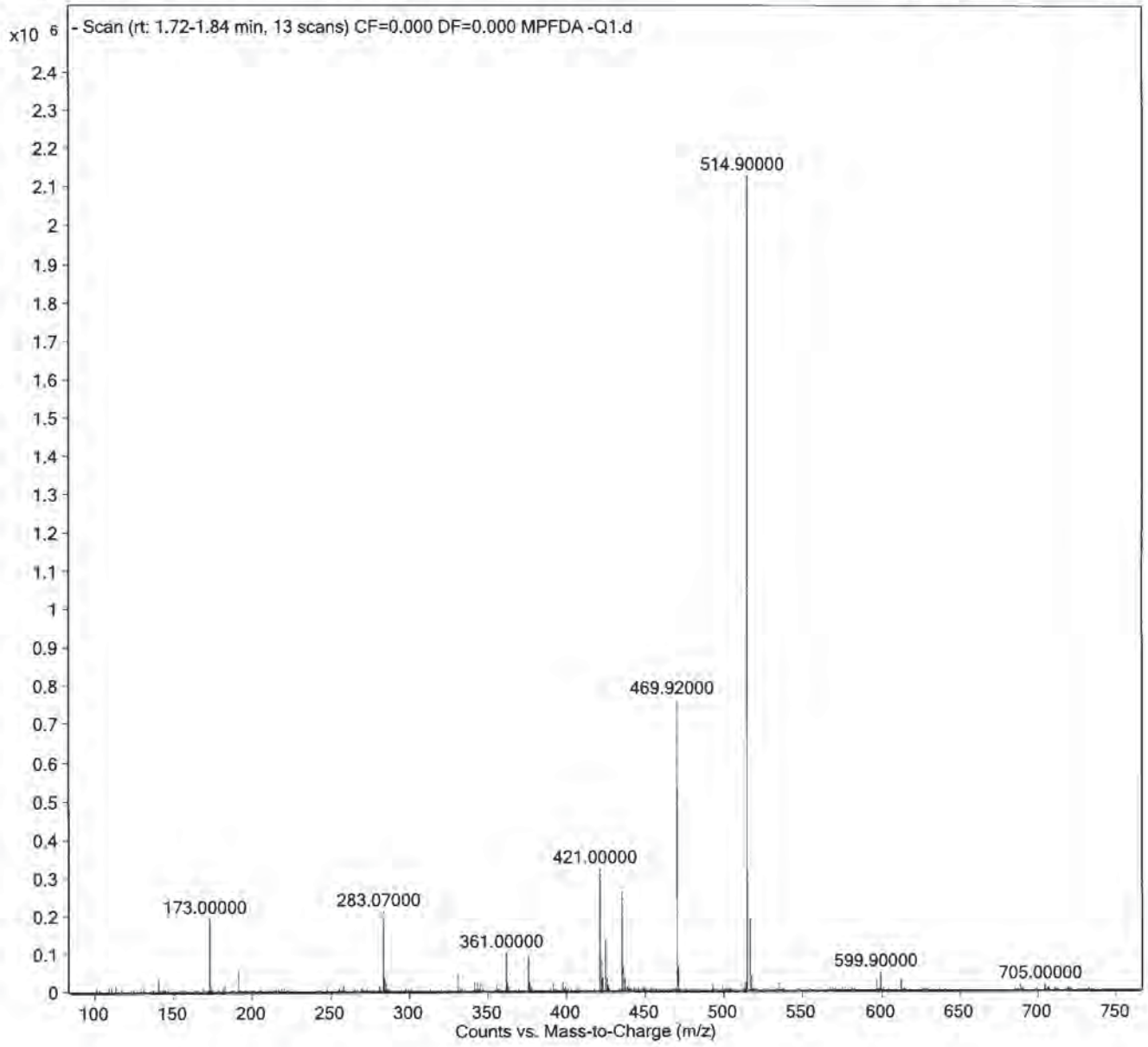
| **Sample Name** | MPFDA | **Position** | P2-A9 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFDA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 1:44:52 PM |




Alaskan Analytics

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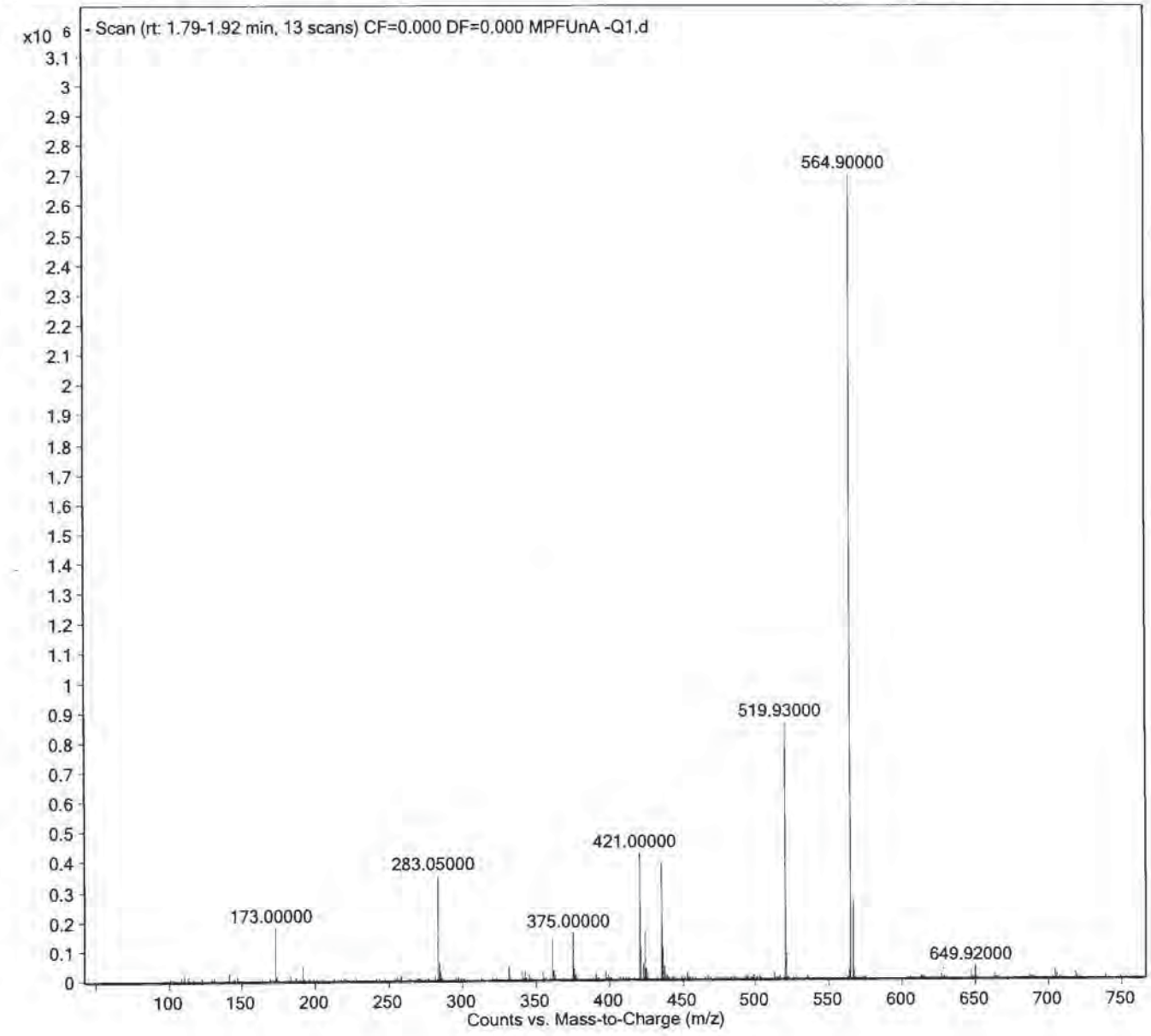
|---|---|---|---|---|---|
| **Sample Name** | MPFUnA | **Position** | P2-B1 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFUnA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 1:50:23 PM |



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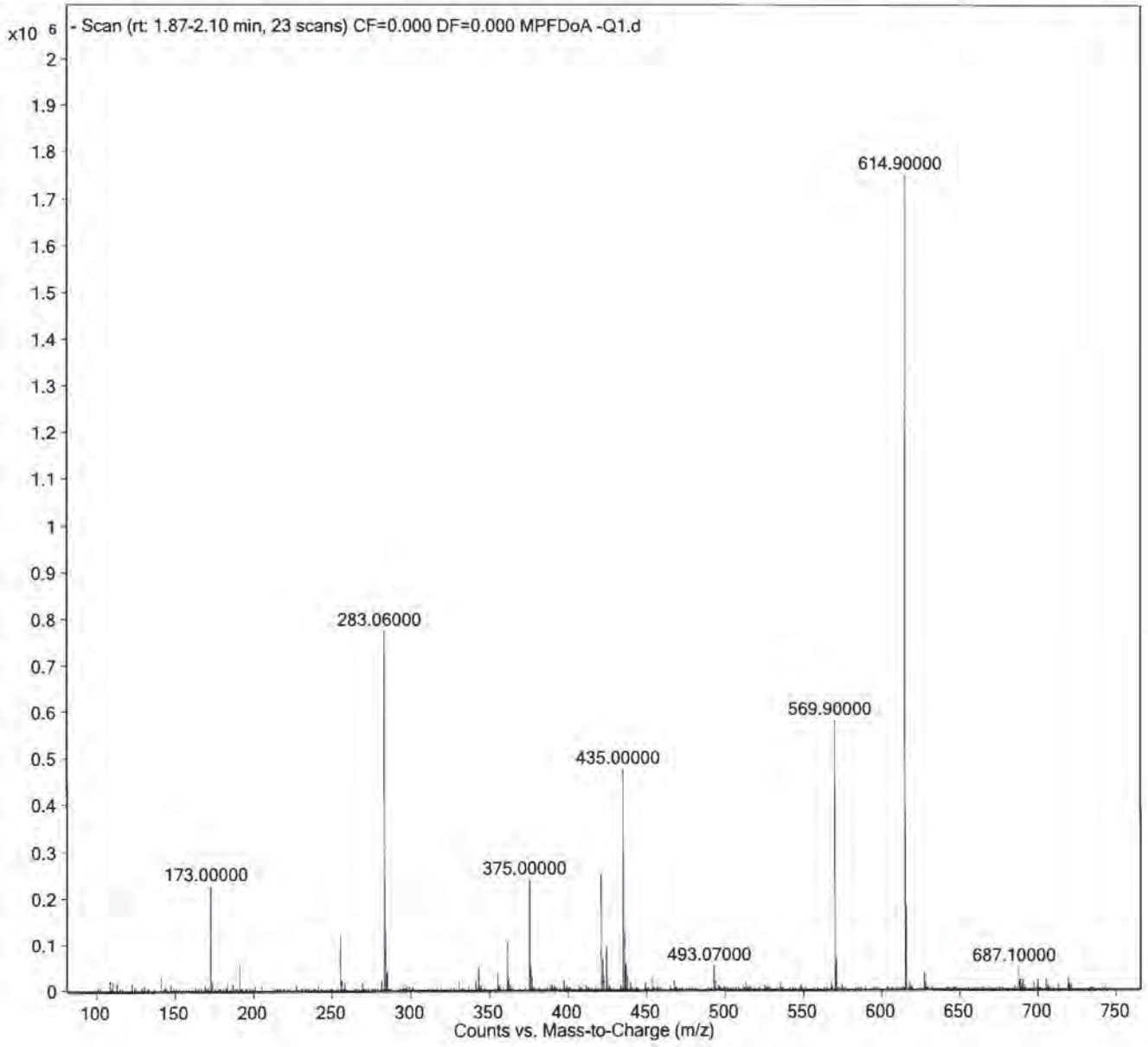
|---|---|---|---|---|---|
| **Sample Name** | MPFDoA | **Position** | P2-B2 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFDoA -Q1.d |
| **Acq Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 1:55:53 PM |




Alaskan Analytics

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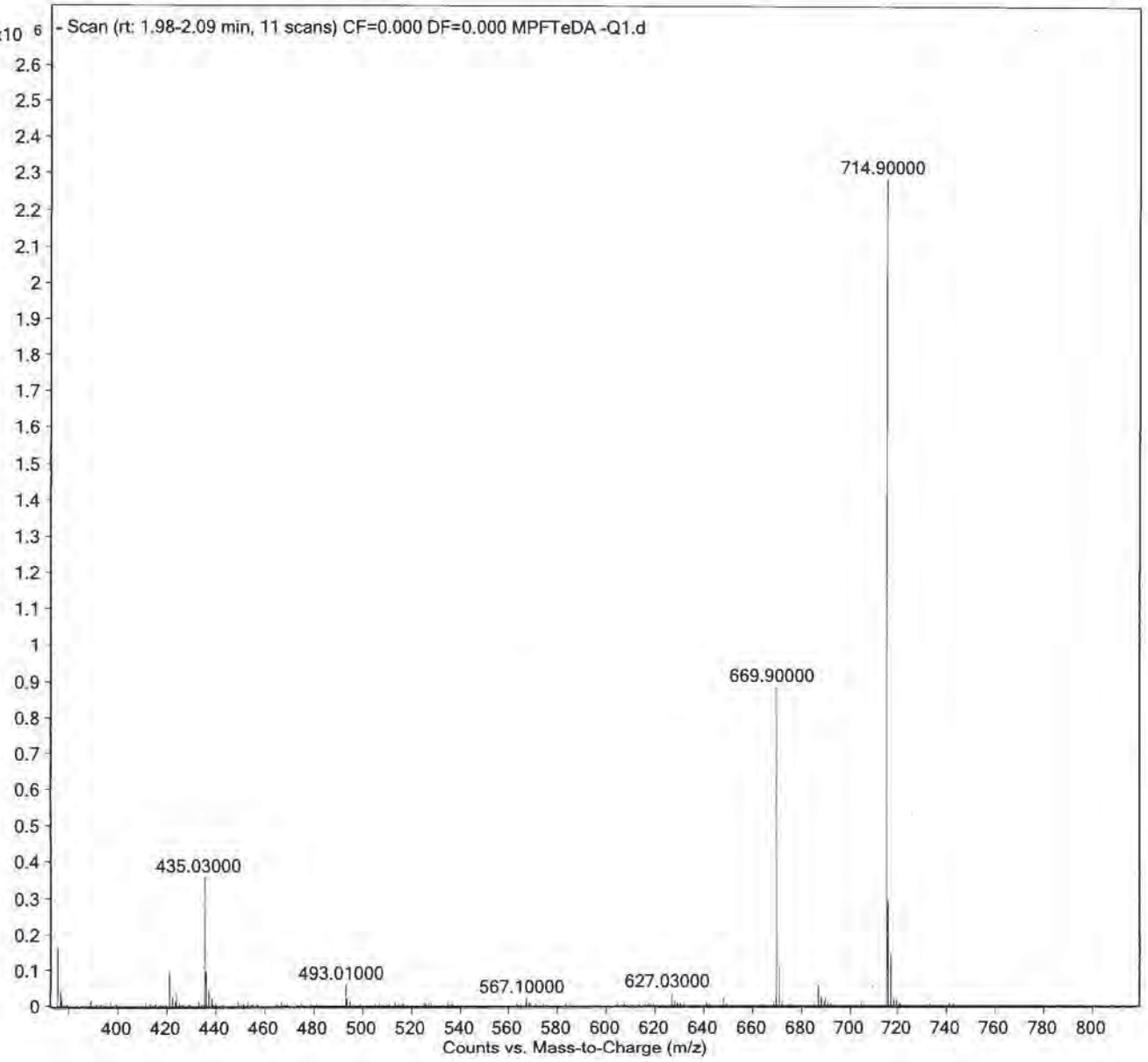
| **Sample Name** | MPFTeDA | **Position** | P2-B3 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFTeDA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 2:01:23 PM |




Alaxam Analytics

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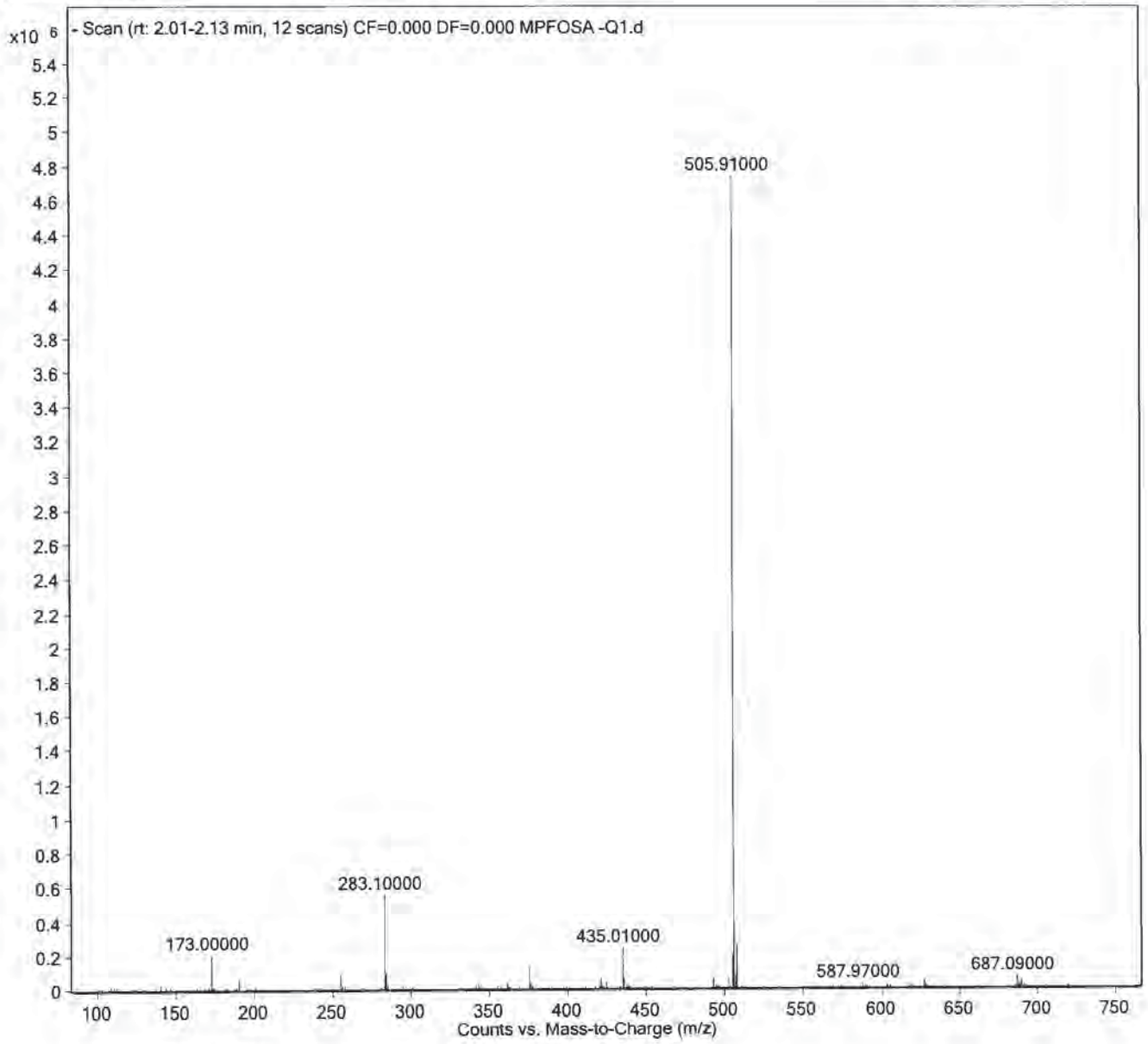
| **Sample Name** | MPFOSA | **Position** | P2-B4 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFOSA -Q1.d |
| **Acq Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 2:06:53 PM |




Maxxam Analytics

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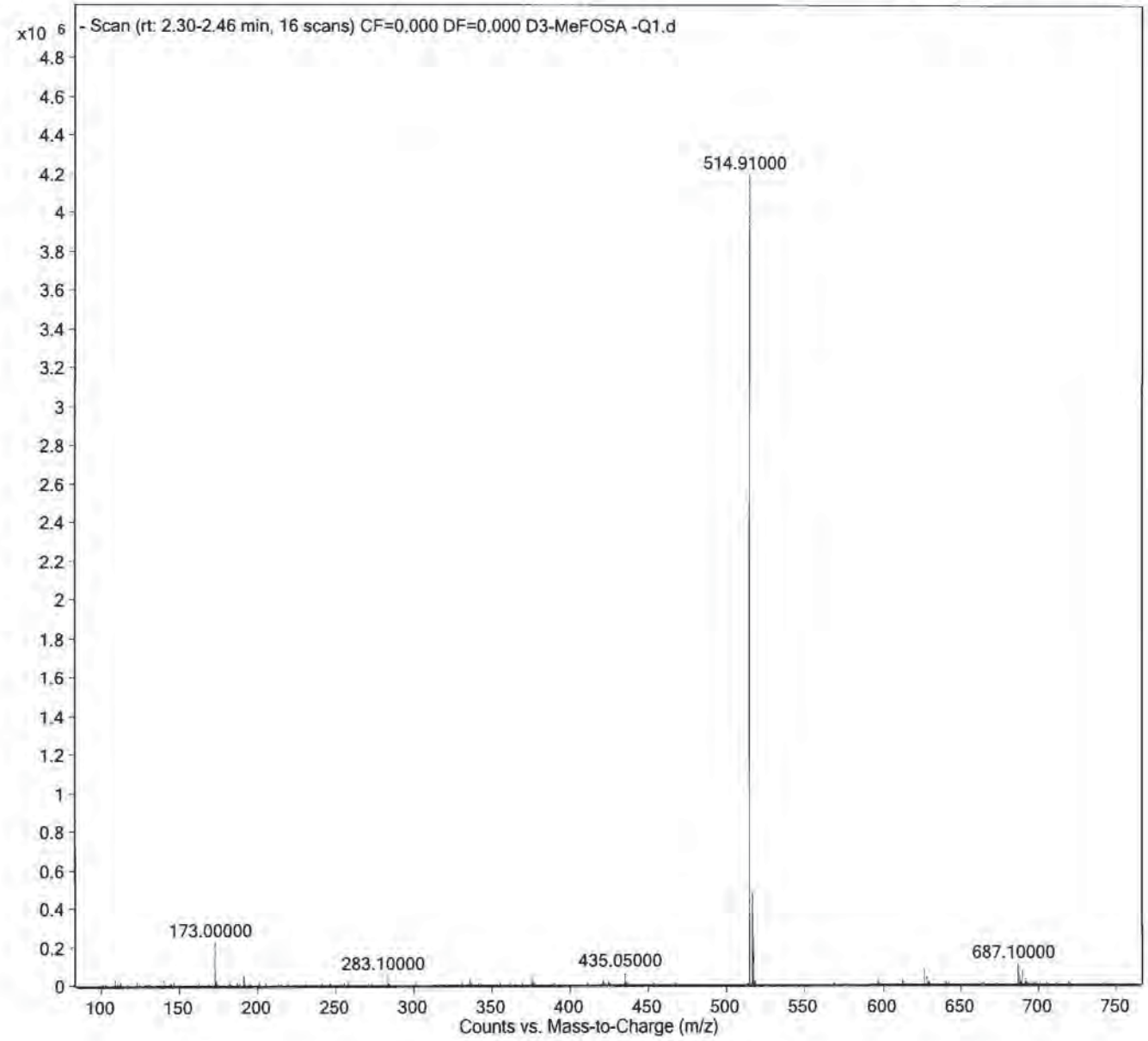
| **Sample Name** | D3-MeFOSA | **Position** | P2-B5 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | D3-MeFOSA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 2:12:24 PM |




Maxxam Analytics

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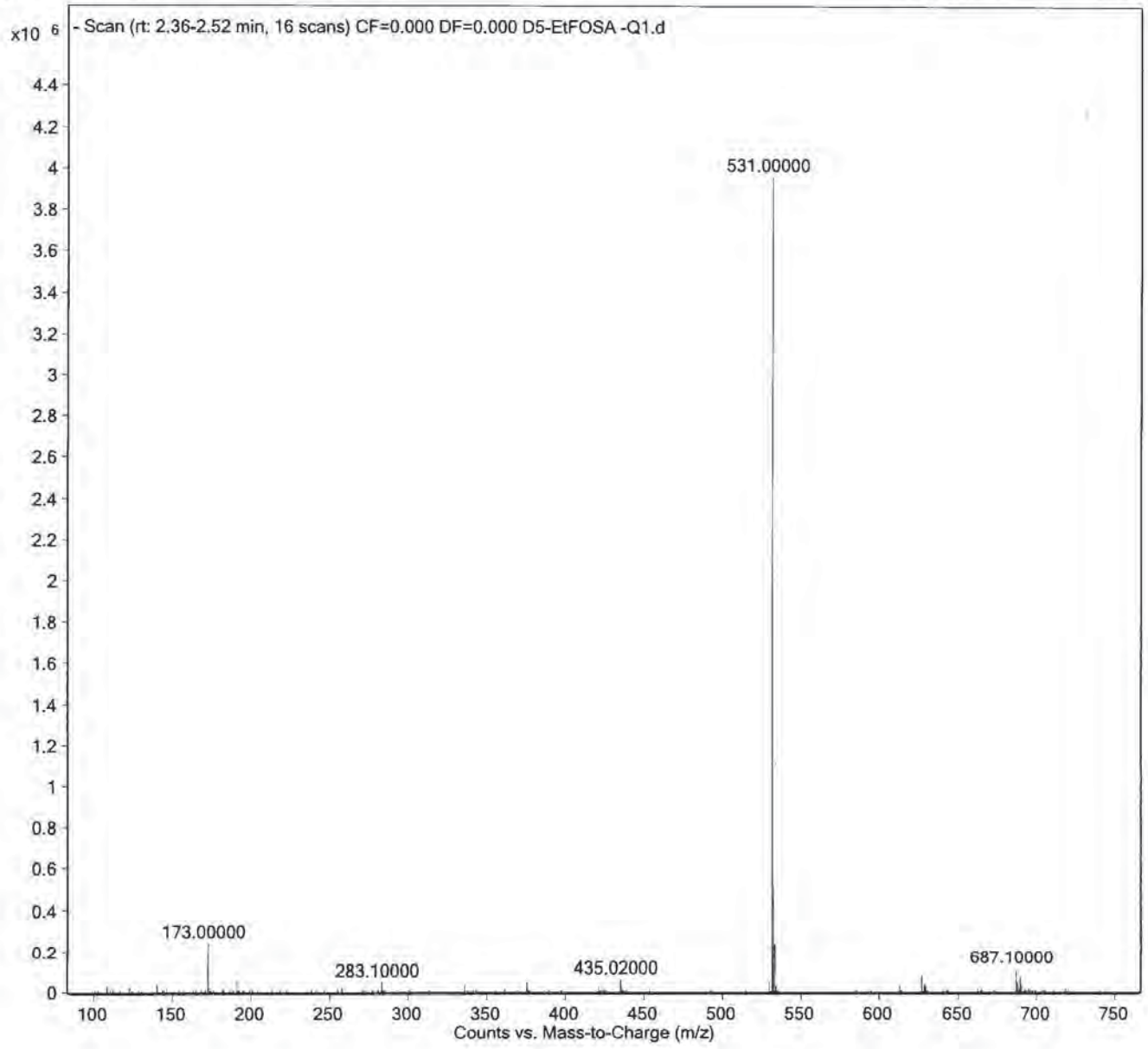
| **Sample Name** | D5-EtFOSA | **Position** | P2-B6 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | D5-EtFOSA -Q1.d |
| **LCQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 2:17:53 PM |




Maxxam Analytics

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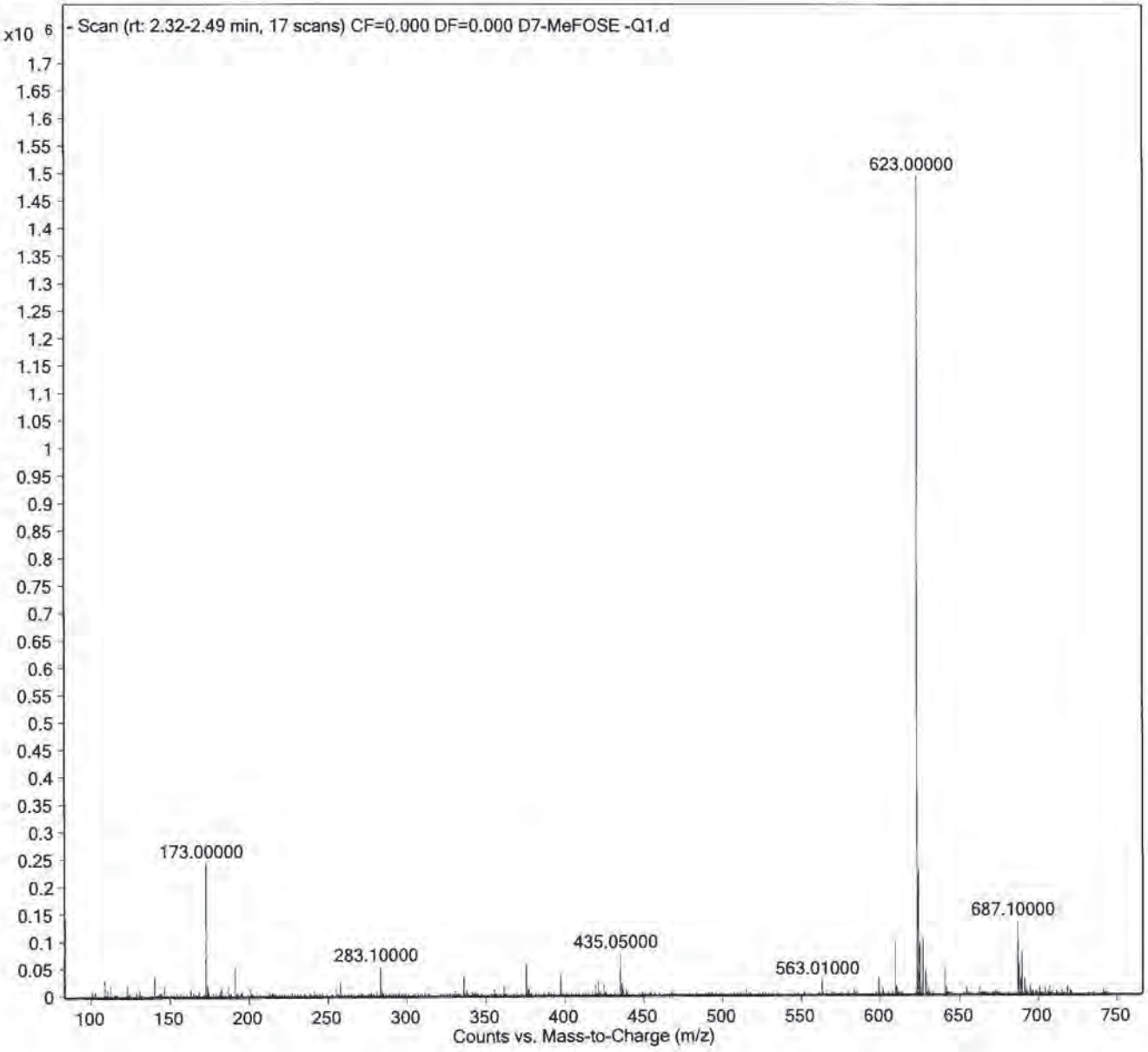
| **Sample Name** | D7-MeFOSE | **Position** | P2-B7 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | D7-MeFOSE -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 2:23:24 PM |




SGS AXYS Analytics

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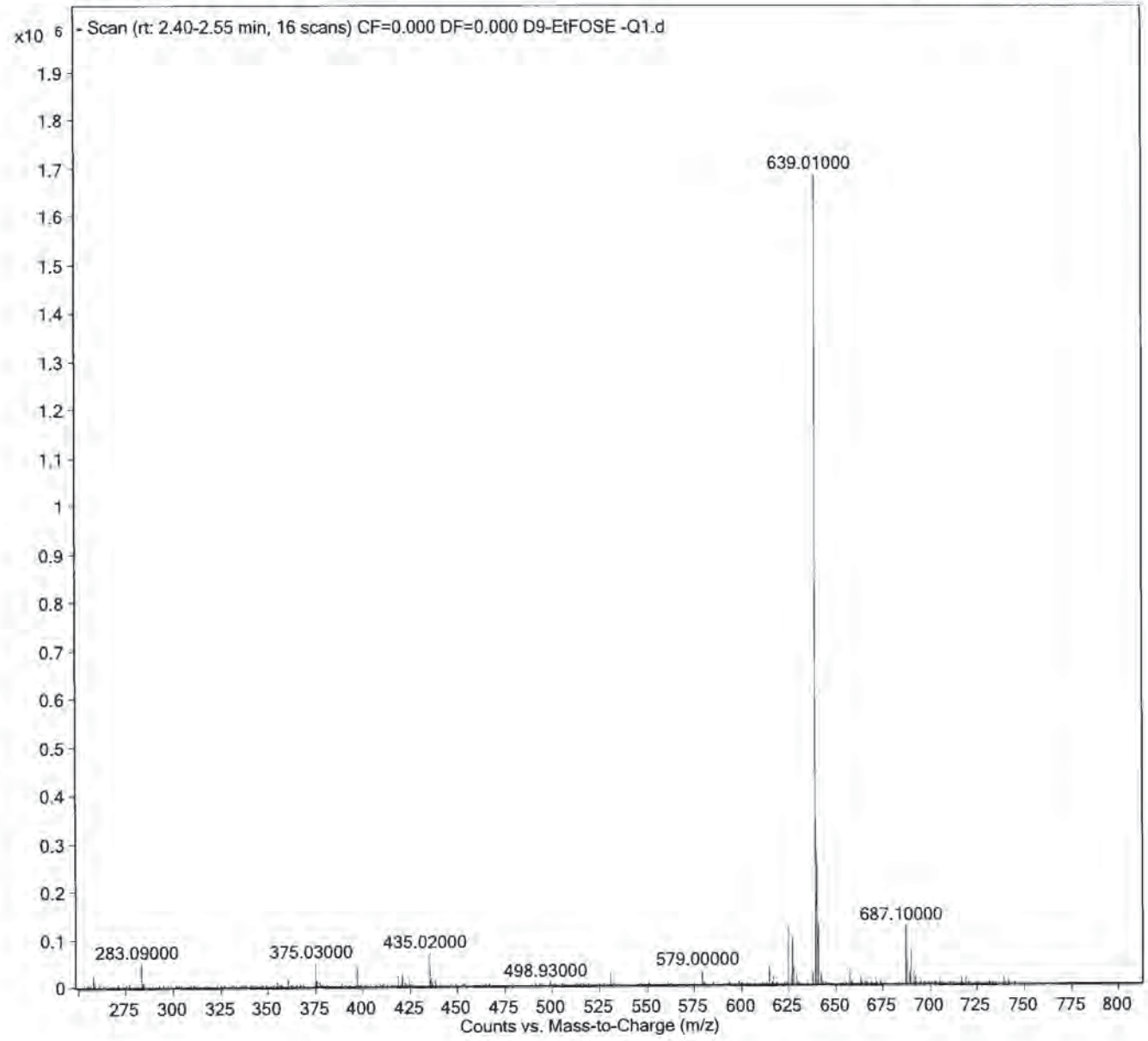
| **Sample Name** | D9-EtFOSE | **Position** | P2-B8 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | D9-EtFOSE -Q1.d |
| **AQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 2:28:56 PM |




SaxAm Analytics

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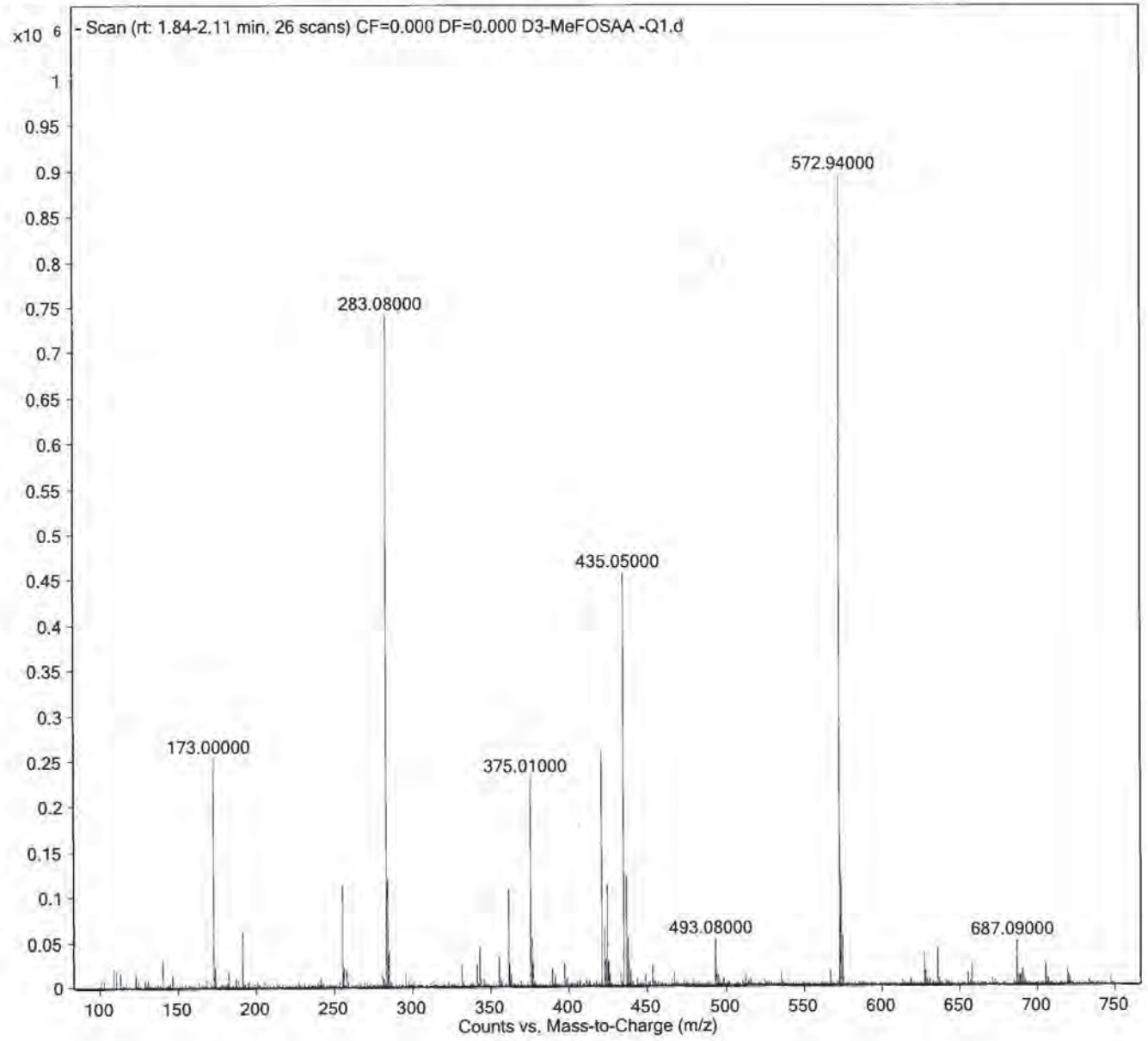
| **Sample Name** | D3-MeFOSAA | **Position** | P2-B9 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | D3-MeFOSAA -Q1.d |
| **AcQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 2:34:28 PM |




Eurofins Lancaster Laboratories Environmental

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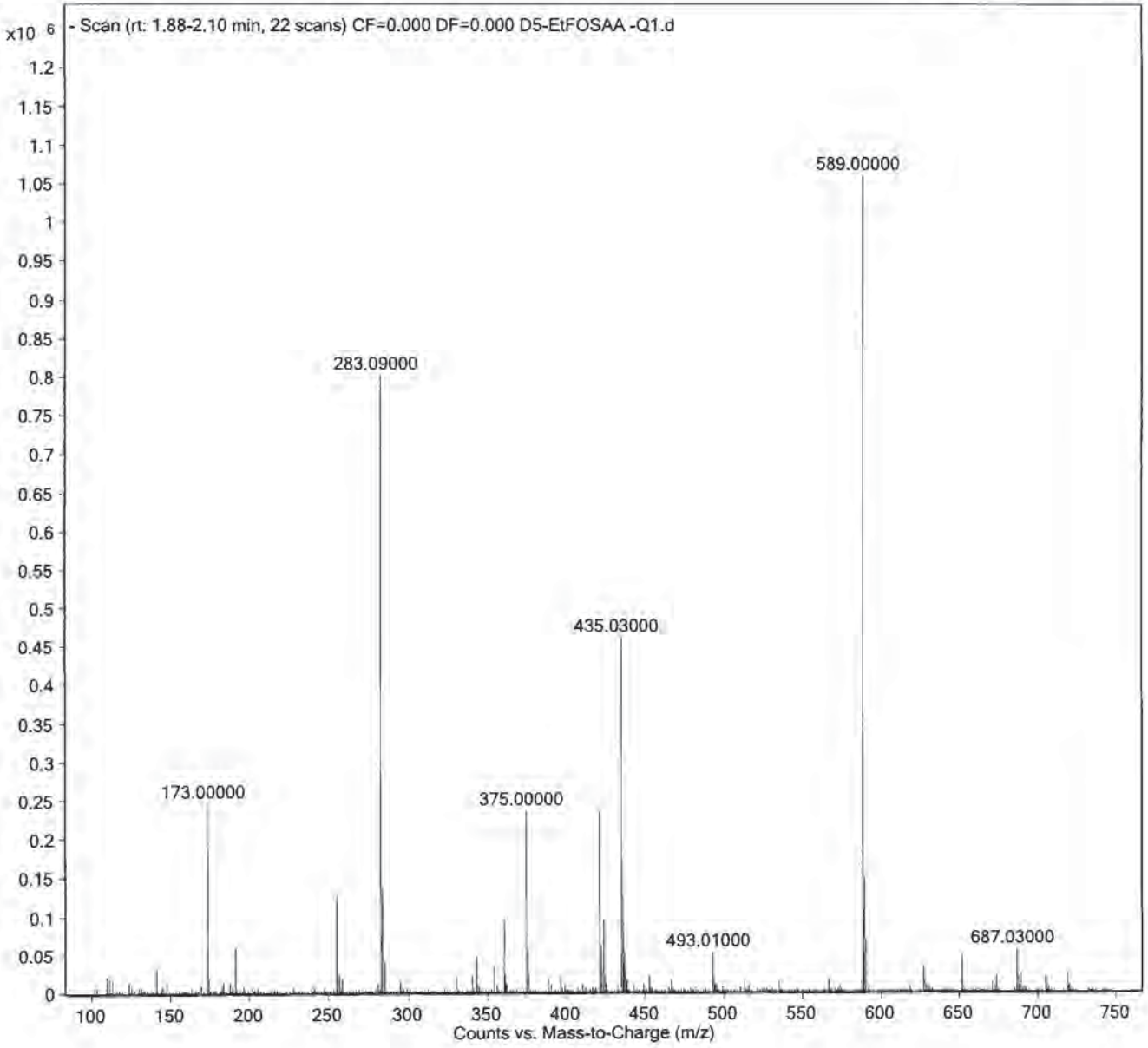
| **Sample Name** | D5-EtFOSAA | **Position** | P2-C1 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | D5-EtFOSAA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 2:39:59 PM |




Alpha Analytics

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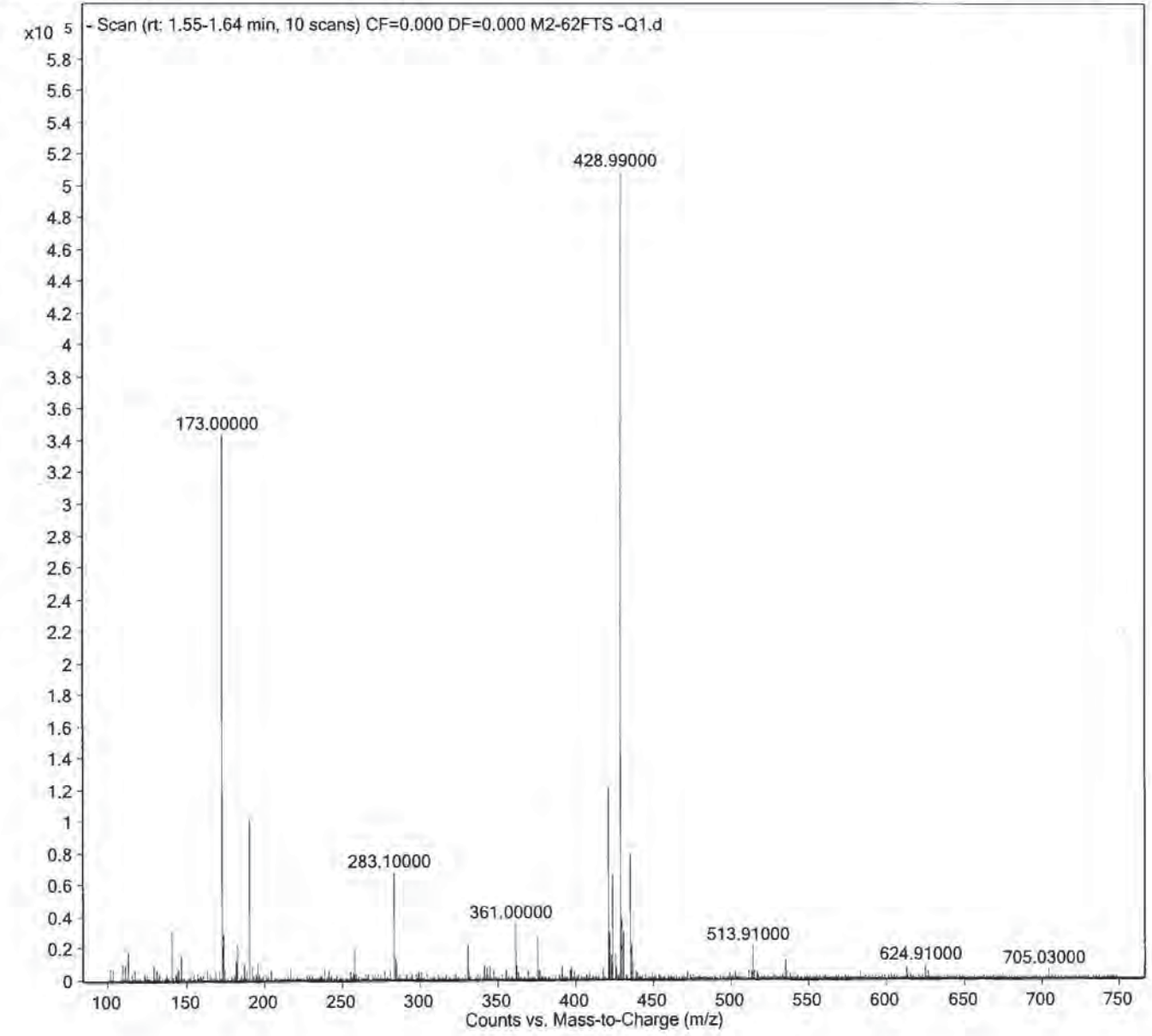
|---|---|---|---|---|---|
| **Sample Name** | M2-6:2FTS | **Position** | P2-C2 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | M2-62FTS -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 2:45:29 PM |




Alaskan Analytics

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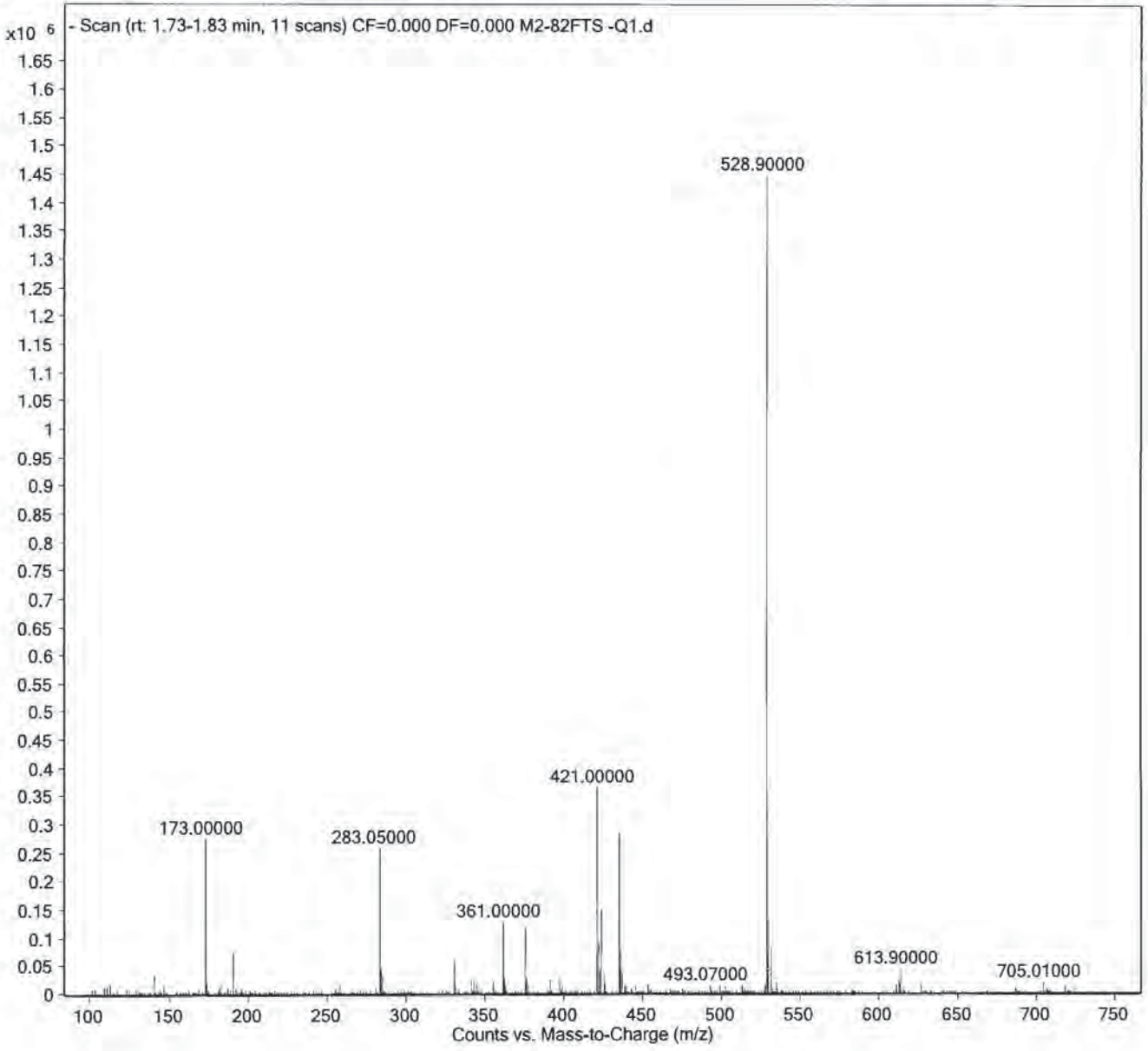
| **Sample Name** | M2-8:2FTS | **Position** | P2-C3 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | M2-82FTS -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 2:50:59 PM |




Maxxam Analytics

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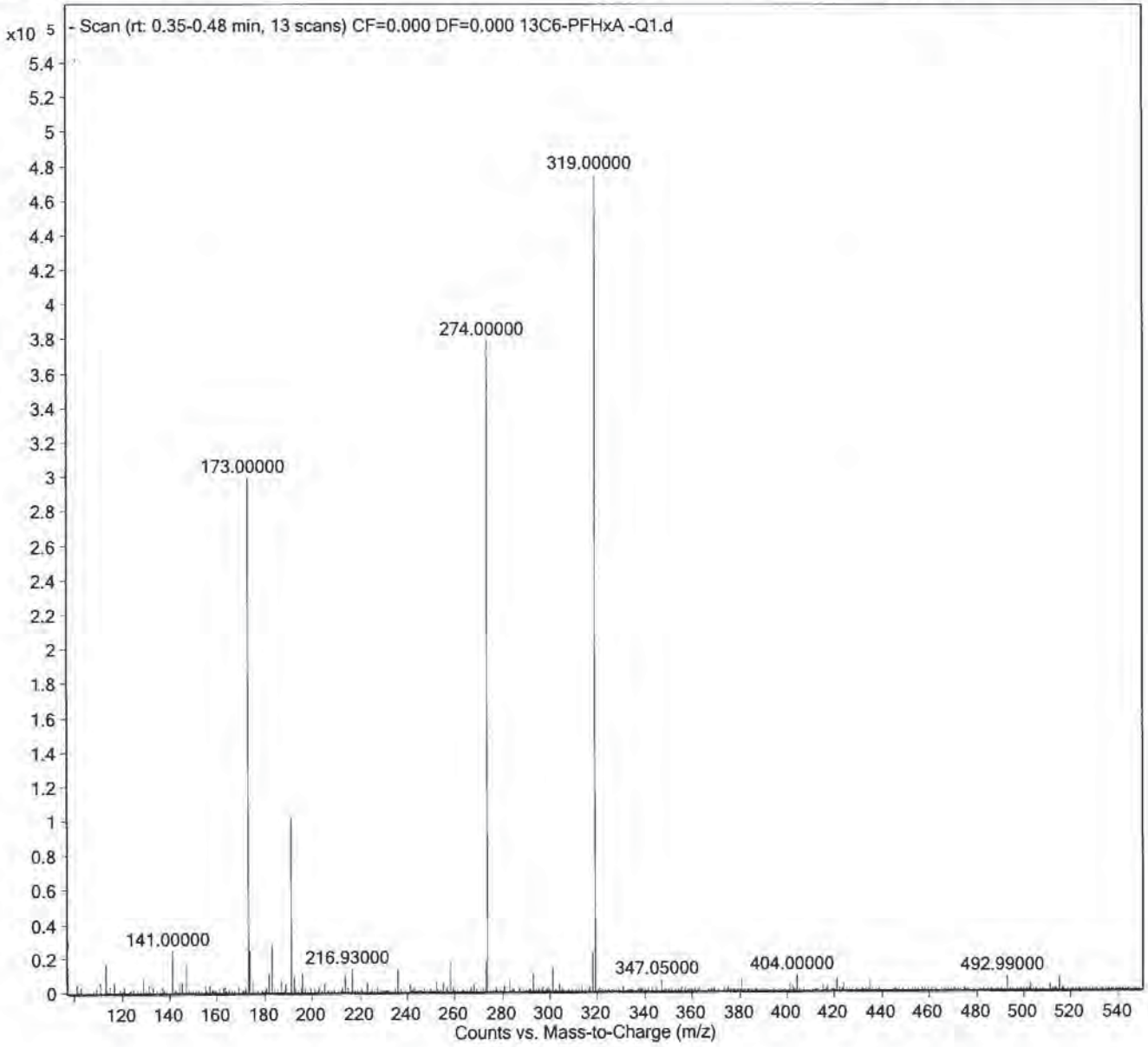
| **Sample Name** | 13C6-PFHxA | **Position** | P2-C4 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | 13C6-PFHxA -Q1.d |
| **ACQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 2:56:30 PM |




SAExam Analytics

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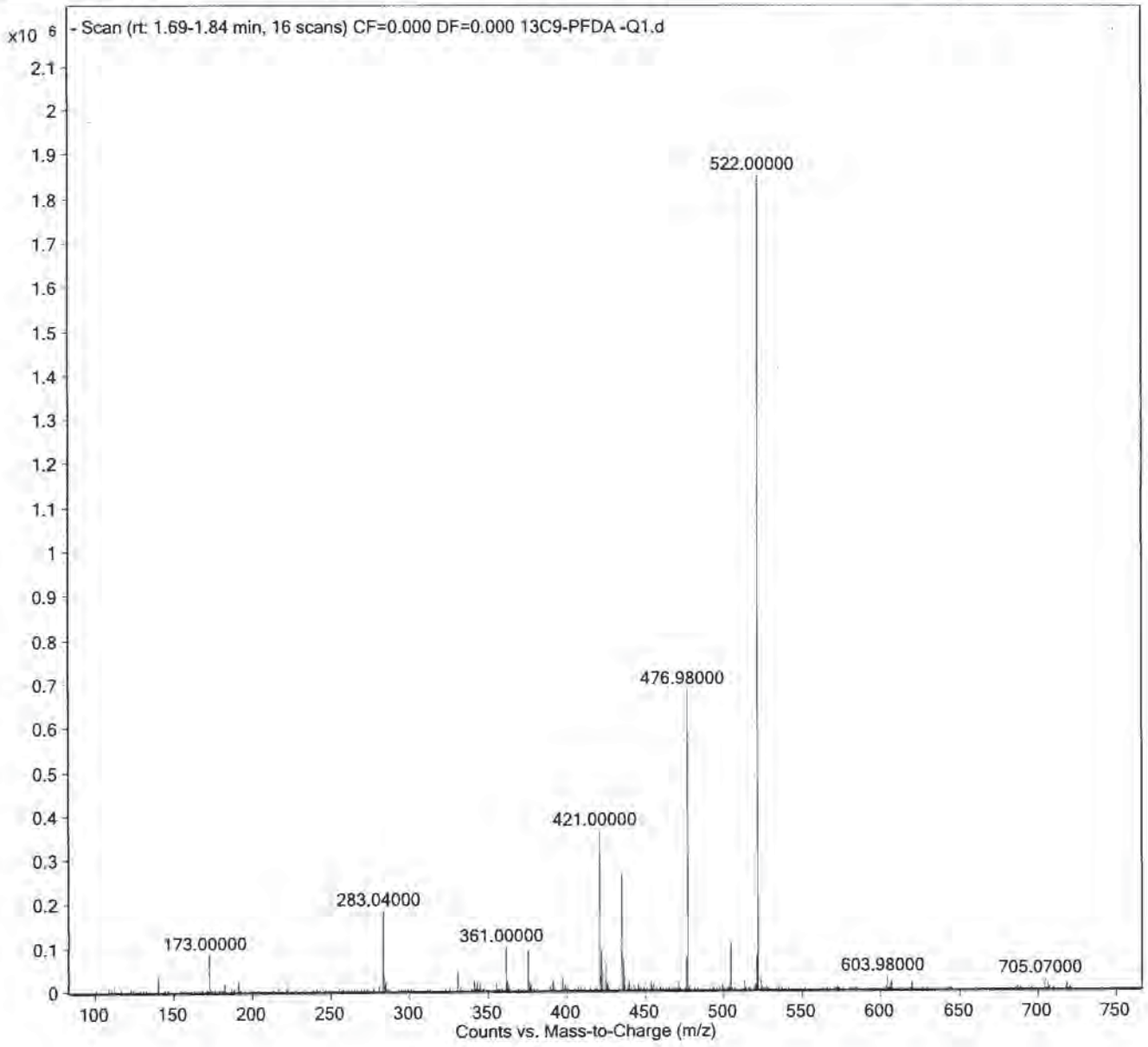
|---|---|---|---|---|---|
| **Sample Name** | 13C9-PFDA | **Position** | P2-C5 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | 13C9-PFDA -Q1.d |
| **MCQ Method** | PFC_MassVerification-Q1.m | **Comment** | | **Acquired Time** | 2017/07/11 3:01:59 PM |




Saxcam Analytics

# Extracted and Injection Internal Standard Product Ion Verification

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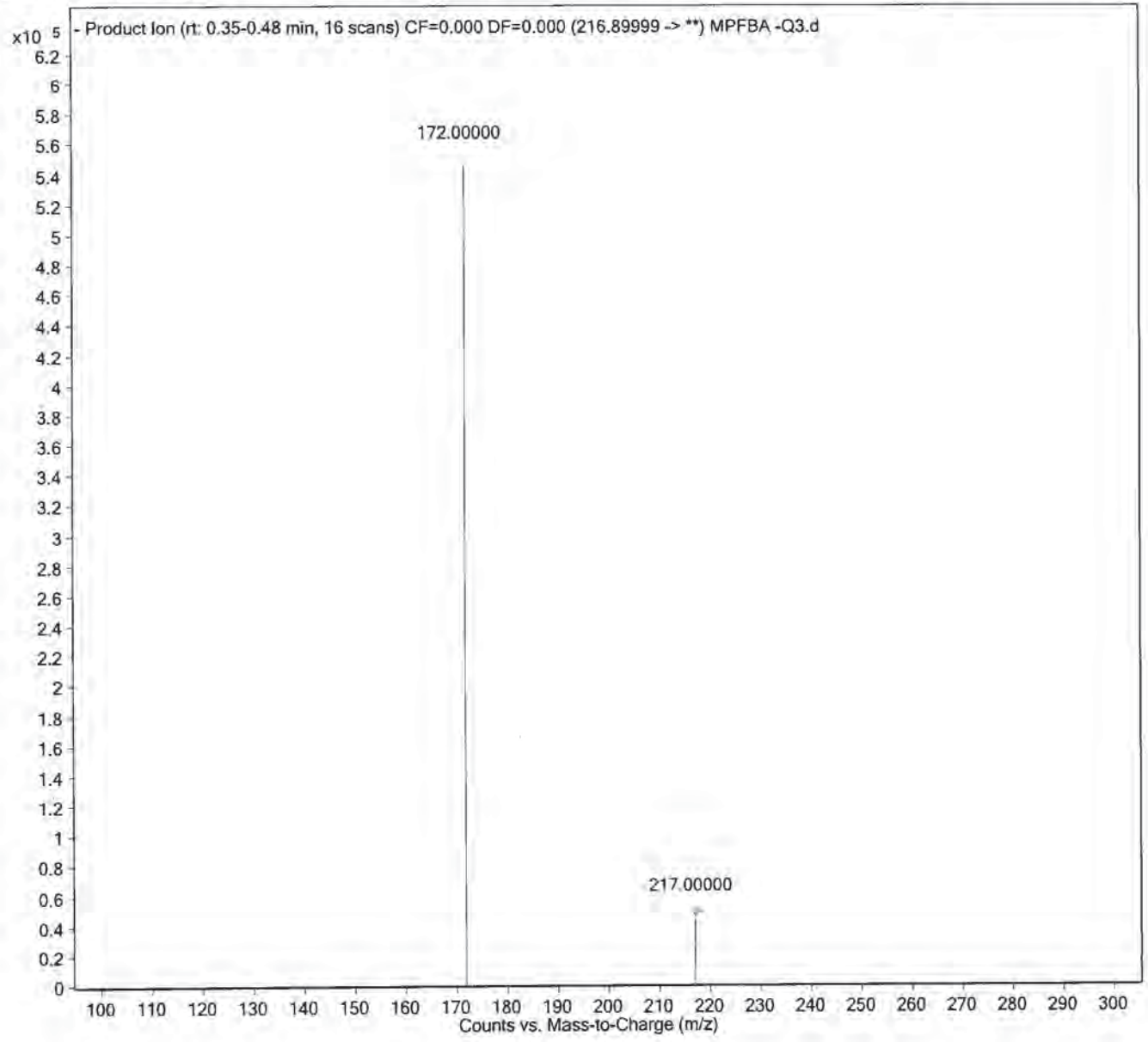
|---|---|---|---|---|---|
| **Sample Name** | MPFBA -Q3 | **Position** | P2-A1 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFBA -Q3.d |
| **ACQ Method** | PFC_MassVerification-MPFBA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 3:07:29 PM |



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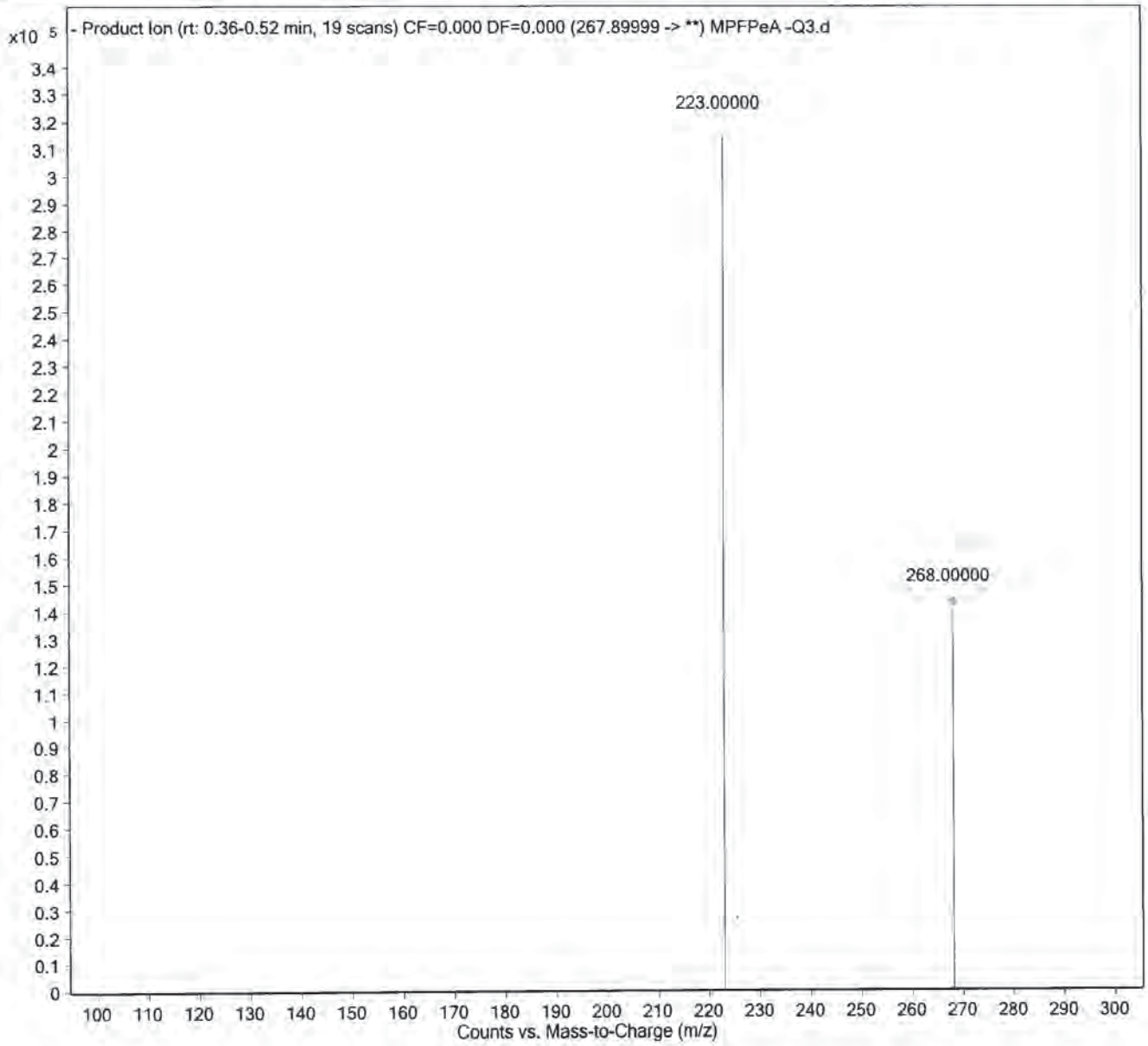
|---|---|---|---|---|---|
| **Sample Name** | MPFPeA -Q3 | **Position** | P2-A2 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFPeA -Q3.d |
| **Acq Method** | PFC_MassVerification-MPFPeA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 3:12:59 PM |




Maxxam Analytics

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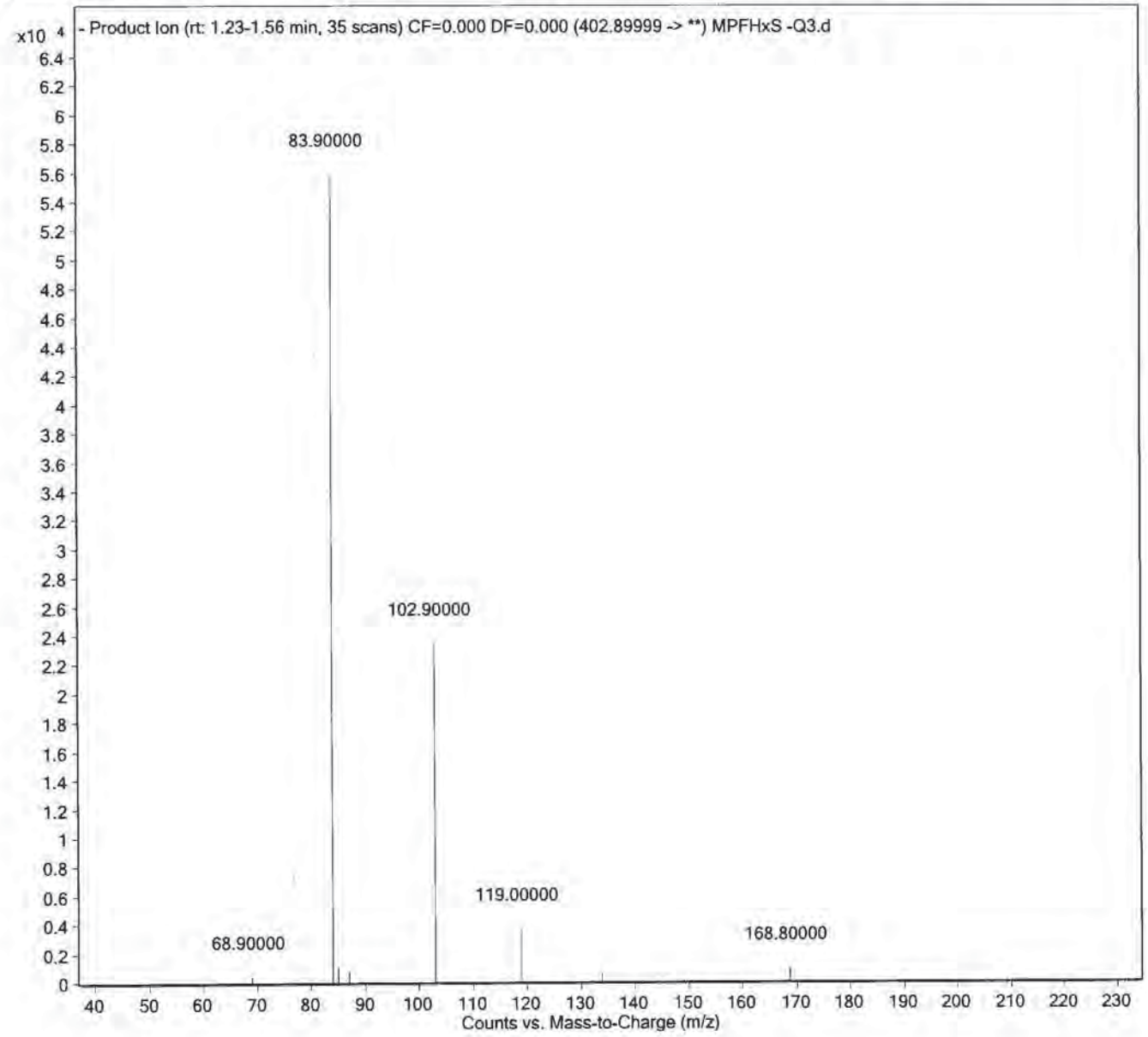
|---|---|---|---|---|---|
| **Sample Name** | MPFHxS -Q3 | **Position** | P2-A4 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFHxS -Q3.d |
| **ACQ Method** | PFC_MassVerification-MPFHxS-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 3:24:00 PM |




SaxAm Analytics

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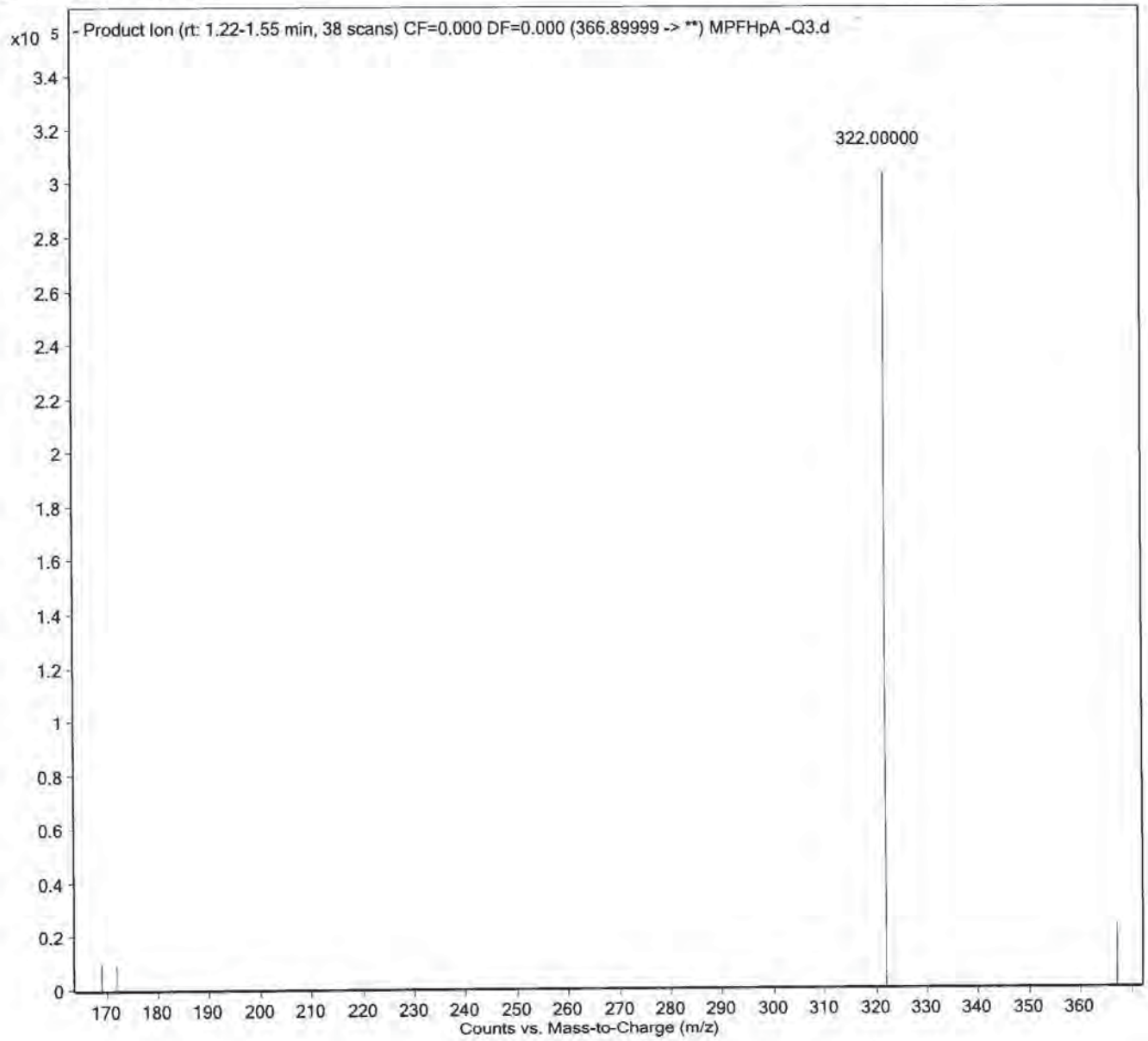
| **Sample Name** | MPFHpA -Q3 | **Position** | P2-A5 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFHpA -Q3.d |
| **ACQ Method** | PFC_MassVerification-MPFHpA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 3:29:30 PM |




Maxxam Analytics

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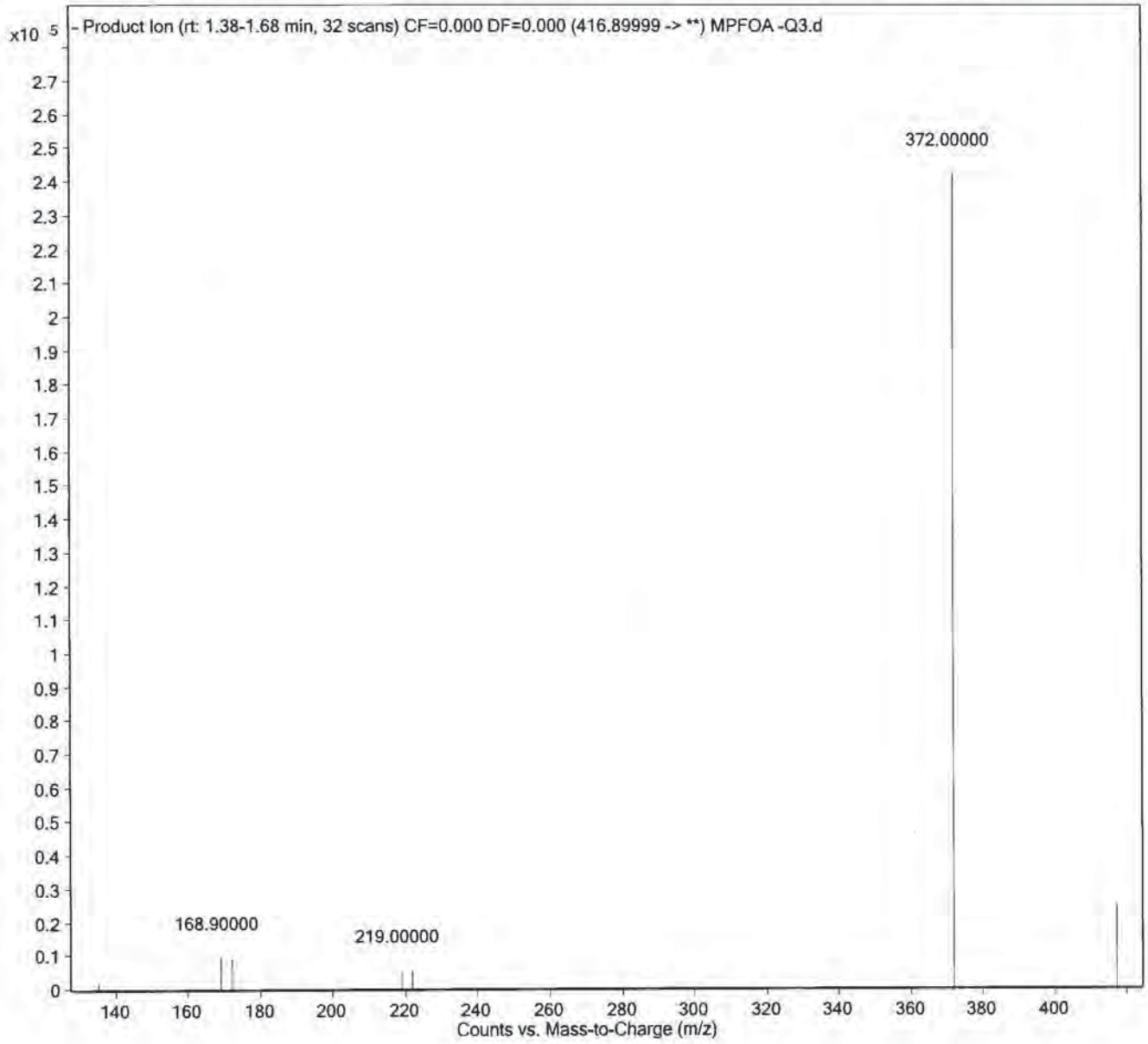
| **Sample Name** | MPFOA -Q3 | **Position** | P2-A6 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFOA -Q3.d |
| **ACQ Method** | PFC_MassVerification-MPFOA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 3:35:00 PM |



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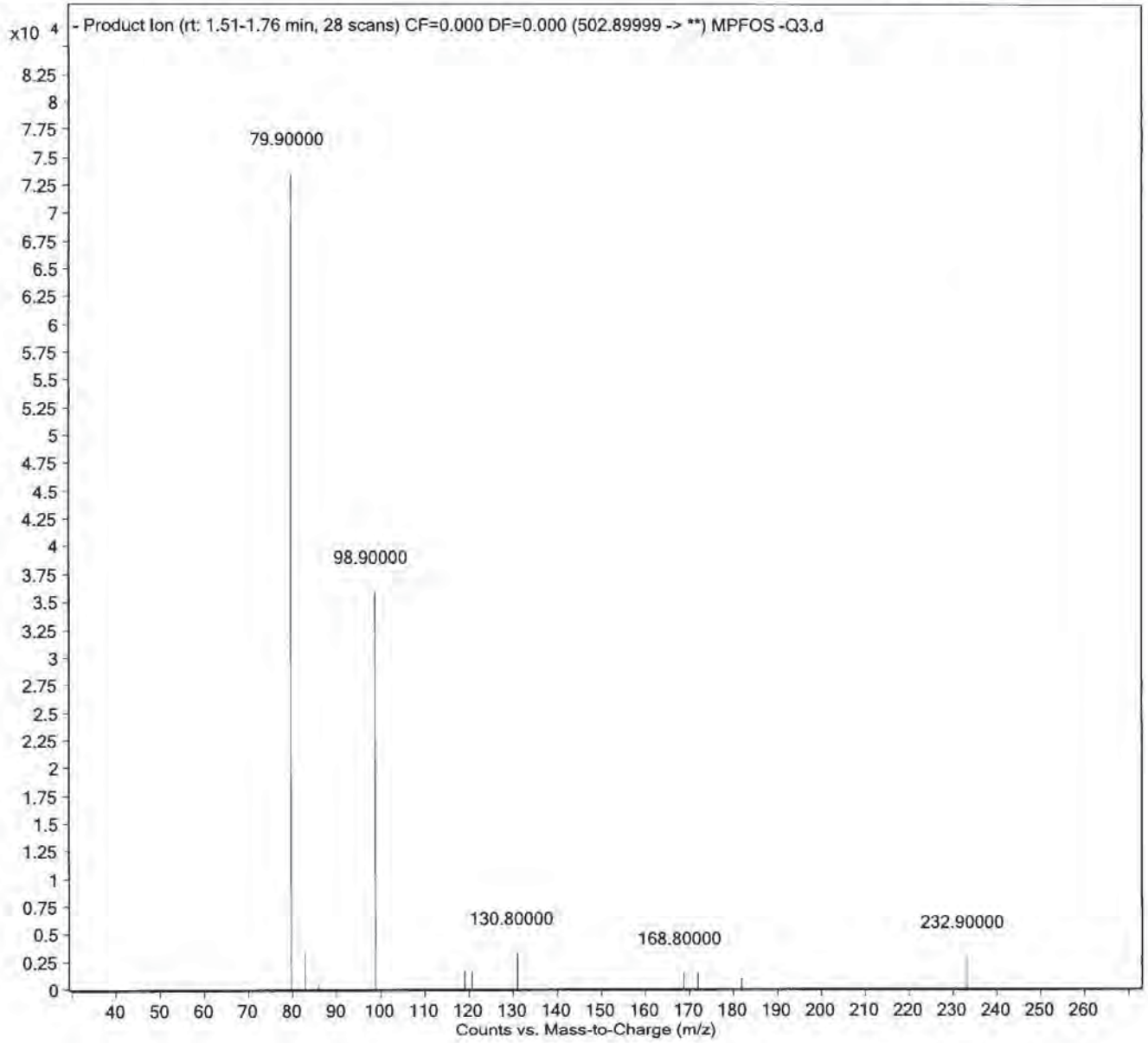
|---|---|---|---|---|---|
| **Sample Name** | MPFOS -Q3 | **Position** | P2-A7 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFOS -Q3.d |
| **ACQ Method** | PFC_MassVerification-MPFOS-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 3:40:32 PM |




SGS AXYS Analytics

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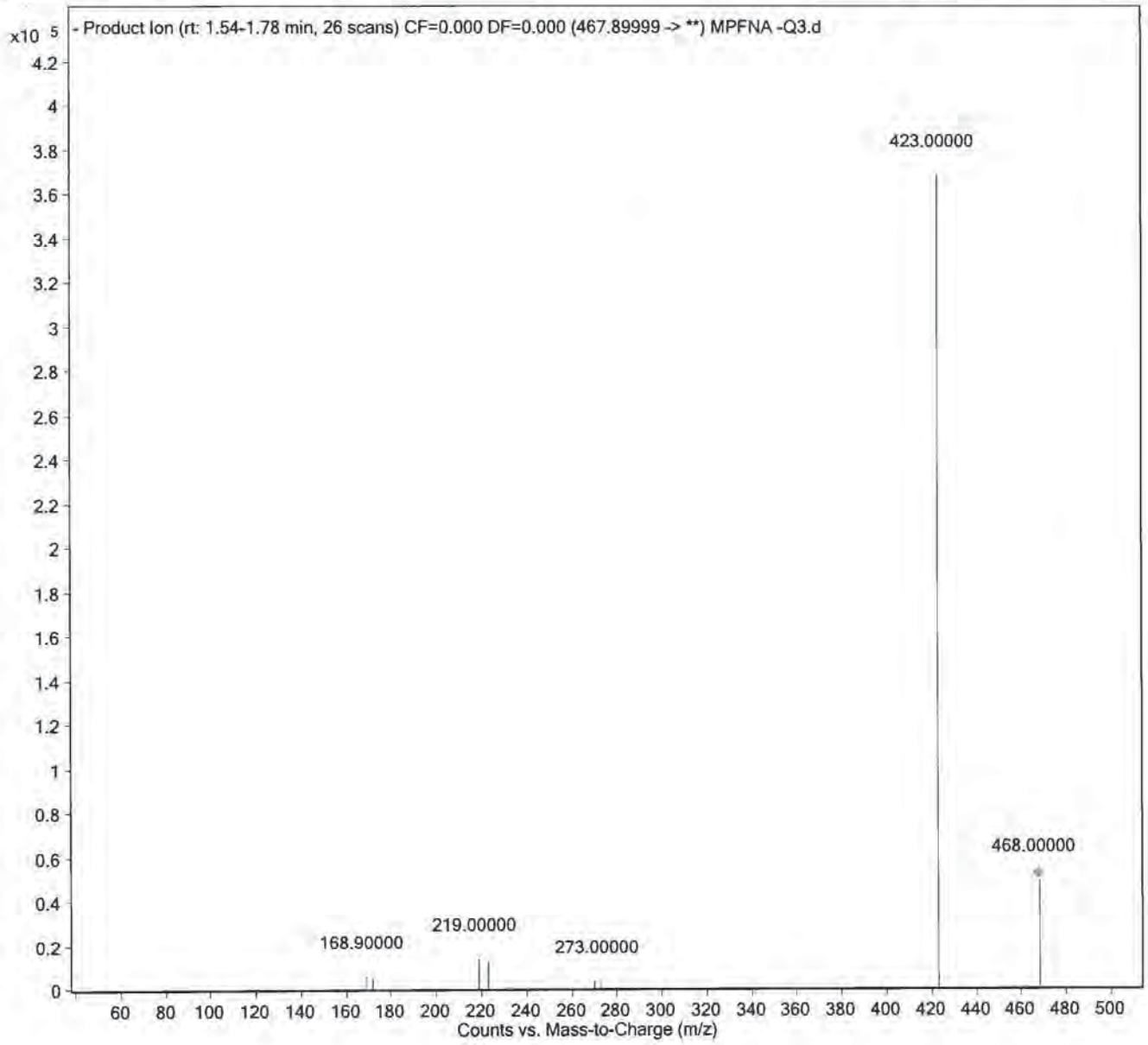
|---|---|---|---|---|---|
| **Sample Name** | MPFNA -Q3 | **Position** | P2-A8 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFNA -Q3.d |
| **ACQ Method** | PFC_MassVerification-MPFNA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 3:46:04 PM |



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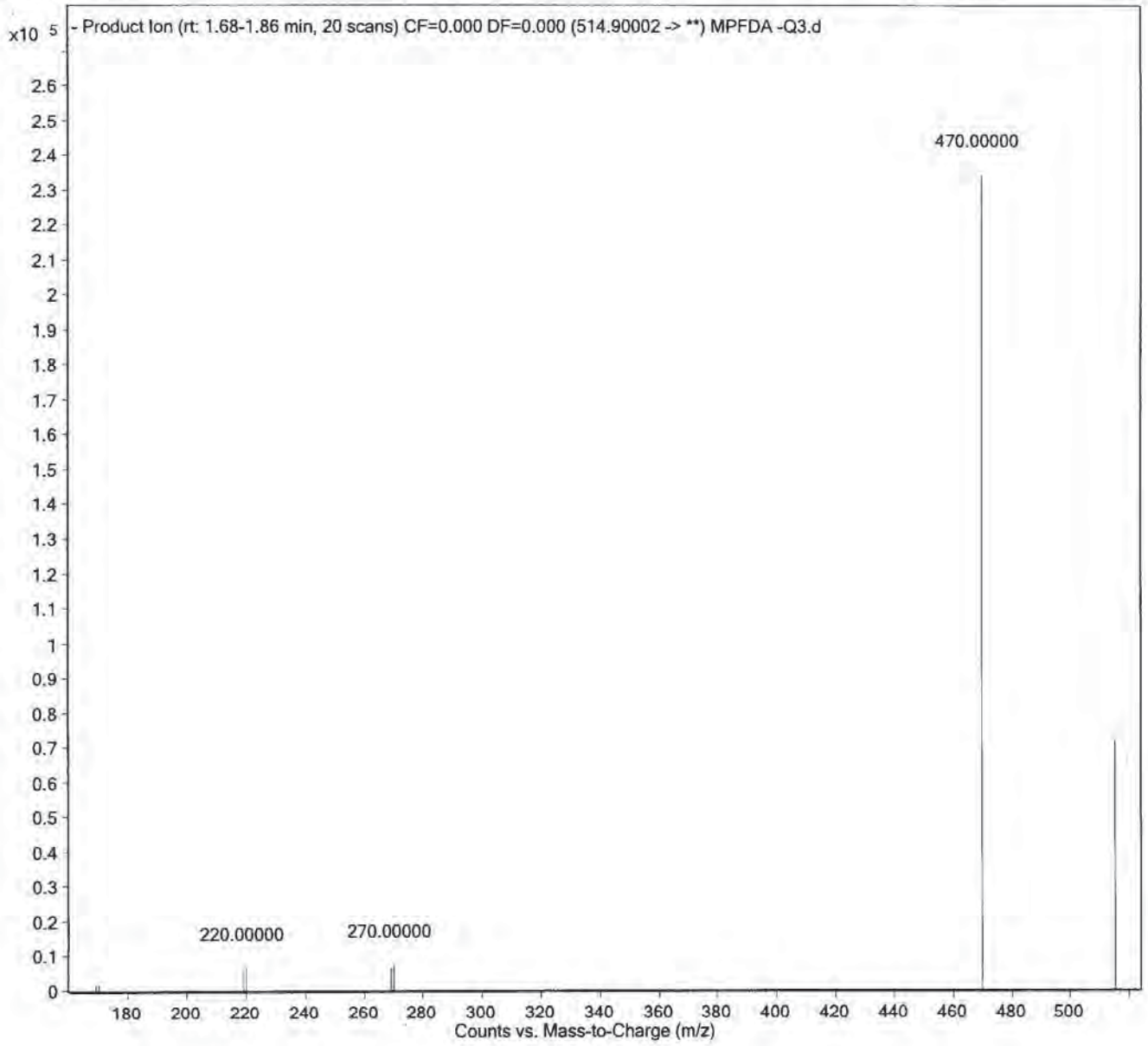
|---|---|---|---|---|---|
| **Sample Name** | MPFDA -Q3 | **Position** | P2-A9 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFDA -Q3.d |
| **ACQ Method** | PFC_MassVerification-MPFDA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 3:51:36 PM |




Saram Analytics

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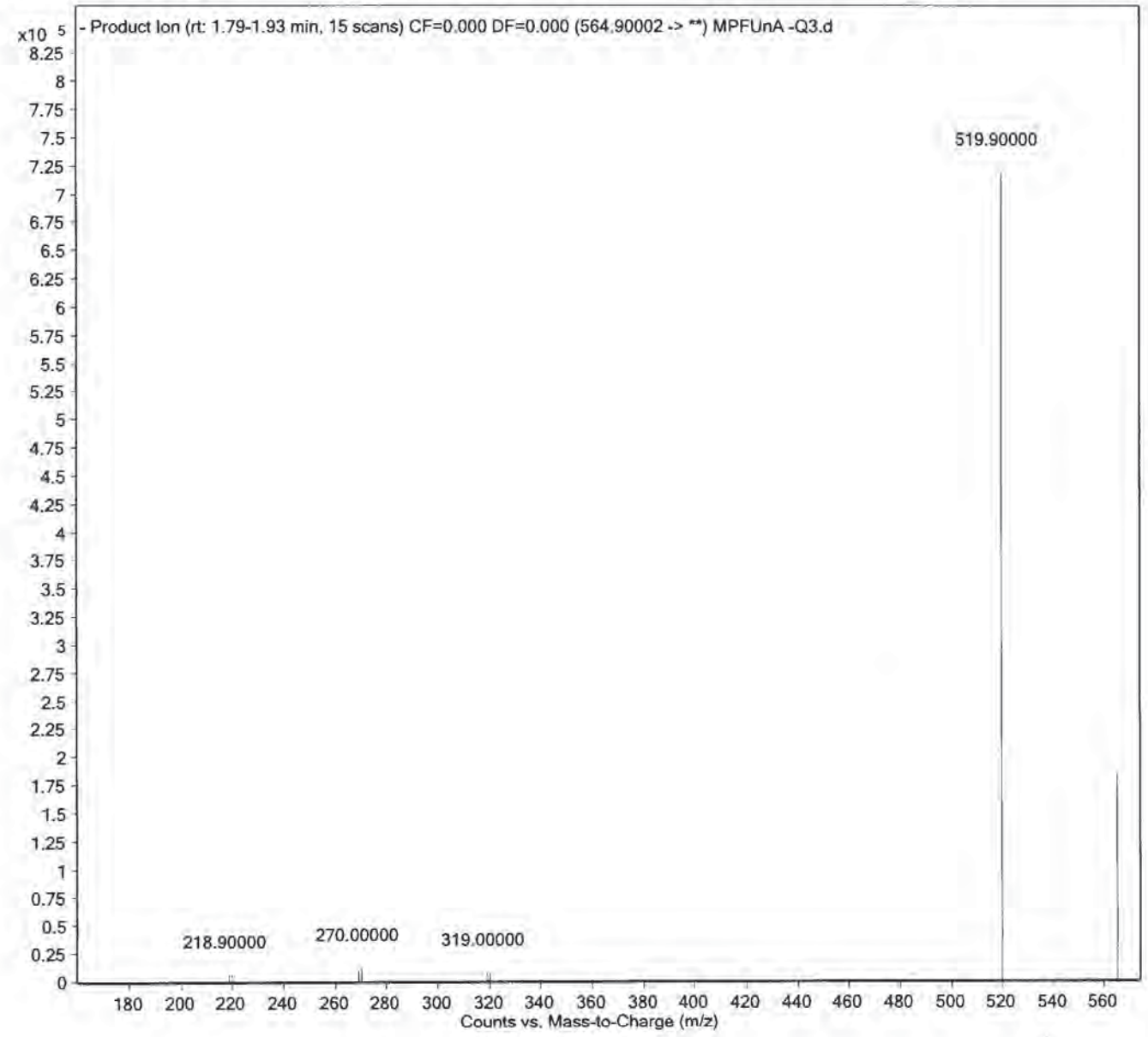
|---|---|---|---|---|---|
| **Sample Name** | MPFUnA -Q3 | **Position** | P2-B1 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFUnA -Q3.d |
| **ACQ Method** | PFC_MassVerification-MPFUnA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 3:57:07 PM |




SAExam Analytics

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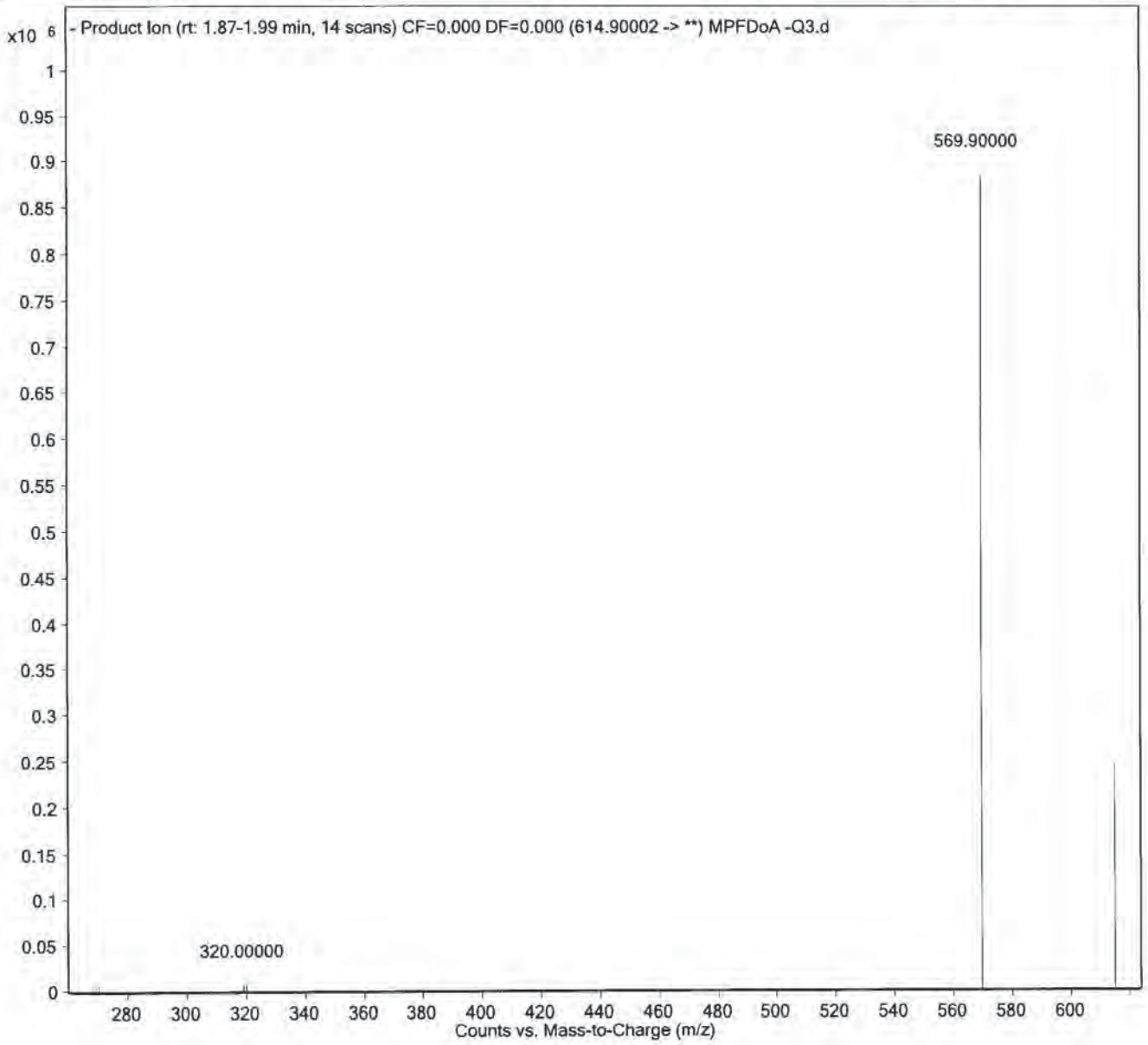
|---|---|---|---|---|---|
| **Sample Name** | MPFDoA -Q3 | **Position** | P2-B2 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFDoA -Q3.d |
| **ACQ Method** | PFC_MassVerification-MPFDoA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 4:02:38 PM |




Saxam Analytics

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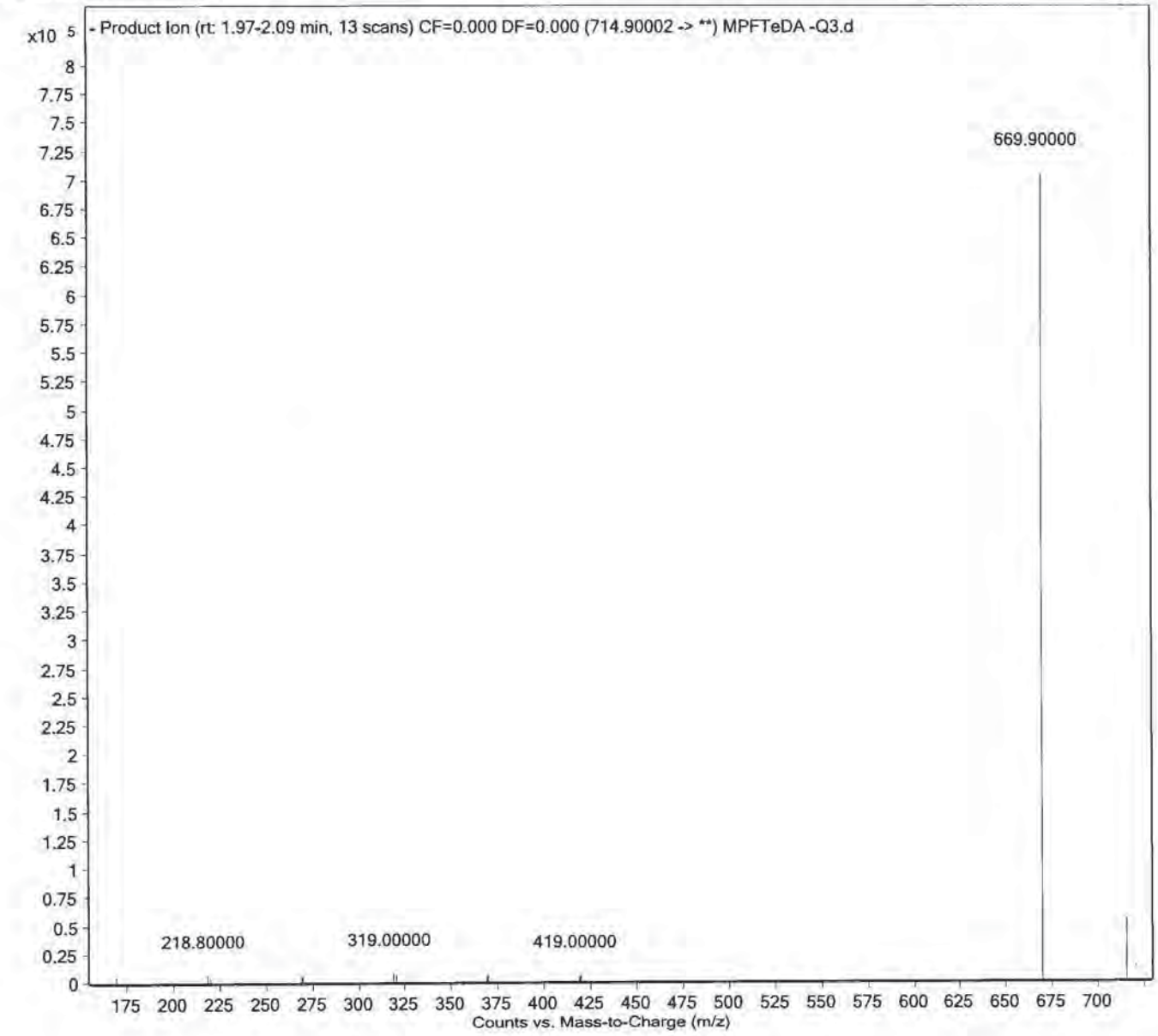
|---|---|---|---|---|---|
| **Sample Name** | MPFTeDA -Q3 | **Position** | P2-B3 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFTeDA -Q3.d |
| **ACQ Method** | PFC_MassVerification-MPFTeDA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 4:08:08 PM |



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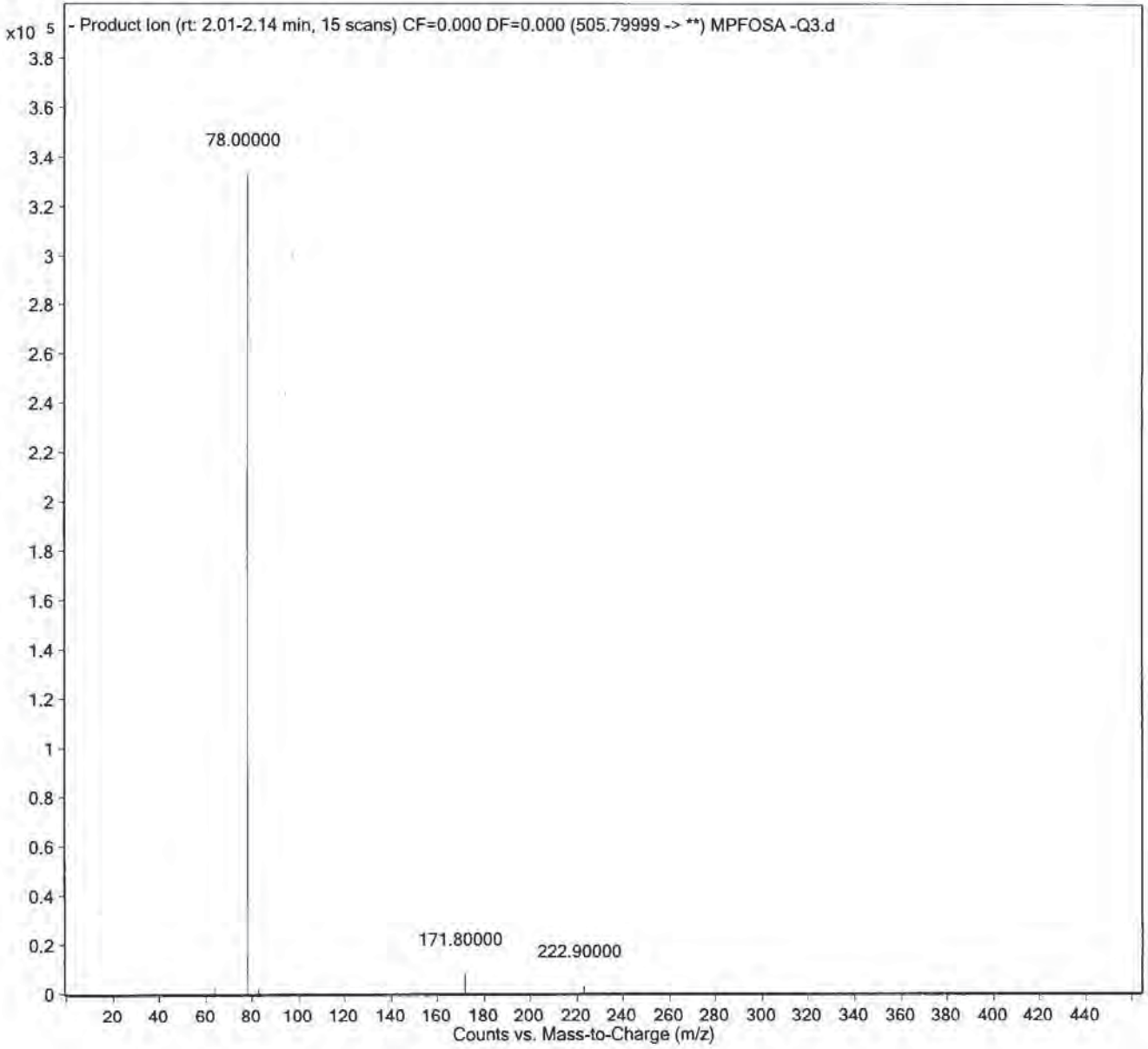
|---|---|---|---|---|---|
| **Sample Name** | MPFOSA -Q3 | **Position** | P2-B4 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | MPFOSA -Q3.d |
| **ACQ Method** | PFC_MassVerification-MPFOSA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 4:13:38 PM |




Maxxam Analytics

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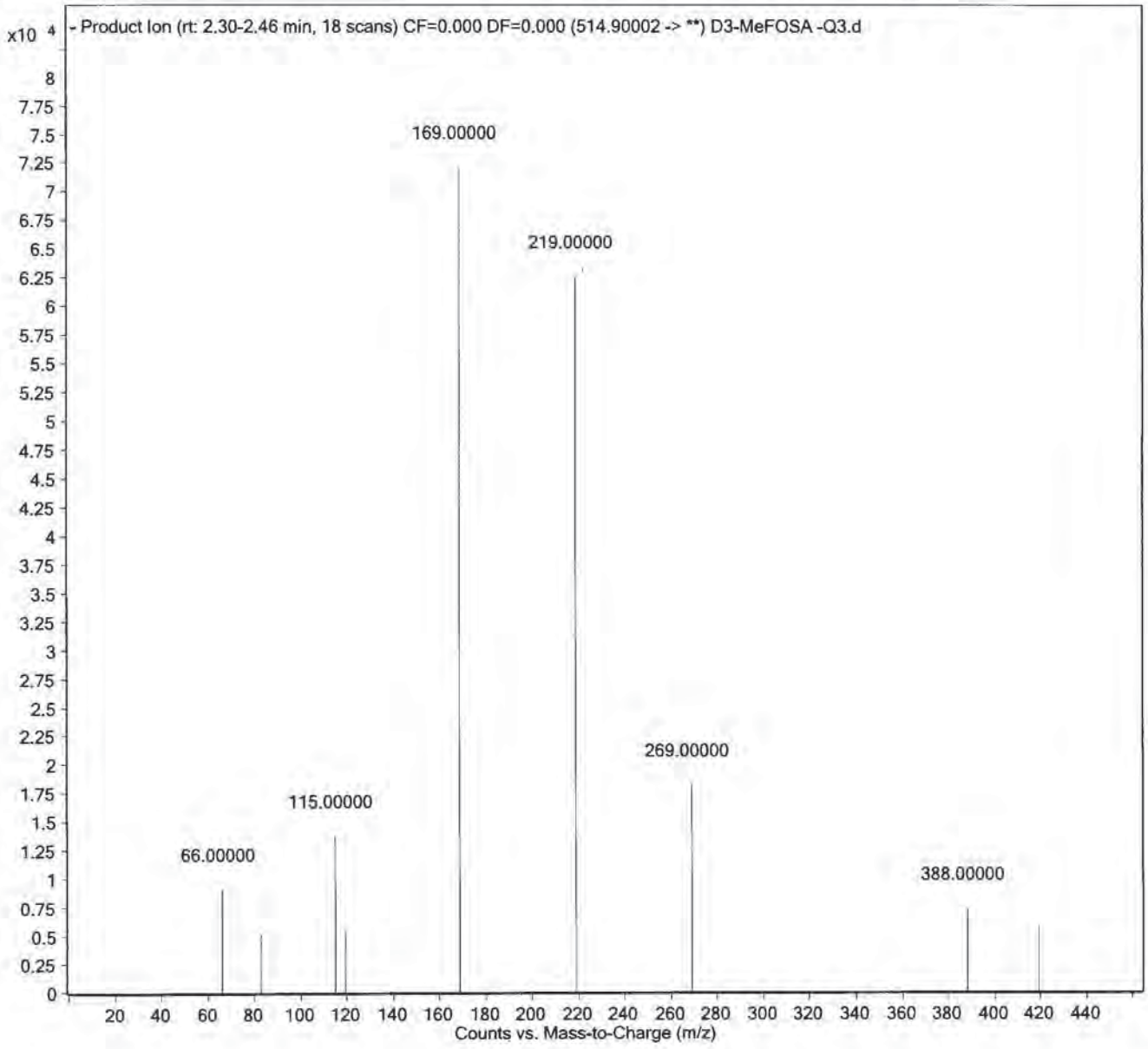
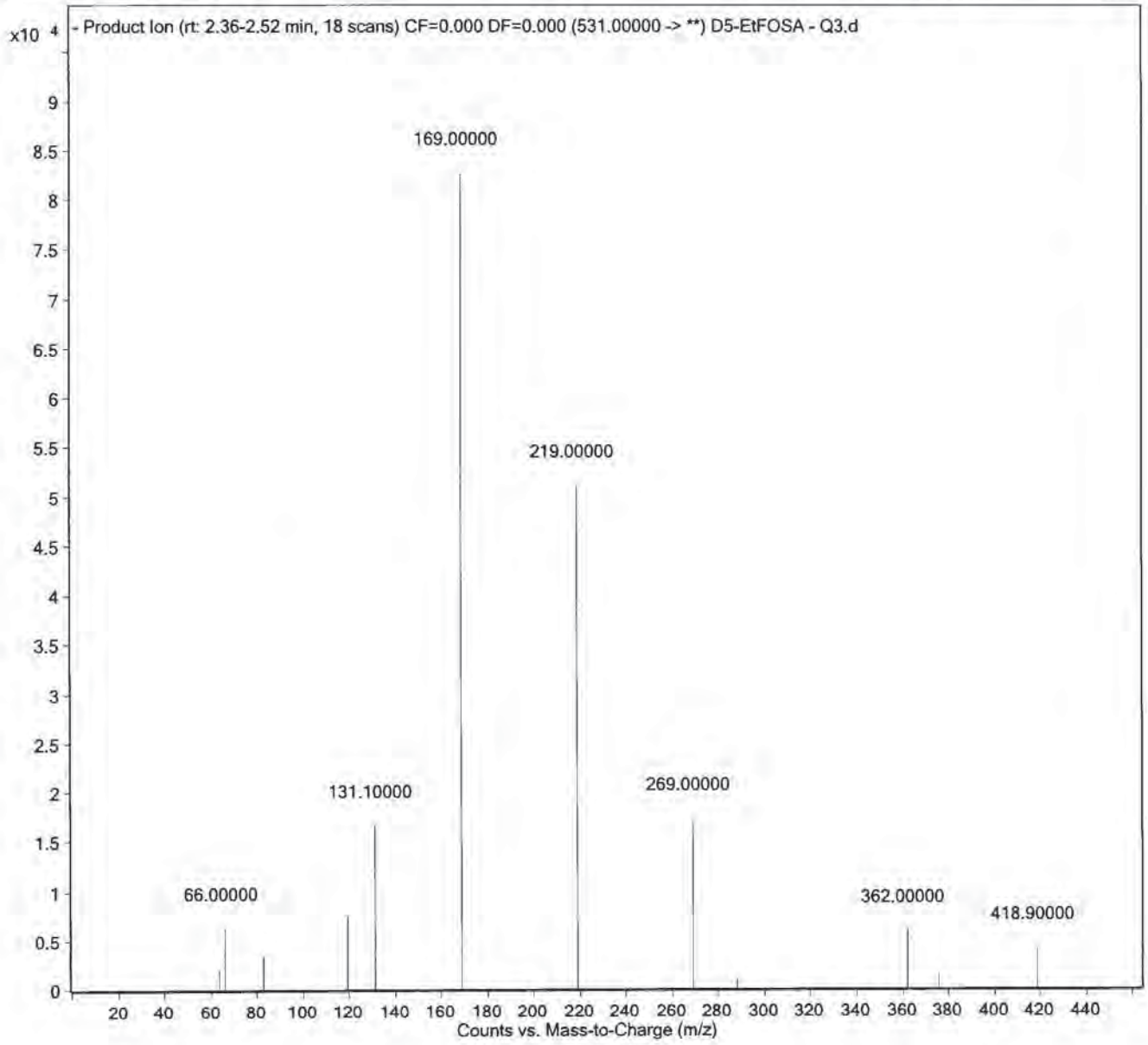
| **Sample Name** | D3-MeFOSA -Q3 | **Position** | P2-B5 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | D3-MeFOSA -Q3.d |
| **ACQ Method** | PFC_MassVerification-D3-MeFOSA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 4:19:08 PM |



| | | | | | |
|---|---|---|---|---|---|
| **Sample Name** | D5-EtFOSA -Q3 | **Position** | P2-B6 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | D5-EtFOSA - Q3.d |
| **Acq Method** | PFC_MassVerification-D5-EtFOSA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 4:24:38 PM |




SaxAm Analytics

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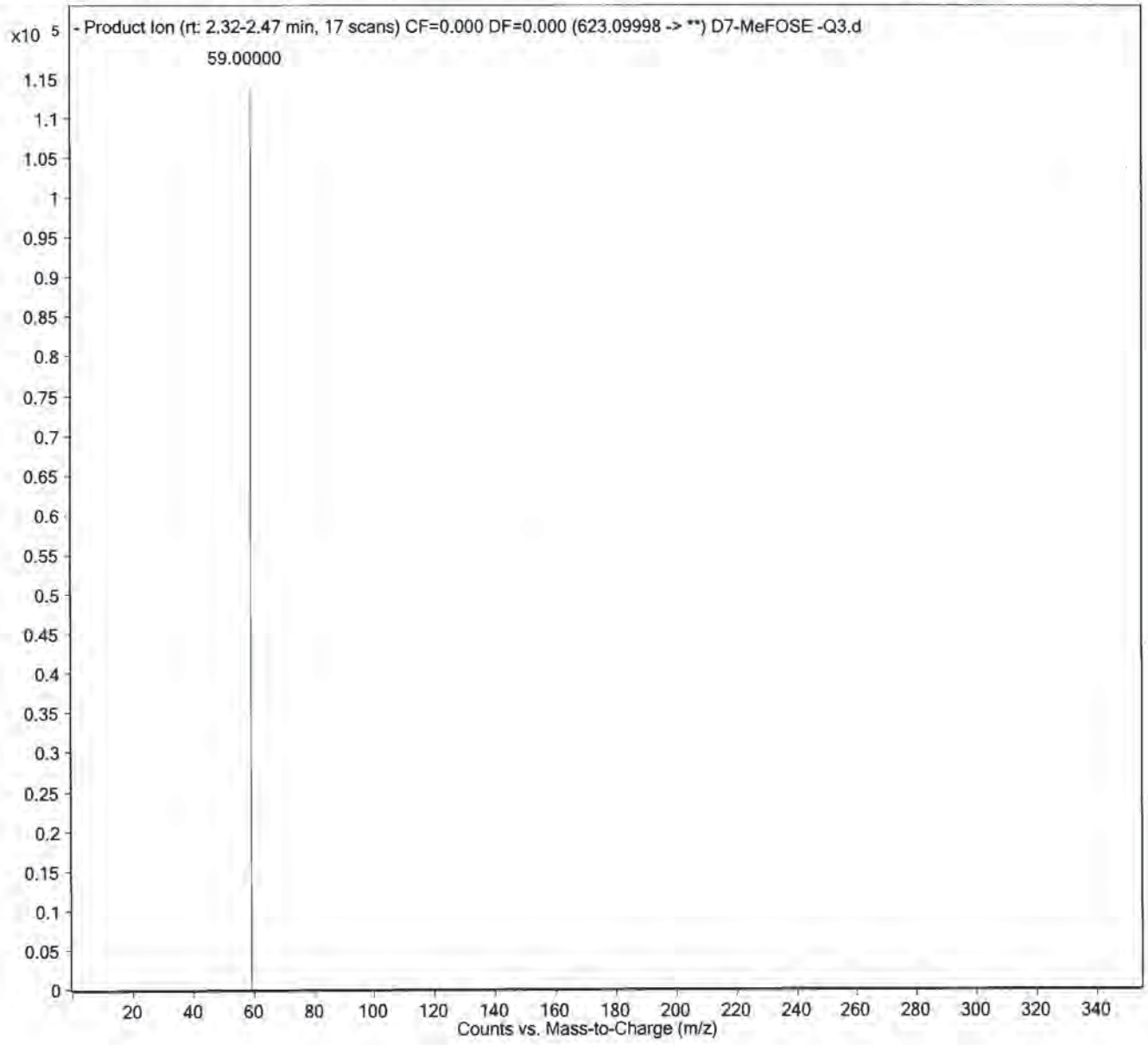
| **Sample Name** | D7-MeFOSE -Q3 | **Position** | P2-B7 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | D7-MeFOSE -Q3.d |
| **ACQ Method** | PFC_MassVerification-D7-MeFOSE-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 4:30:08 PM |



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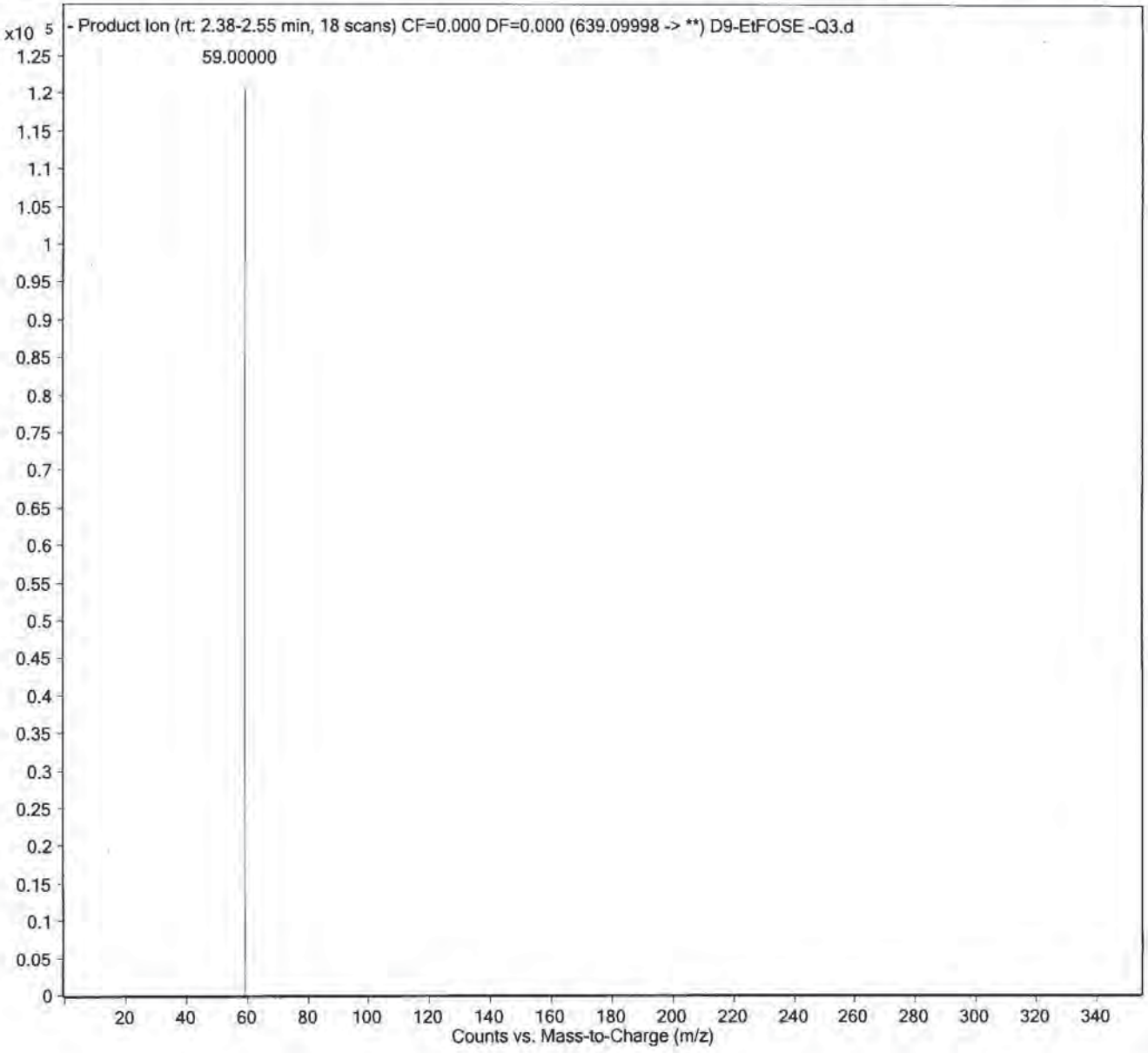
|---|---|---|---|---|---|
| **Sample Name** | D9-EtFOSE -Q3 | **Position** | P2-B8 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | D9-EtFOSE -Q3.d |
| **ACQ Method** | PFC_MassVerification-D9-EtFOSE-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 4:35:38 PM |




MaxXam Analytics

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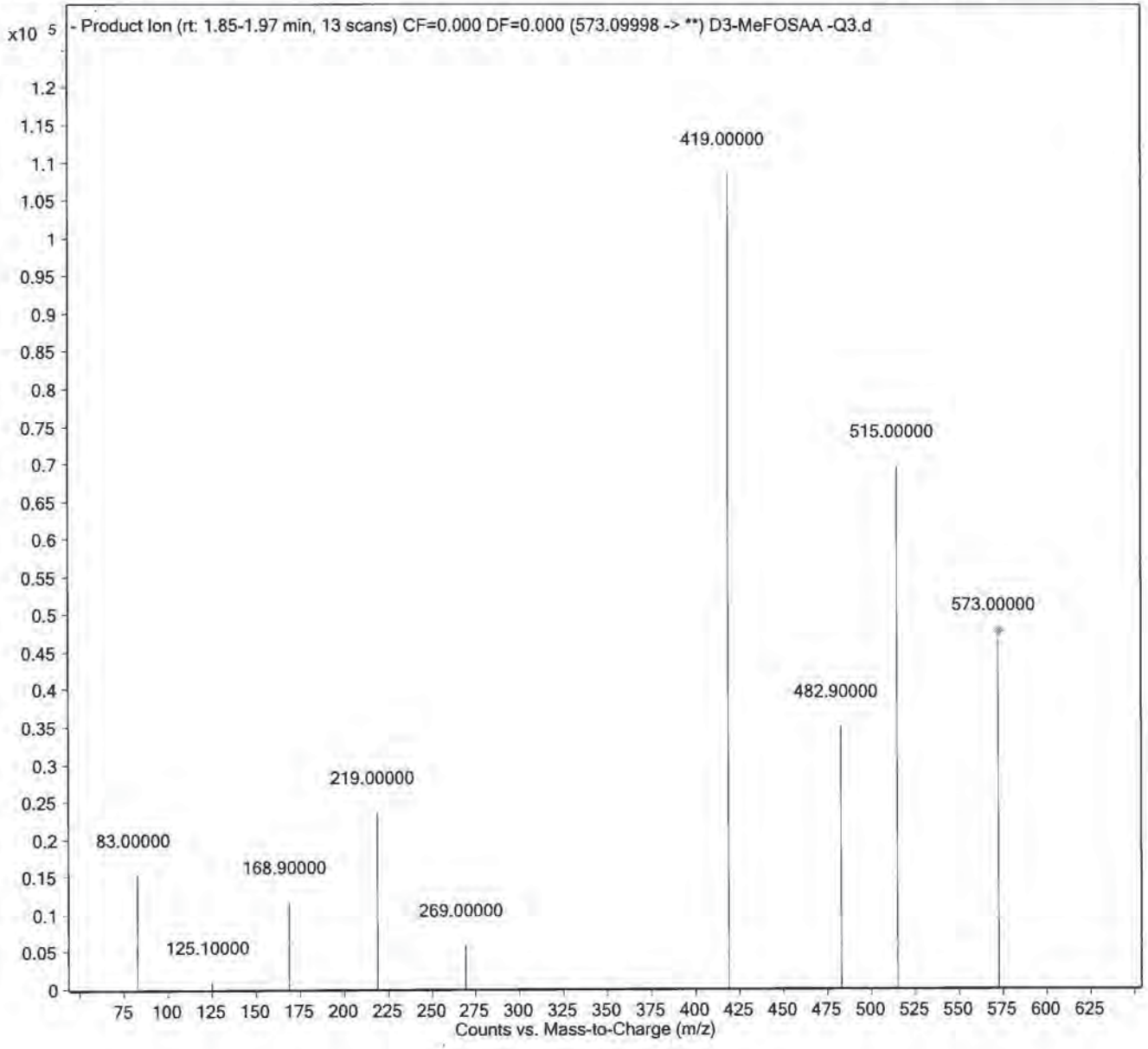
| **Sample Name** | D3-MeFOSAA -Q3 | **Position** | P2-B9 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | D3-MeFOSAA -Q3.d |
| **Acq Method** | PFC_MassVerification-D3-MeFOSAA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 4:41:10 PM |



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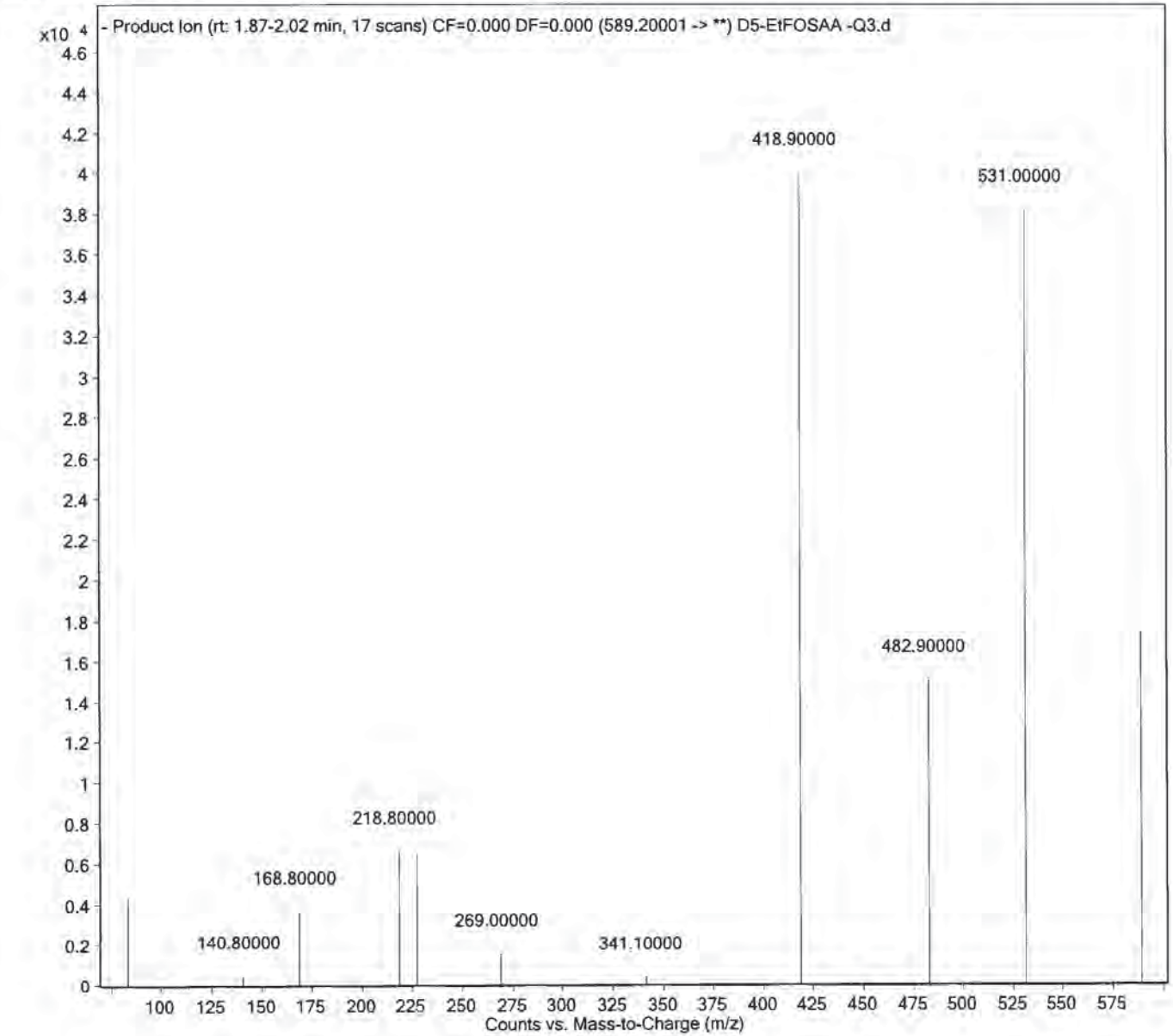
|---|---|---|---|---|---|
| **Sample Name** | D5-EtFOSAA -Q3 | **Position** | P2-C1 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | D5-EtFOSAA -Q3.d |
| **ACQ Method** | PFC_MassVerification-D5-EtFOSAA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/12 8:41:07 AM |



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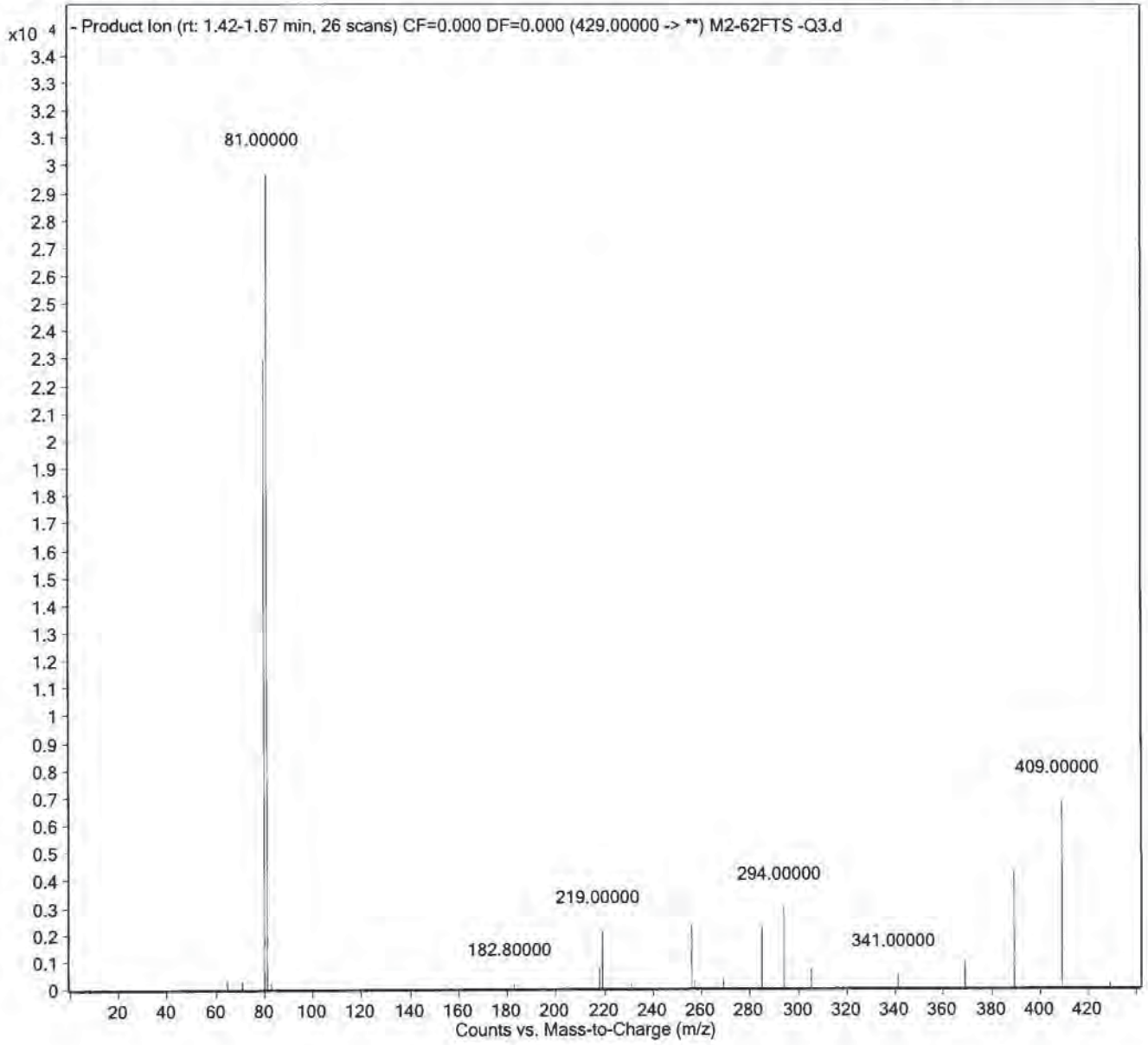
|---|---|---|---|---|---|
| **Sample Name** | M2-6:2FTS -Q3 | **Position** | P2-C2 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | M2-62FTS -Q3.d |
| **ACQ Method** | PFC_MassVerification-M26-2FTS-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 4:52:12 PM |

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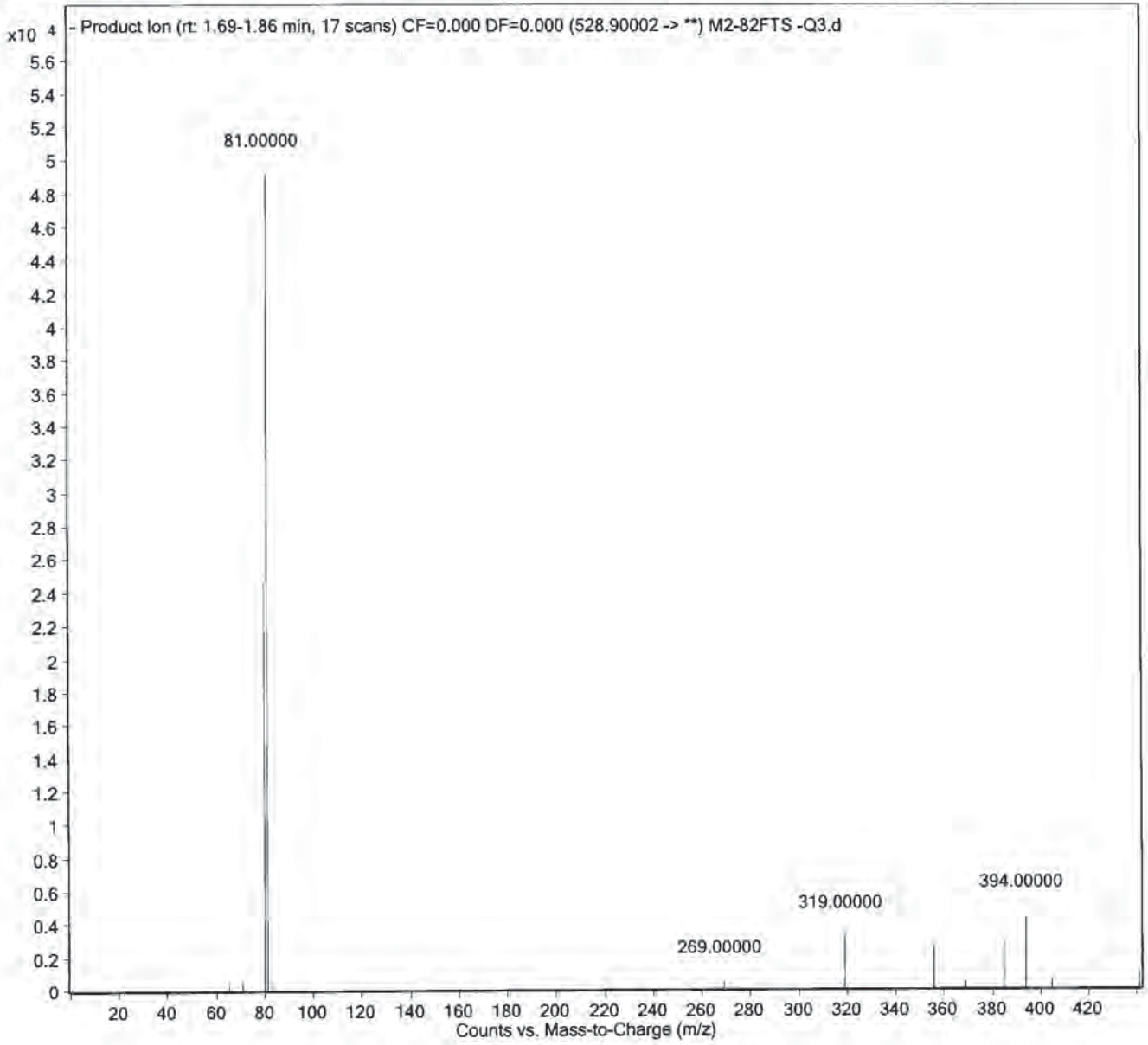
| **Sample Name** | M2-8:2FTS -Q3 | **Position** | P2-C3 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | M2-82FTS -Q3.d |
| **ACQ Method** | PFC_MassVerification-M2-8-2FTS-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 4:57:42 PM |




SanKam Analytics

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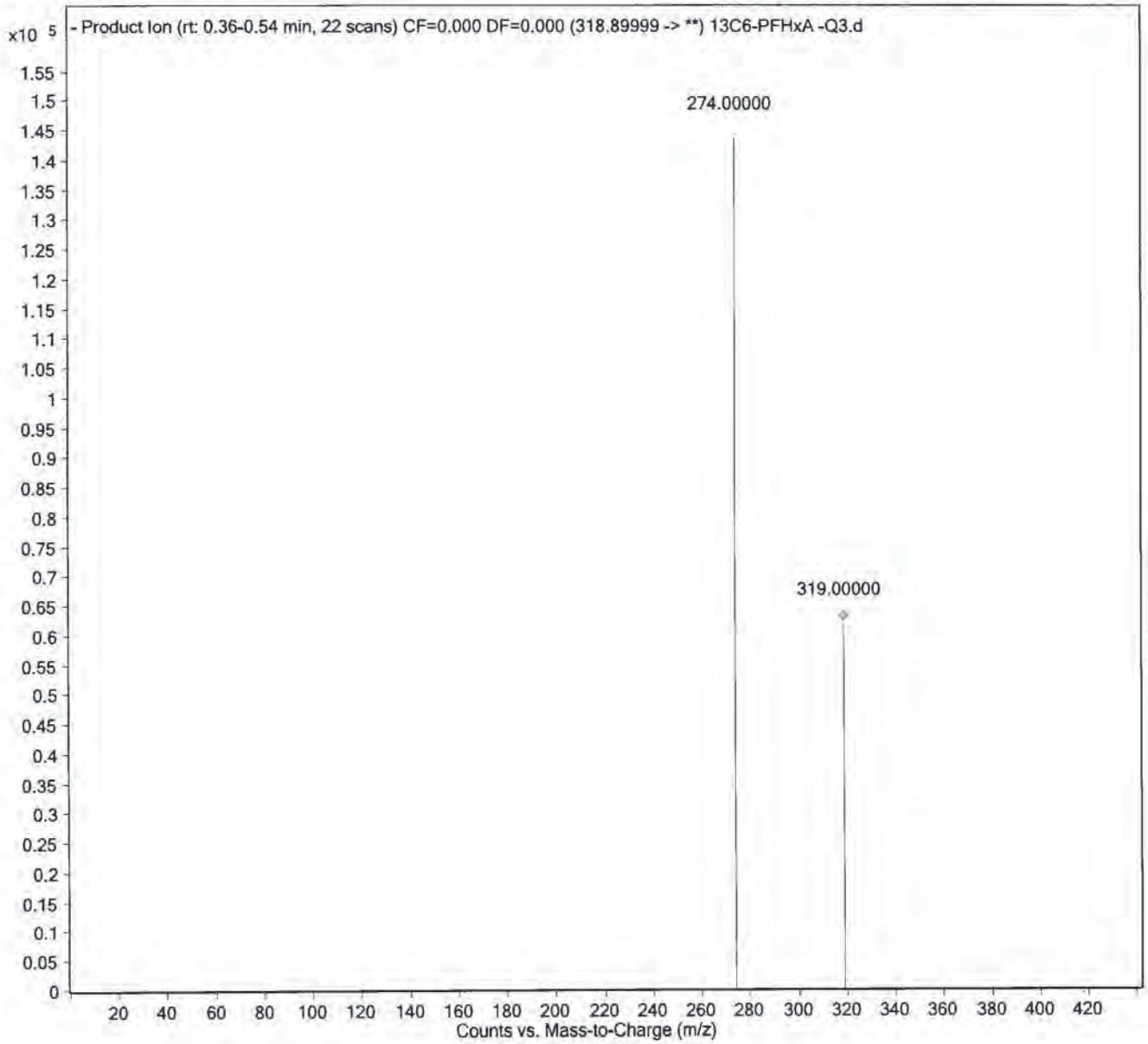
|---|---|---|---|---|---|
| **Sample Name** | 13C6-PFHxA -Q3 | **Position** | P2-C4 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | 13C6-PFHxA -Q3.d |
| **ACQ Method** | PFC_MassVerification-13C6-PFHxA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 5:03:12 PM |

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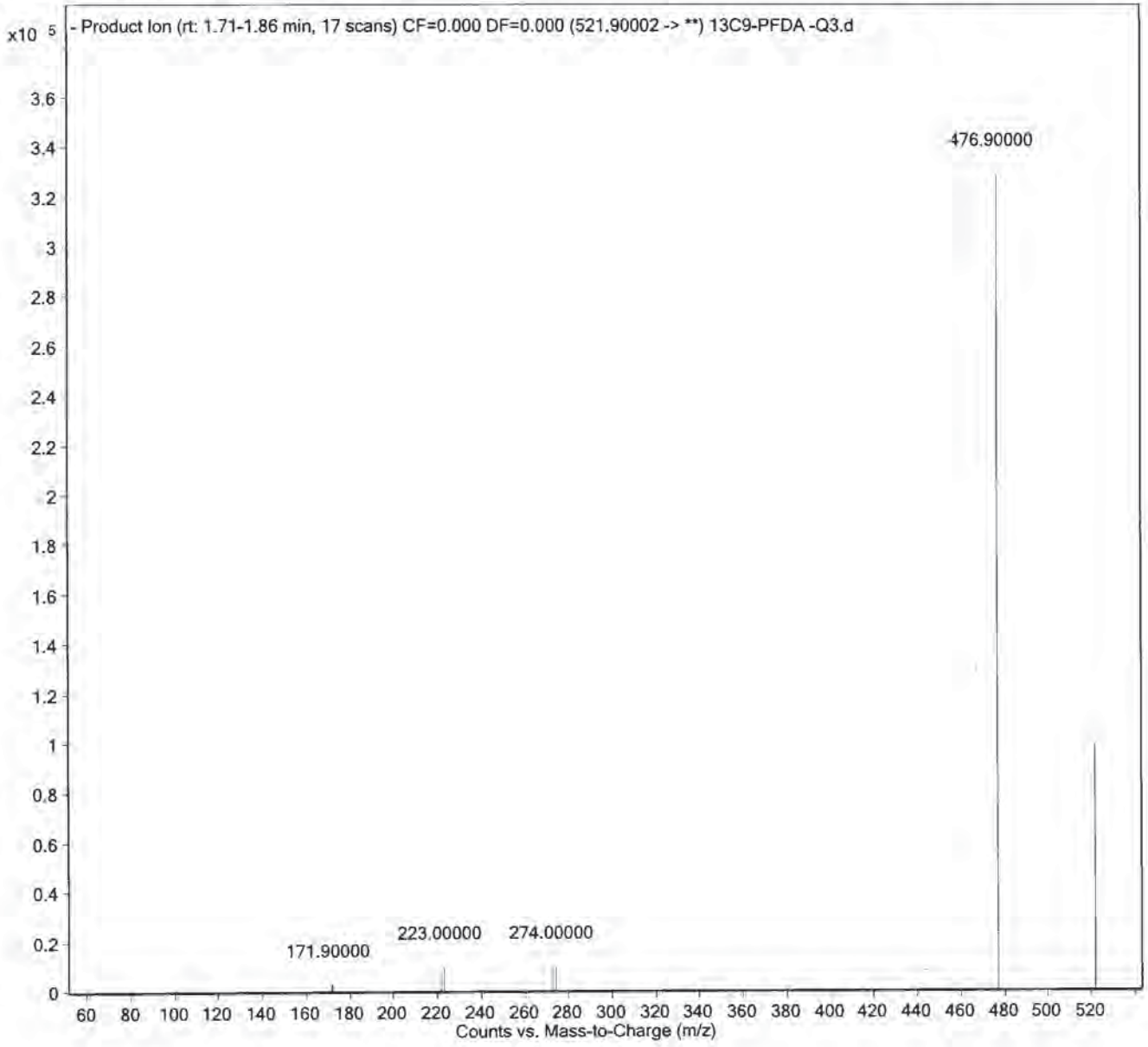
|---|---|---|---|---|---|
| **Sample Name** | 13C9-PFDA -Q3 | **Position** | P2-C5 | **Instrument Name** | LCMS04 |
| **User Name** | AD | **Inj Vol** | 10 | **InjPosition** | |
| **Sample Type** | Sample | **IRM Calibration Status** | Not Applicable | **Data Filename** | 13C9-PFDA -Q3.d |
| **ACQ Method** | PFC_MassVerification-13C9-PFDA-Q3.m | **Comment** | | **Acquired Time** | 2017/07/11 5:08:42 PM |

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# Worklist Report

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**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFAS_MASSVER_IS_170711.wkl

**Operator Name:** AD
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\data\Mass Verification\20170711_IS
**Pre-Worklist Script:** ---
**Post-Worklist Script:** ---
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** ---

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P1 | |

**Worklist Table**

| | Sample Name | Sample Position | Method | Data File | Sample Type | Inj Vol (µl) | Sample Group |
|---|---|---|---|---|---|---|---|
| 1 | MPFBA | P2-A1 | PFC_MassVerification-Q1.m | D:\MassHunter\Data\Mass Verification\20170711_IS\MPFBA -Q1.d | Sample | As Method | PFAS-Q1 |
| 2 | MPFPeA | P2-A2 | PFC_MassVerification-Q1.m | MPFPeA -Q1.d | Sample | As Method | PFAS-Q1 |
| 3 | MPFHxA | P2-A3 | PFC_MassVerification-Q1.m | MPFHxA -Q1.d | Sample | As Method | PFAS-Q1 |
| 4 | MPFHxS | P2-A4 | PFC_MassVerification-Q1.m | MPFHxS -Q1.d | Sample | As Method | PFAS-Q1 |
| 5 | MPFHpA | P2-A5 | PFC_MassVerification-Q1.m | MPFHpA -Q1.d | Sample | As Method | PFAS-Q1 |
| 6 | MPFOA | P2-A6 | PFC_MassVerification-Q1.m | MPFOA -Q1.d | Sample | As Method | PFAS-Q1 |
| 7 | MPFOS | P2-A7 | PFC_MassVerification-Q1.m | MPFOS -Q1.d | Sample | As Method | PFAS-Q1 |
| 8 | MPFNA | P2-A8 | PFC_MassVerification-Q1.m | MPFNA -Q1.d | Sample | As Method | PFAS-Q1 |

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| | Sample Name | Sample Position | Method | Data File | Sample Type | Inj Vol (µl) | Sample Group |
|---|---|---|---|---|---|---|---|
| 9 | MPFDA | P2-A9 | PFC_MassVerification-Q1.m | MPFDA -Q1.d | Sample | As Method | PFAS-Q1 |
| 10 | MPFUnA | P2-B1 | PFC_MassVerification-Q1.m | MPFUnA -Q1.d | Sample | As Method | PFAS-Q1 |
| 11 | MPFDoA | P2-B2 | PFC_MassVerification-Q1.m | MPFDoA -Q1.d | Sample | As Method | PFAS-Q1 |
| 12 | MPFTeDA | P2-B3 | PFC_MassVerification-Q1.m | MPFTeDA -Q1.d | Sample | As Method | PFAS-Q1 |
| 13 | MPFOSA | P2-B4 | PFC_MassVerification-Q1.m | MPFOSA -Q1.d | Sample | As Method | PFAS-Q1 |
| 14 | D3-MeFOSA | P2-B5 | PFC_MassVerification-Q1.m | D3-MeFOSA -Q1.d | Sample | As Method | PFAS-Q1 |
| 15 | D5-EtFOSA | P2-B6 | PFC_MassVerification-Q1.m | D5-EtFOSA -Q1.d | Sample | As Method | PFAS-Q1 |
| 16 | D7-MeFOSE | P2-B7 | PFC_MassVerification-Q1.m | D7-MeFOSE -Q1.d | Sample | As Method | PFAS-Q1 |
| 17 | D9-EtFOSE | P2-B8 | PFC_MassVerification-Q1.m | D9-EtFOSE -Q1.d | Sample | As Method | PFAS-Q1 |
| 18 | D3-MeFOSAA | P2-B9 | PFC_MassVerification-Q1.m | D3-MeFOSAA -Q1.d | Sample | As Method | PFAS-Q1 |
| 19 | D5-EtFOSAA | P2-C1 | PFC_MassVerification-Q1.m | D5-EtFOSAA -Q1.d | Sample | As Method | PFAS-Q1 |
| 20 | M2-6:2FTS | P2-C2 | PFC_MassVerification-Q1.m | M2-62FTS -Q1.d | Sample | As Method | PFAS-Q1 |
| 21 | M2-8:2FTS | P2-C3 | PFC_MassVerification-Q1.m | M2-82FTS -Q1.d | Sample | As Method | PFAS-Q1 |
| 22 | 13C6-PFHxA | P2-C4 | PFC_MassVerification-Q1.m | 13C6-PFHxA -Q1.d | Sample | As Method | PFAS-Q1 |
| 23 | 13C9-PFDA | P2-C5 | PFC_MassVerification-Q1.m | 13C9-PFDA -Q1.d | Sample | As Method | PFAS-Q1 |
| 24 | MPFBA -Q3 | P2-A1 | PFC_MassVerification-MPFBA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\MPFBA -Q3.d | Sample | As Method | PFAS-Q3 |
| 25 | MPFPeA -Q3 | P2-A2 | PFC_MassVerification-MPFPeA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\MPFPeA -Q3.d | Sample | As Method | PFAS-Q3 |
| 26 | MPFHxA -Q3 | P2-A3 | PFC_MassVerification-MPFHxA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\MPFHxA -Q3.d | Sample | As Method | PFAS-Q3 |
| 27 | MPFHxS -Q3 | P2-A4 | PFC_MassVerification-MPFHxS-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\MPFHxS -Q3.d | Sample | As Method | PFAS-Q3 |
| 28 | MPFHpA -Q3 | P2-A5 | PFC_MassVerification-MPFHpA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\MPFHpA -Q3.d | Sample | As Method | PFAS-Q3 |

| | Sample Name | Sample Position | Method | Data File | Sample Type | Inj Vol (µl) | Sample Group |
|---|---|---|---|---|---|---|---|
| 29 | MPFOA -Q3 | P2-A6 | PFC_MassVerification-MPFOA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\MPFOA -Q3.d | Sample | As Method | PFAS-Q3 |
| 30 | MPFOS -Q3 | P2-A7 | PFC_MassVerification-MPFOS-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\MPFOS -Q3.d | Sample | As Method | PFAS-Q3 |
| 31 | MPFNA -Q3 | P2-A8 | PFC_MassVerification-MPFNA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\MPFNA -Q3.d | Sample | As Method | PFAS-Q3 |
| 32 | MPFDA -Q3 | P2-A9 | PFC_MassVerification-MPFDA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\MPFDA -Q3.d | Sample | As Method | PFAS-Q3 |
| 33 | MPFUnA -Q3 | P2-B1 | PFC_MassVerification-MPFUnA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\MPFUnA -Q3.d | Sample | As Method | PFAS-Q3 |
| 34 | MPFDoA -Q3 | P2-B2 | PFC_MassVerification-MPFDoA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\MPFDoA -Q3.d | Sample | As Method | PFAS-Q3 |
| 35 | MPFTeDA -Q3 | P2-B3 | PFC_MassVerification-MPFTeDA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\MPFTeDA -Q3.d | Sample | As Method | PFAS-Q3 |
| 36 | MPFOSA -Q3 | P2-B4 | PFC_MassVerification-MPFOSA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\MPFOSA -Q3.d | Sample | As Method | PFAS-Q3 |
| 37 | D3-MeFOSA -Q3 | P2-B5 | PFC_MassVerification-D3-MeFOSA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\D3-MeFOSA -Q3.d | Sample | As Method | PFAS-Q3 |
| 38 | D5-EtFOSA -Q3 | P2-B6 | PFC_MassVerification-D5-EtFOSA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\D5-EtFOSA -Q3.d | Sample | As Method | PFAS-Q3 |
| 39 | D7-MeFOSE -Q3 | P2-B7 | PFC_MassVerification-D7-MeFOSE-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\D7-MeFOSE -Q3.d | Sample | As Method | PFAS-Q3 |
| 40 | D9-EtFOSE -Q3 | P2-B8 | PFC_MassVerification-D9-EtFOSE-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\D9-EtFOSE -Q3.d | Sample | As Method | PFAS-Q3 |
| 41 | D3-MeFOSAA -Q3 | P2-B9 | PFC_MassVerification-D3-MeFOSAA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\D3-MeFOSAA -Q3.d | Sample | As Method | PFAS-Q3 |

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| | Sample Name | Sample Position | Method | Data File | Sample Type | Inj Vol (µl) | Sample Group |
|---|---|---|---|---|---|---|---|
| 42 | D5-EtFOSA -Q3 | P2-C1 | PFC_MassVerification-D5-EtFOSA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\D5-EtFOSA -Q3.d | Sample | As Method | PFAS-Q3 |
| 43 | M2-6:2FTS -Q3 | P2-C2 | PFC_MassVerification-M26-2FTS-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\M2-62FTS -Q3.d | Sample | As Method | PFAS-Q3 |
| 44 | M2-8:2FTS -Q3 | P2-C3 | PFC_MassVerification-M2-8-2FTS-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\M2-82FTS -Q3.d | Sample | As Method | PFAS-Q3 |
| 45 | 13C6-PFHxA -Q3 | P2-C4 | PFC_MassVerification-13C6-PFHxA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\13C6-PFHxA -Q3.d | Sample | As Method | PFAS-Q3 |
| 46 | 13C9-PFDA -Q3 | P2-C5 | PFC_MassVerification-13C9-PFDA-Q3.m | D:\MassHunter\Data\Mass Verification\20170711_IS\13C9-PFDA -Q3.d | Sample | As Method | PFAS-Q3 |
| 47 | SCP_InstrumentStandby() {MH_Acq_Scripts.exe} | | | | | | |




# 5. Initial Calibration

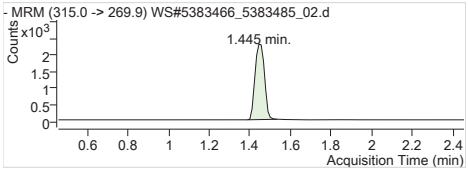
Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

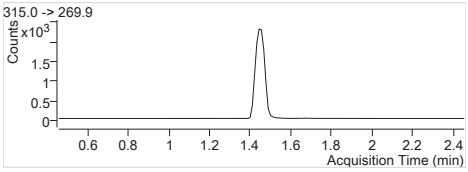
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 1** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_02.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A2 |
| **Acq. Date** | 2018/02/06 6:11:47 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

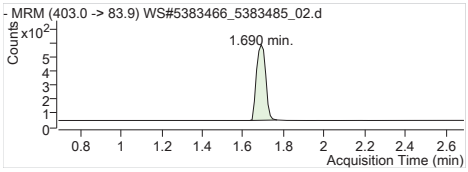
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 7360 | 1.44 | 1 µg/L | | |
| MPFHxS | 1709 | 1.69 | 1 µg/L | | |
| MPFHpA | 8555 | 1.71 | 1 µg/L | | |
| MPFOA | 9294 | 1.89 | 1 µg/L | | |
| MPFOS | 1880 | 1.99 | 1 µg/L | | |
| MPFNA | 8823 | 2.04 | 1 µg/L | | |
| MPFDA | 7393 | 2.15 | 1 µg/L | | |
| MPFUnA | 8613 | 2.25 | 1 µg/L | | |
| MPFDoA | 12307 | 2.33 | 1 µg/L | | |
| MPFTeDA | 13245 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 25741 | 1.44 | 1 µg/L | | |
| 13C9-PFDA IS | 34399 | 2.15 | 1 µg/L | | |

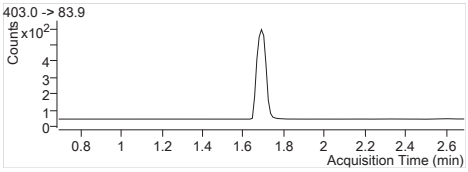
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 560 | 1.11 | 0.83 | 0.89 µg/L | 107.07 |
| PFHxA 1 | 1612 | 1.45 | 0.83 | 0.86 µg/L | 104.02 |
| PFHxS 1 | 524 | 1.69 | 0.83 | 0.94 µg/L | 112.86 |
| PFHpA 1 | 2769 | 1.71 | 0.83 | 0.96 µg/L | 115.76 |
| PFOA 1 | 2835 | 1.89 | 0.83 | 0.89 µg/L | 107.76 |
| PFOS 1 | 592 | 1.98 | 0.83 | 0.97 µg/L | 117.23 |
| PFNA 1 | 2562 | 2.04 | 0.83 | 0.88 µg/L | 105.89 |
| PFDA 1 | 2686 | 2.15 | 0.83 | 0.86 µg/L | 103.25 |
| PFUnA 1 | 3117 | 2.25 | 0.83 | 0.85 µg/L | 102.10 |
| PFDoA 1 | 3531 | 2.33 | 0.83 | 0.82 µg/L | 98.99 |
| PFTrDA 1 | 4399 | 2.41 | 0.83 | 0.84 µg/L | 101.03 |
| PFTeDA 1 | 3520 | 2.48 | 0.83 | 0.81 µg/L | 97.97 |
| 13C2-PFHxA | 7360 | 1.44 | 100.00 | 120.68 µg/L | 120.68 |
| 18O2-PFHxS | 1709 | 1.69 | 100.00 | 114.25 µg/L | 114.25 |
| 13C4-PFHpA | 8555 | 1.71 | 100.00 | 113.76 µg/L | 113.76 |
| 13C4-PFOA | 9294 | 1.89 | 100.00 | 115.02 µg/L | 115.02 |
| 13C4-PFOS | 1880 | 1.99 | 100.00 | 105.81 µg/L | 105.81 |
| 13C5-PFNA | 8749 | 2.04 | 100.00 | 109.89 µg/L | 109.89 |
| 13C2-PFDA | 7298 | 2.15 | 100.00 | 105.73 µg/L | 105.73 |
| 13C2-PFUnA | 8613 | 2.25 | 100.00 | 103.52 µg/L | 103.52 |
| 13C2-PFDoA | 12307 | 2.33 | 100.00 | 111.14 µg/L | 111.14 |
| 13C2-PFTeDA | 13325 | 2.48 | 100.00 | 105.61 µg/L | 105.61 |
| 13C6-PFHxA | 25741 | 1.44 | 100.00 | 90.54 µg/L | 90.54 |
| 13C9-PFDA | 34399 | 2.15 | 100.00 | 96.16 µg/L | 96.16 |



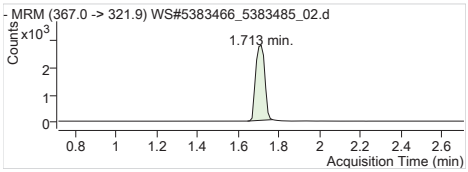



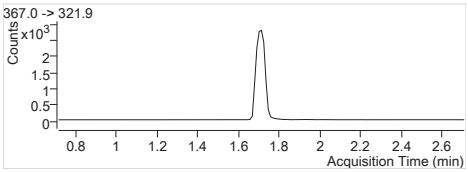

**MPFHxA** Internal Standard
RT (Exp. RT): 1.445 (1.456)
Concentration: 1 µg/L
Sample type: Calibration



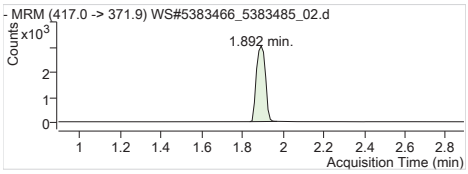



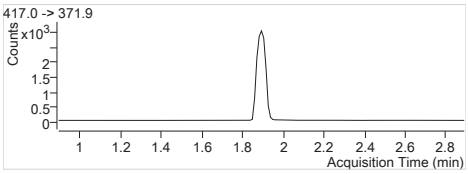

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Calibration



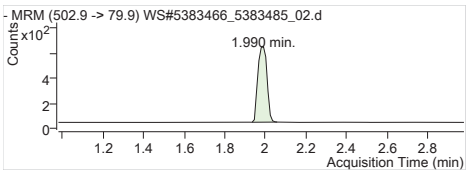



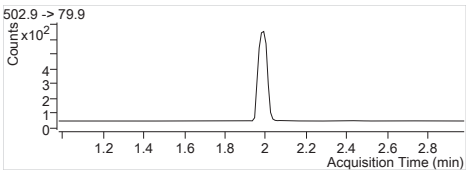

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Calibration



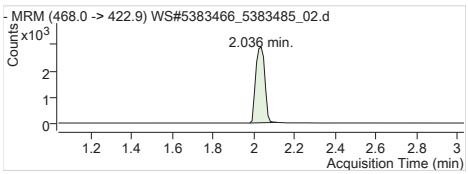



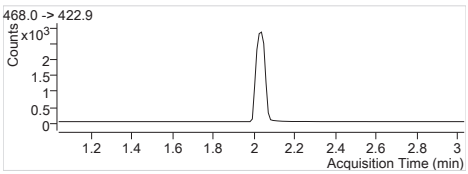

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Calibration



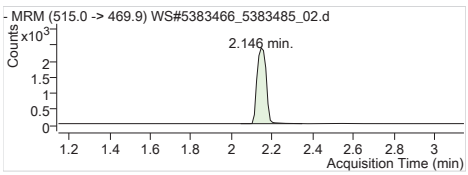



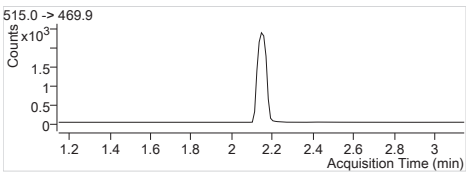

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



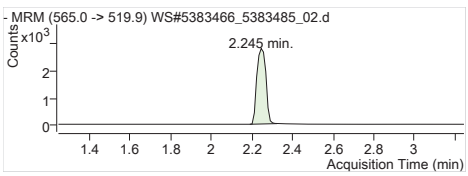



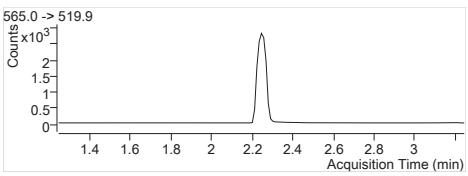

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Calibration



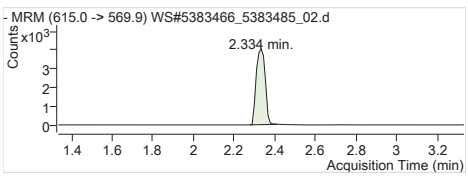



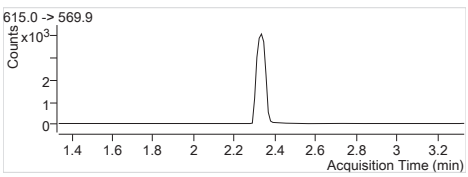

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



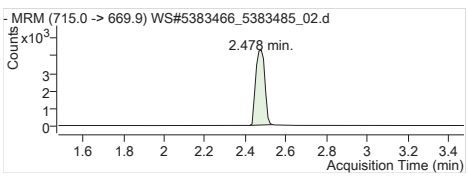



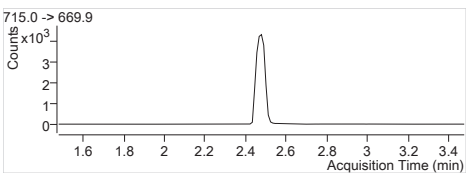

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Calibration



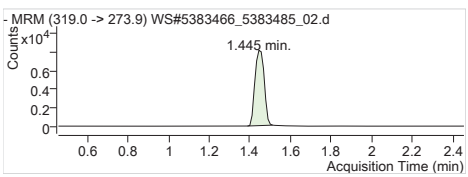



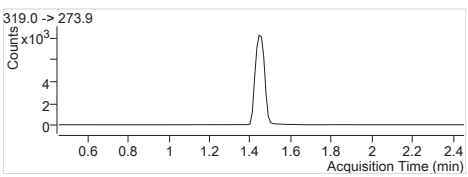

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Calibration



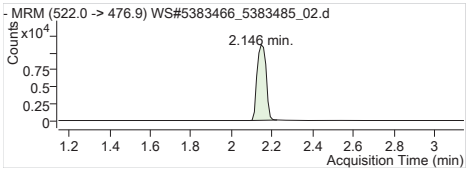



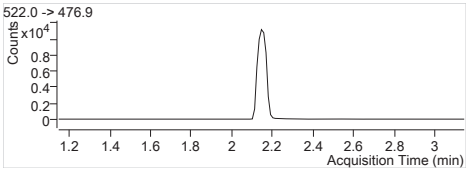

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Calibration



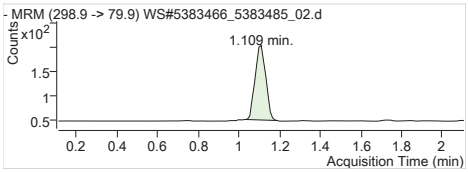



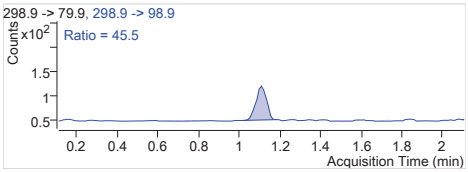

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.445 (1.456)
Concentration: 1 µg/L
Sample type: Calibration



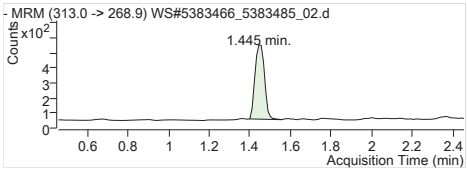



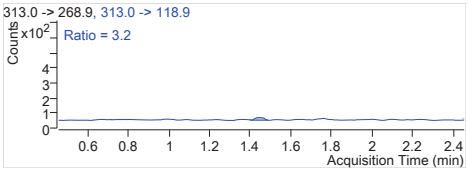

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



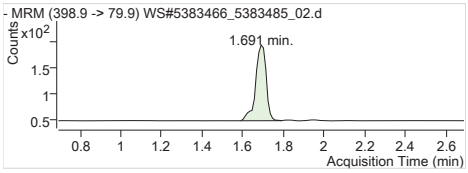



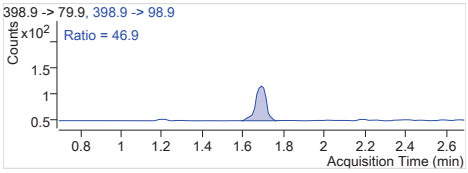

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 0.89 µg/L
Area ratio: 0.32768
Sample type: Calibration



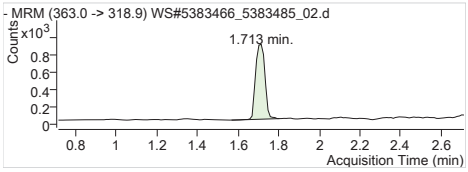



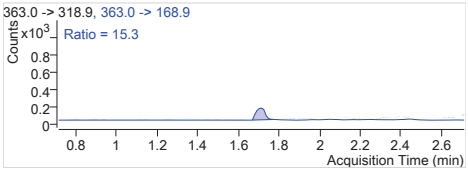

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.445 (1.456)
Calc. conc. 0.86 µg/L
Area ratio: 0.21902
Sample type: Calibration



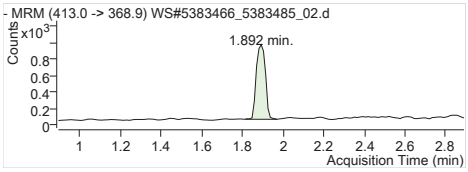



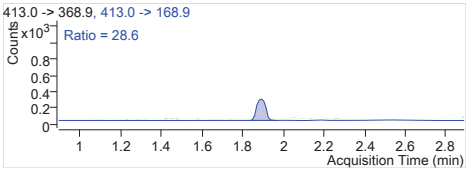

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.94 µg/L
Area ratio: 0.30661
Sample type: Calibration



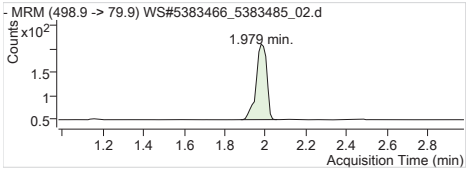



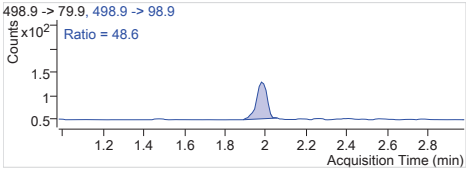

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 0.96 µg/L
Area ratio: 0.32367
Sample type: Calibration



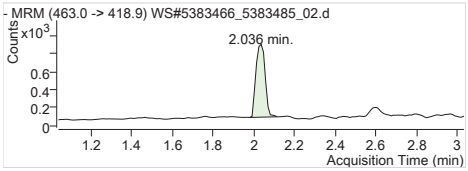



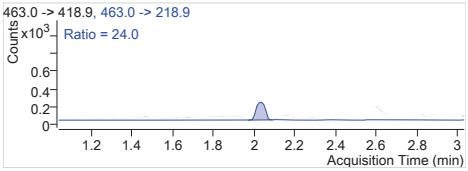

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 0.89 µg/L
Area ratio: 0.30504
Sample type: Calibration



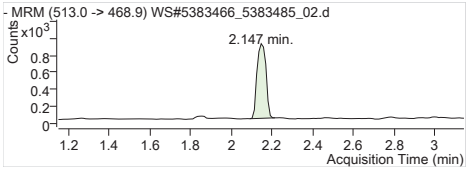



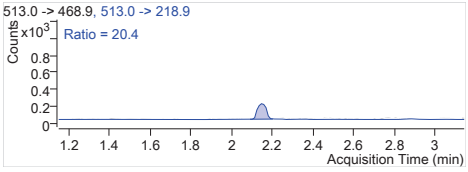

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 0.97 µg/L
Area ratio: 0.31489
Sample type: Calibration



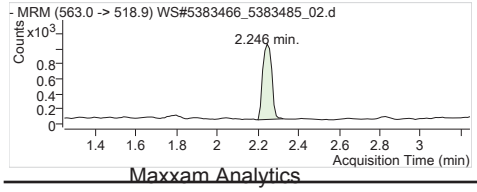



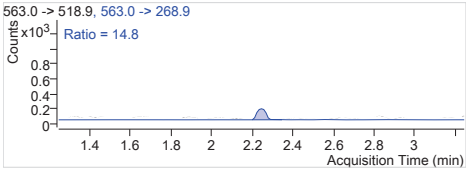

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 0.88 µg/L
Area ratio: 0.29038
Sample type: Calibration



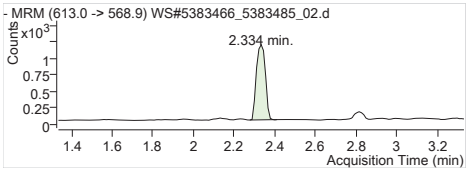



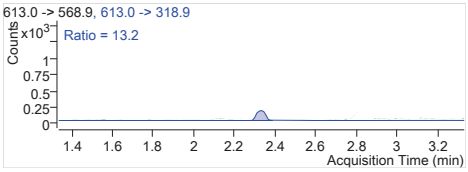

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.147)
Calc. conc. 0.86 µg/L
Area ratio: 0.36332
Sample type: Calibration



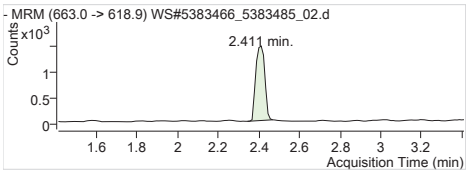



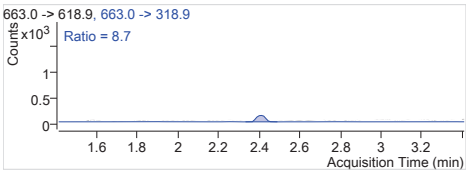

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 0.85 µg/L
Area ratio: 0.36189
Sample type: Calibration



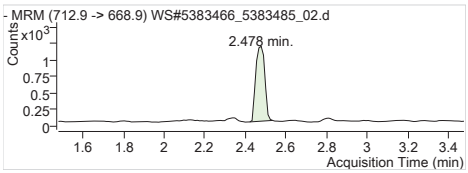



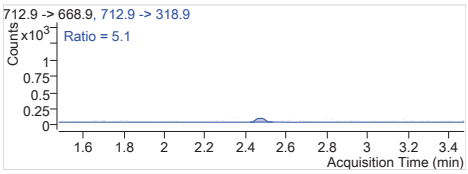

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 0.82 µg/L
Area ratio: 0.28691
Sample type: Calibration



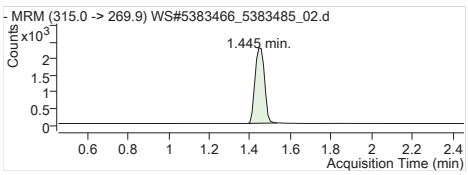



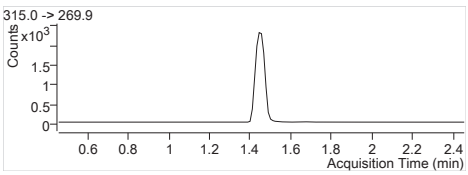

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.411 (2.411)
Calc. conc. 0.84 µg/L
Area ratio: 0.33213
Sample type: Calibration



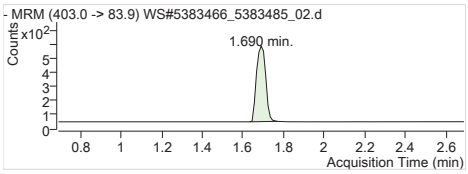



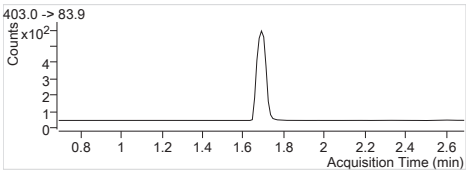

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 0.81 µg/L
Area ratio: 0.26576
Sample type: Calibration



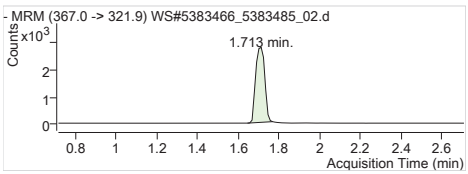



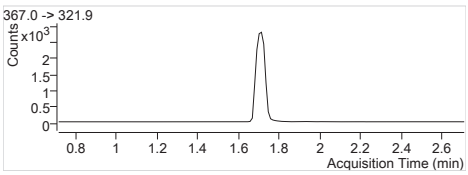

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.445 (1.456)
Calc. conc. 120.68 µg/L
Area ratio: 0.28593
Sample type: Calibration



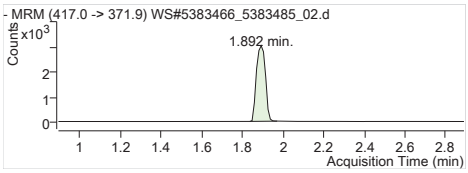



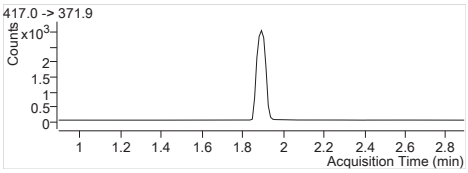

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 114.25 µg/L
Area ratio: 0.06639
Sample type: Calibration



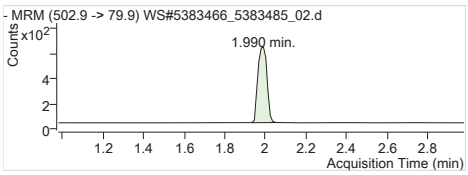



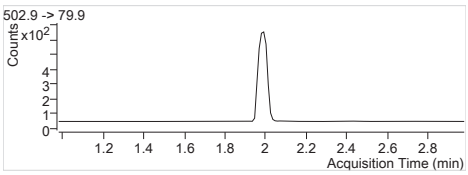

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 113.76 µg/L
Area ratio: 0.33235
Sample type: Calibration



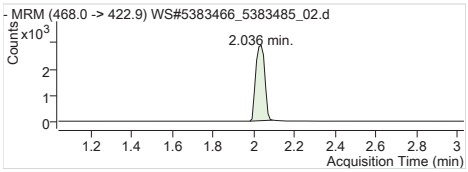



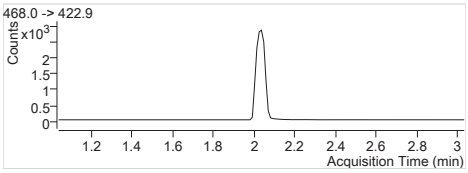

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 115.02 µg/L
Area ratio: 0.36106
Sample type: Calibration



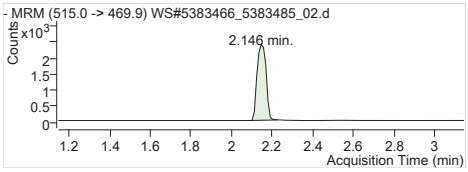



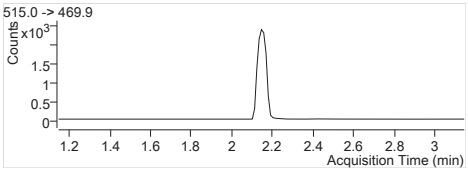

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.990 (1.979)
Calc. conc. 105.81 µg/L
Area ratio: 0.07304
Sample type: Calibration



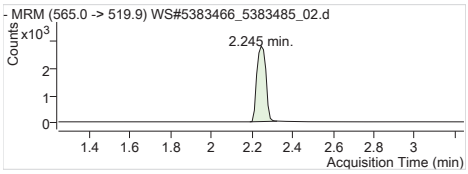



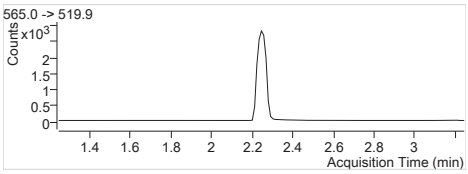

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 109.89 µg/L
Area ratio: 0.33989
Sample type: Calibration



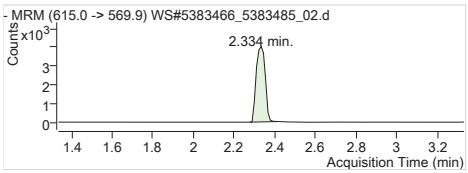



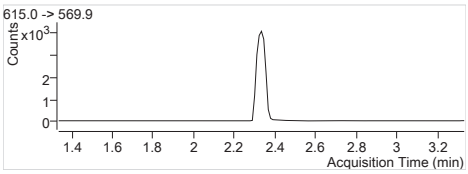

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 105.73 µg/L
Area ratio: 0.21216
Sample type: Calibration



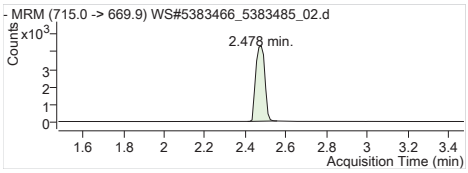



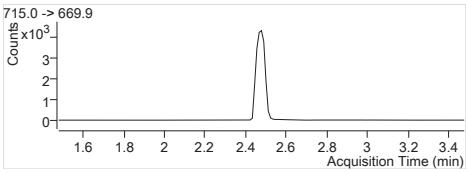

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 103.52 µg/L
Area ratio: 0.25039
Sample type: Calibration



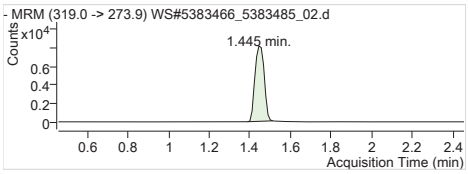



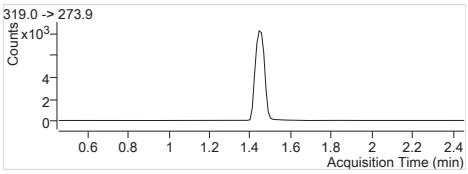

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 111.14 µg/L
Area ratio: 0.35777
Sample type: Calibration



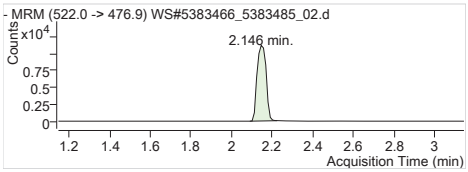



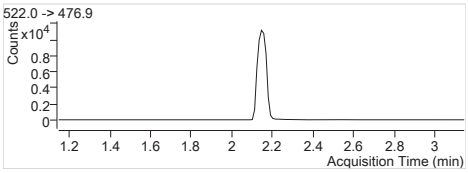

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 105.61 µg/L
Area ratio: 0.38737
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.445 (1.456)
Calc. conc. 90.54 µg/L
Area ratio: 0
Sample type: Calibration



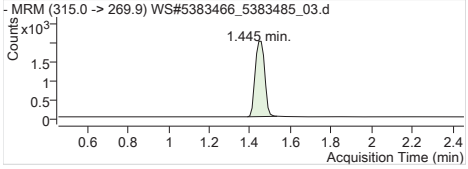

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 96.16 µg/L
Area ratio: 0
Sample type: Calibration

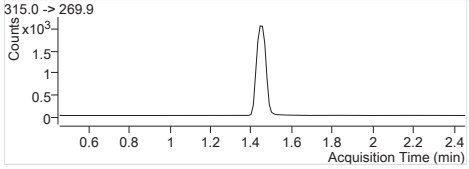
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_ETOxics

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 2** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_03.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A3 |
| **Acq. Date** | 2018/02/06 6:16:44 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

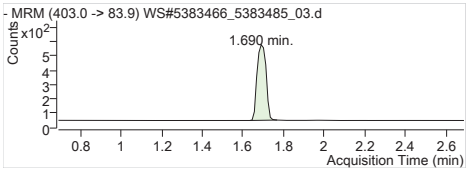
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6506 | 1.44 | 1 µg/L | | |
| MPFHxS | 1633 | 1.69 | 1 µg/L | | |
| MPFHpA | 8349 | 1.71 | 1 µg/L | | |
| MPFOA | 8736 | 1.89 | 1 µg/L | | |
| MPFOS | 1889 | 1.99 | 1 µg/L | | |
| MPFNA | 8809 | 2.04 | 1 µg/L | | |
| MPFDA | 7517 | 2.15 | 1 µg/L | | |
| MPFUnA | 8820 | 2.25 | 1 µg/L | | |
| MPFDoA | 11355 | 2.33 | 1 µg/L | | |
| MPFTeDA | 12272 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 27981 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 35531 | 2.15 | 1 µg/L | | |

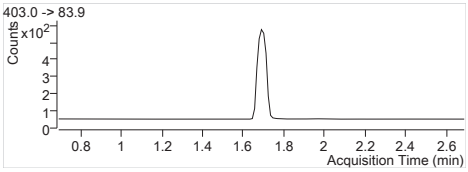
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 1174 | 1.11 | 1.70 | 1.77 µg/L | 104.35 |
| PFHxA 1 | 4054 | 1.46 | 1.70 | 1.86 µg/L | 109.45 |
| PFHxS 1 | 1115 | 1.69 | 1.70 | 1.78 µg/L | 104.59 |
| PFHpA 1 | 5056 | 1.71 | 1.70 | 1.63 µg/L | 95.86 |
| PFOA 1 | 5942 | 1.89 | 1.70 | 1.77 µg/L | 104.31 |
| PFOS 1 | 961 | 1.98 | 1.70 | 1.54 µg/L | 90.33 |
| PFNA 1 | 5291 | 2.04 | 1.70 | 1.71 µg/L | 100.36 |
| PFDA 1 | 5351 | 2.15 | 1.70 | 1.60 µg/L | 93.83 |
| PFUnA 1 | 5994 | 2.25 | 1.70 | 1.60 µg/L | 93.99 |
| PFDoA 1 | 7517 | 2.33 | 1.70 | 1.73 µg/L | 102.01 |
| PFTrDA 1 | 8288 | 2.41 | 1.70 | 1.67 µg/L | 98.07 |
| PFTeDA 1 | 7406 | 2.48 | 1.70 | 1.79 µg/L | 105.42 |
| 13C2-PFHxA | 6506 | 1.44 | 100.00 | 98.14 µg/L | 98.14 |
| 18O2-PFHxS | 1633 | 1.69 | 100.00 | 100.43 µg/L | 100.43 |
| 13C4-PFHpA | 8349 | 1.71 | 100.00 | 102.13 µg/L | 102.13 |
| 13C4-PFOA | 8736 | 1.89 | 100.00 | 99.46 µg/L | 99.46 |
| 13C4-PFOS | 1889 | 1.99 | 100.00 | 97.81 µg/L | 97.81 |
| 13C5-PFNA | 8746 | 2.04 | 100.00 | 101.06 µg/L | 101.06 |
| 13C2-PFDA | 7451 | 2.15 | 100.00 | 104.50 µg/L | 104.50 |
| 13C2-PFUnA | 8820 | 2.25 | 100.00 | 102.63 µg/L | 102.63 |
| 13C2-PFDoA | 11355 | 2.33 | 100.00 | 99.27 µg/L | 99.27 |
| 13C2-PFTeDA | 12474 | 2.48 | 100.00 | 95.72 µg/L | 95.72 |
| 13C6-PFHxA | 27981 | 1.46 | 100.00 | 98.42 µg/L | 98.42 |
| 13C9-PFDA | 35531 | 2.15 | 100.00 | 99.32 µg/L | 99.32 |



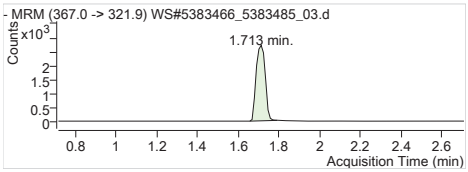



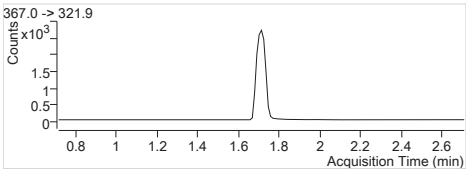

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.445 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | Calibration |



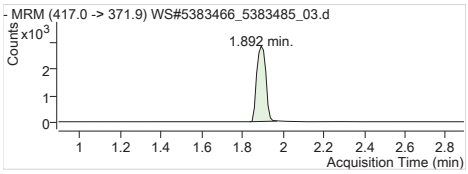



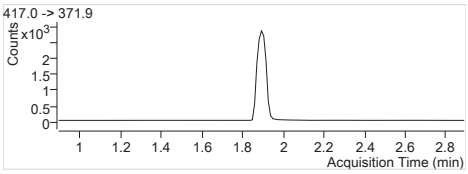

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Calibration



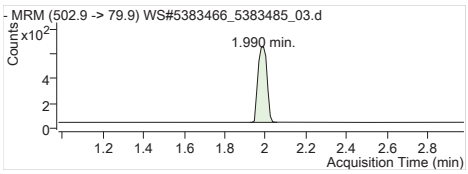



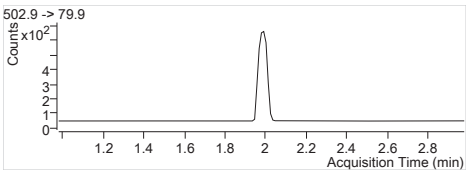

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Calibration



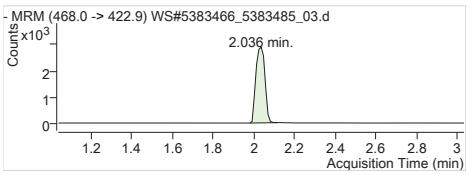



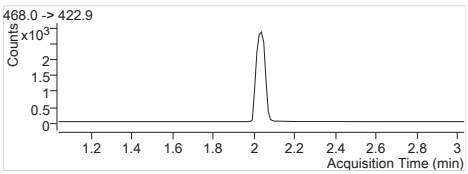

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Calibration



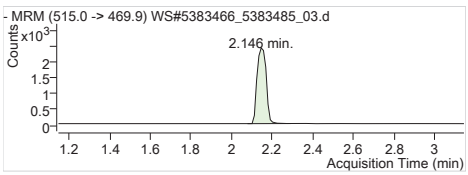



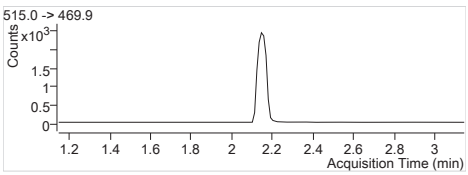

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



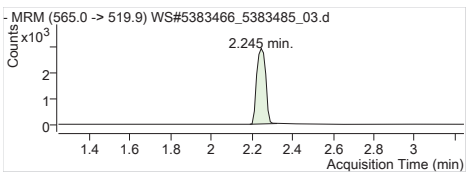



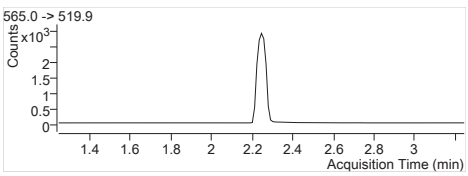

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Calibration



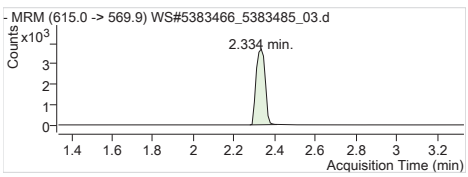



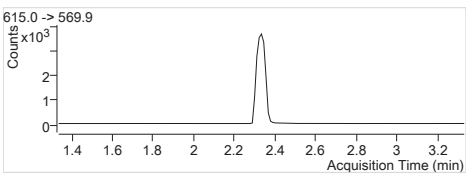

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



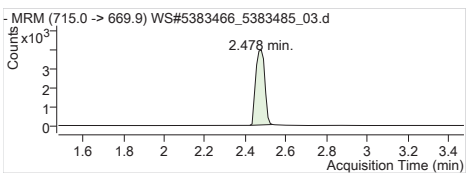



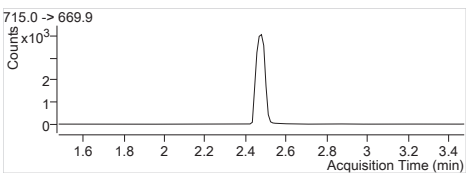

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Calibration



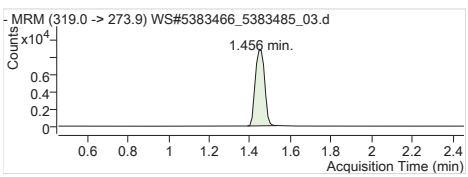



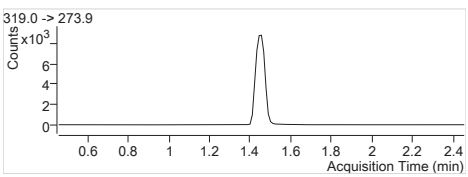

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Calibration



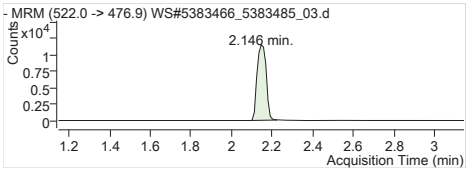



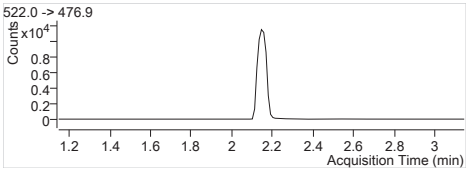

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Calibration



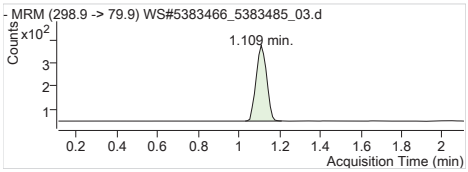



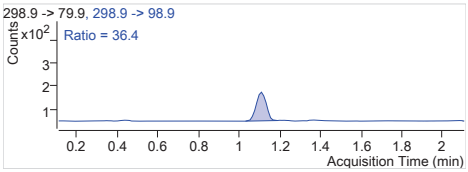

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: Calibration



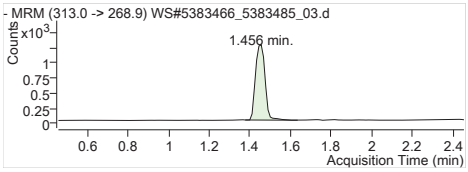



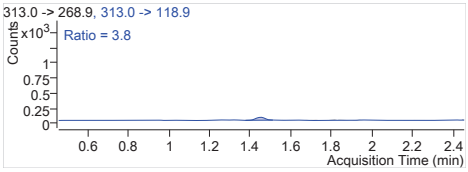

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



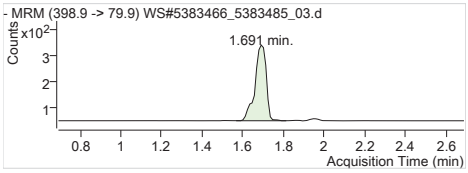



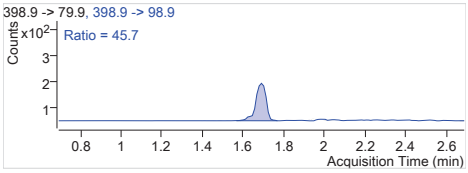

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 1.77 µg/L
Area ratio: 0.71892
Sample type: Calibration



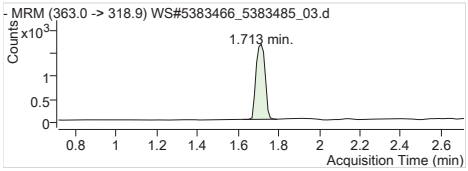



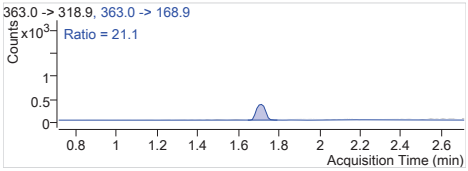

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 1.86 µg/L
Area ratio: 0.62312
Sample type: Calibration



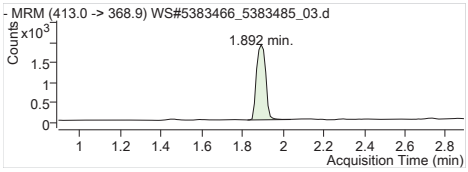



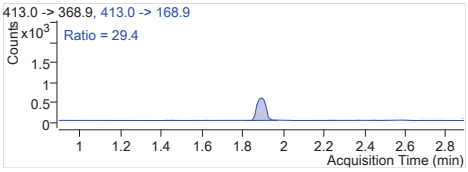

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 1.78 µg/L
Area ratio: 0.68279
Sample type: Calibration



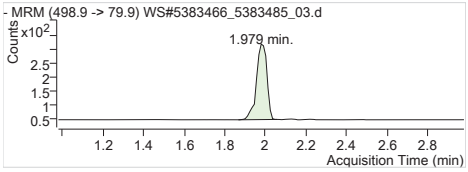



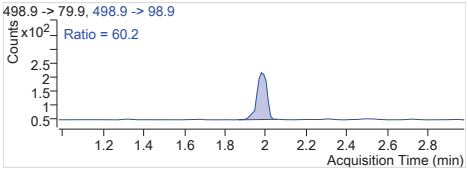

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 1.63 µg/L
Area ratio: 0.60558
Sample type: Calibration



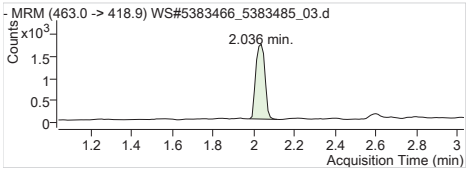



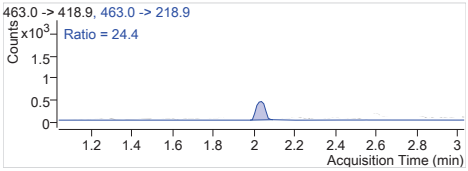

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 1.77 µg/L
Area ratio: 0.68017
Sample type: Calibration



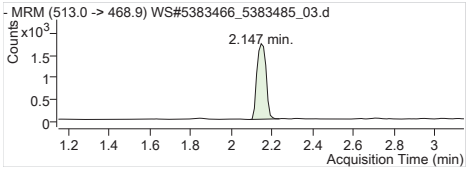



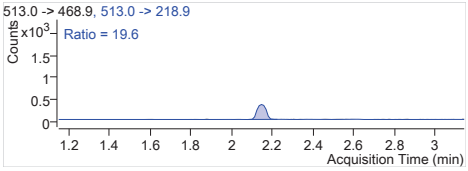

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 1.54 µg/L
Area ratio: 0.50873
Sample type: Calibration



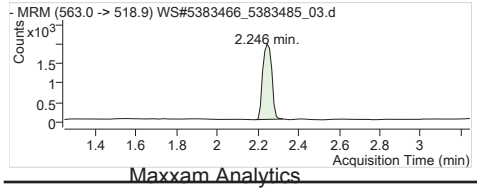



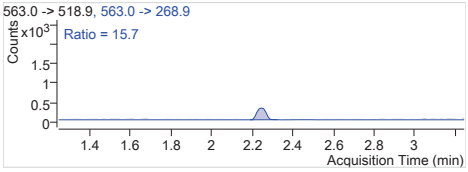

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 1.71 µg/L
Area ratio: 0.60064
Sample type: Calibration



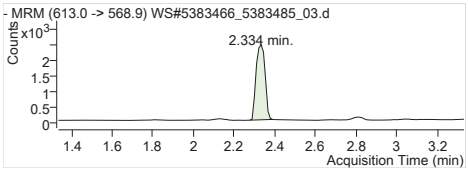



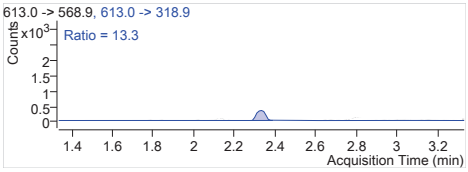

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.147)
Calc. conc. 1.60 µg/L
Area ratio: 0.71185
Sample type: Calibration



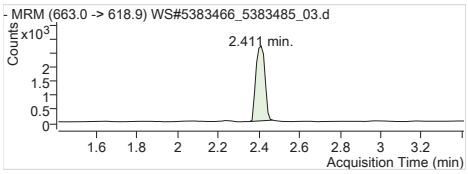



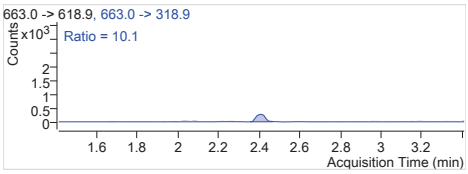

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 1.60 µg/L
Area ratio: 0.67959
Sample type: Calibration



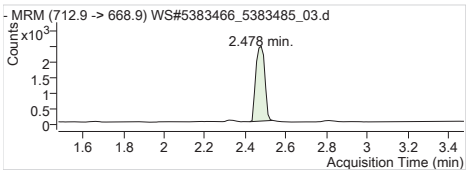



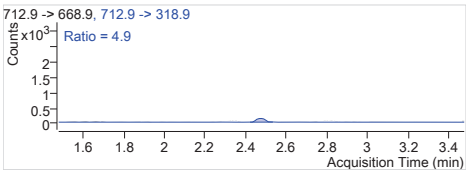

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.334 (2.334) |
| Calc. conc. | 1.73 µg/L |
| Area ratio: | 0.66200 |
| Sample type: | Calibration |



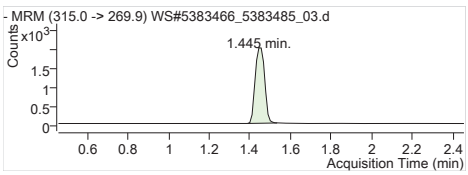



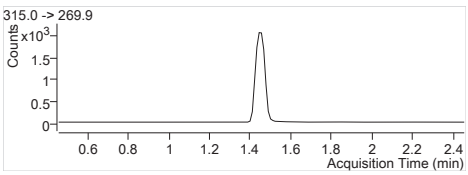

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.411 (2.411) |
| Calc. conc. | 1.67 µg/L |
| Area ratio: | 0.67536 |
| Sample type: | Calibration |



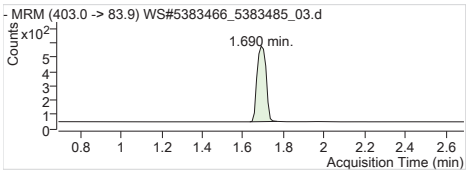



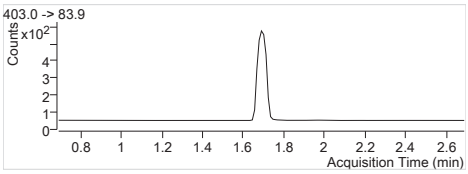

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.478 (2.478) |
| Calc. conc. | 1.79 µg/L |
| Area ratio: | 0.60349 |
| Sample type: | Calibration |



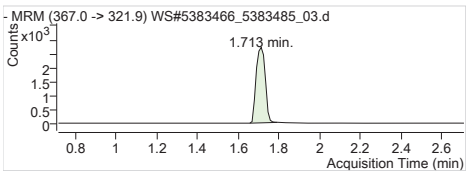



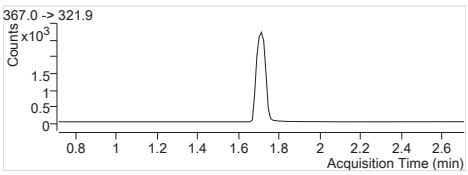

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.445 (1.456) |
| Calc. conc. | 98.14 µg/L |
| Area ratio: | 0.23251 |
| Sample type: | Calibration |



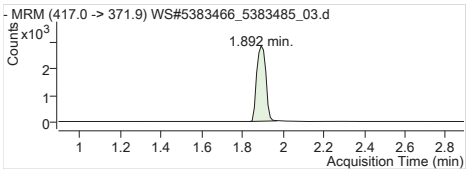



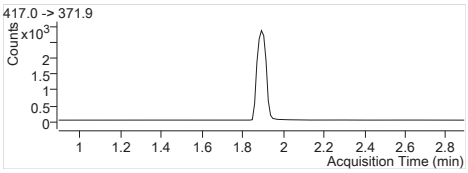

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 100.43 µg/L |
| Area ratio: | 0.05836 |
| Sample type: | Calibration |



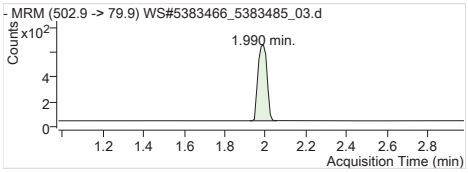



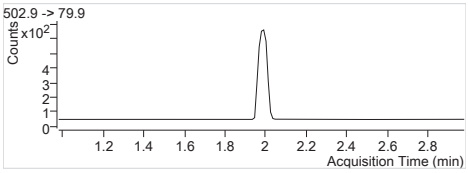

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.713 (1.713) |
| Calc. conc. | 102.13 µg/L |
| Area ratio: | 0.29838 |
| Sample type: | Calibration |



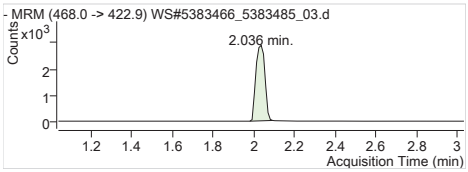



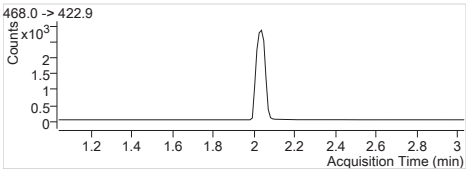

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.892 (1.892) |
| Calc. conc. | 99.46 µg/L |
| Area ratio: | 0.31221 |
| Sample type: | Calibration |



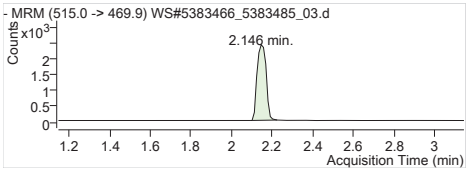



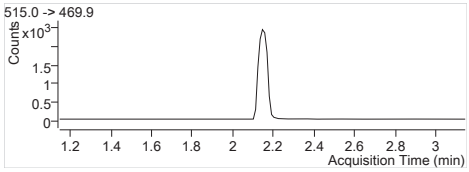

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.990 (1.979) |
| Calc. conc. | 97.81 µg/L |
| Area ratio: | 0.06751 |
| Sample type: | Calibration |



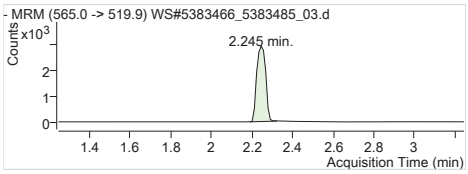



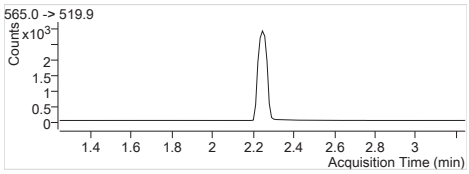

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.036 (2.036) |
| Calc. conc. | 101.06 µg/L |
| Area ratio: | 0.31257 |
| Sample type: | Calibration |



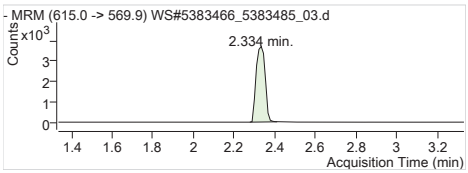



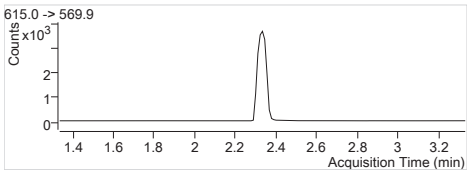

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 104.50 µg/L
Area ratio: 0.20970
Sample type: Calibration



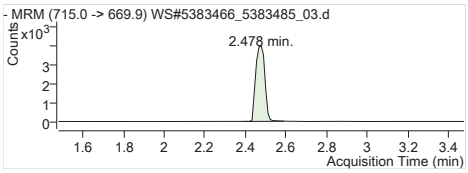



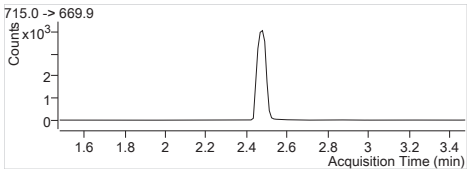

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 102.63 µg/L
Area ratio: 0.24823
Sample type: Calibration



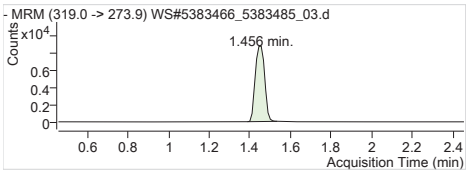



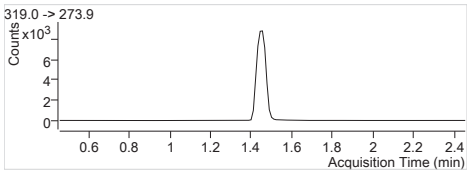

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 99.27 µg/L
Area ratio: 0.31958
Sample type: Calibration



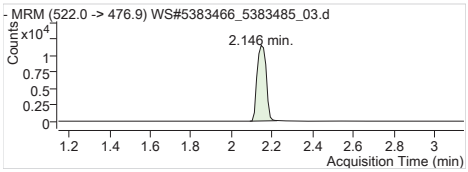



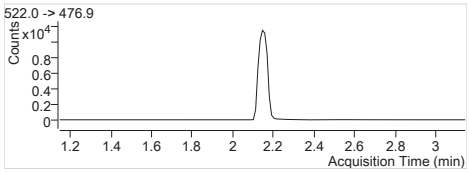

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 95.72 µg/L
Area ratio: 0.35107
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 98.42 µg/L
Area ratio: 0
Sample type: Calibration



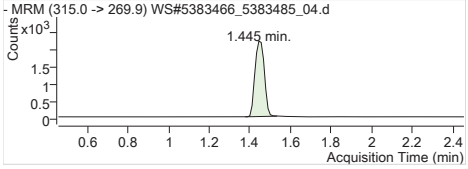

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 99.32 µg/L
Area ratio: 0
Sample type: Calibration

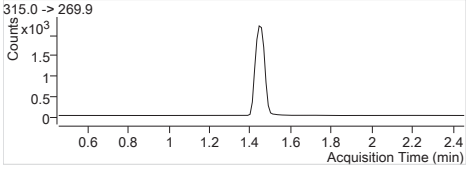
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_ETOxics

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 3** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_04.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A4 |
| **Acq. Date** | 2018/02/06 6:21:40 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

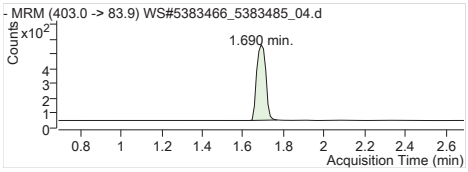
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6984 | 1.44 | 1 µg/L | | |
| MPFHxS | 1605 | 1.69 | 1 µg/L | | |
| MPFHpA | 8574 | 1.71 | 1 µg/L | | |
| MPFOA | 8745 | 1.89 | 1 µg/L | | |
| MPFOS | 1995 | 1.99 | 1 µg/L | | |
| MPFNA | 8917 | 2.04 | 1 µg/L | | |
| MPFDA | 7363 | 2.15 | 1 µg/L | | |
| MPFUnA | 8486 | 2.25 | 1 µg/L | | |
| MPFDoA | 11366 | 2.33 | 1 µg/L | | |
| MPFTeDA | 13162 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 29424 | 1.44 | 1 µg/L | | |
| 13C9-PFDA IS | 36955 | 2.15 | 1 µg/L | | |

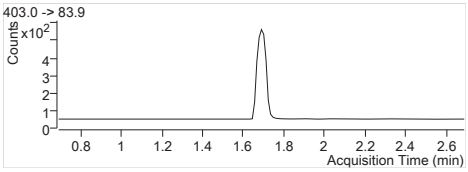
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 3442 | 1.11 | 5.00 | 5.00 µg/L | 99.99 |
| PFHxA 1 | 11982 | 1.45 | 5.00 | 4.56 µg/L | 91.14 |
| PFHxS 1 | 3214 | 1.69 | 5.00 | 4.73 µg/L | 94.59 |
| PFHpA 1 | 15761 | 1.71 | 5.00 | 4.55 µg/L | 91.08 |
| PFOA 1 | 17315 | 1.89 | 5.00 | 4.82 µg/L | 96.38 |
| PFOS 1 | 3310 | 1.98 | 5.00 | 4.87 µg/L | 97.49 |
| PFNA 1 | 16213 | 2.04 | 5.00 | 4.95 µg/L | 99.04 |
| PFDA 1 | 16796 | 2.15 | 5.00 | 4.92 µg/L | 98.37 |
| PFUnA 1 | 19129 | 2.25 | 5.00 | 5.32 µg/L | 106.35 |
| PFDoA 1 | 23281 | 2.33 | 5.00 | 5.11 µg/L | 102.13 |
| PFTrDA 1 | 27306 | 2.41 | 5.00 | 5.05 µg/L | 100.91 |
| PFTeDA 1 | 22027 | 2.48 | 5.00 | 4.89 µg/L | 97.88 |
| 13C2-PFHxA | 6984 | 1.44 | 100.00 | 100.18 µg/L | 100.18 |
| 18O2-PFHxS | 1605 | 1.69 | 100.00 | 93.87 µg/L | 93.87 |
| 13C4-PFHpA | 8574 | 1.71 | 100.00 | 99.74 µg/L | 99.74 |
| 13C4-PFOA | 8745 | 1.89 | 100.00 | 94.68 µg/L | 94.68 |
| 13C4-PFOS | 1995 | 1.99 | 100.00 | 98.23 µg/L | 98.23 |
| 13C5-PFNA | 8855 | 2.04 | 100.00 | 97.30 µg/L | 97.30 |
| 13C2-PFDA | 7249 | 2.15 | 100.00 | 97.75 µg/L | 97.75 |
| 13C2-PFUnA | 8486 | 2.25 | 100.00 | 94.94 µg/L | 94.94 |
| 13C2-PFDoA | 11366 | 2.33 | 100.00 | 95.54 µg/L | 95.54 |
| 13C2-PFTeDA | 13397 | 2.48 | 100.00 | 98.84 µg/L | 98.84 |
| 13C6-PFHxA | 29424 | 1.44 | 100.00 | 103.50 µg/L | 103.50 |
| 13C9-PFDA | 36955 | 2.15 | 100.00 | 103.30 µg/L | 103.30 |



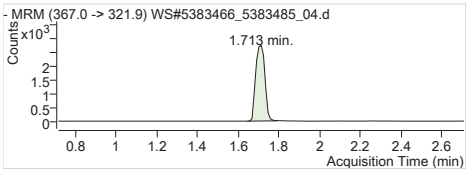



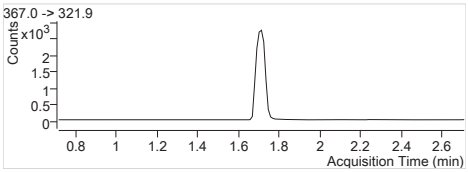

**MPFHxA** Internal Standard
RT (Exp. RT): 1.445 (1.456)
Concentration: 1 µg/L
Sample type: Calibration



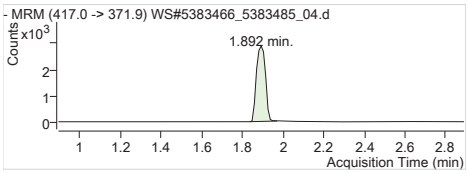



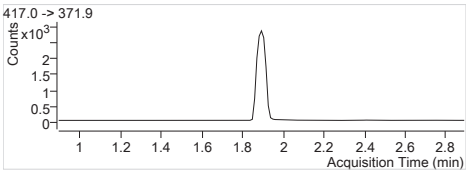

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Calibration



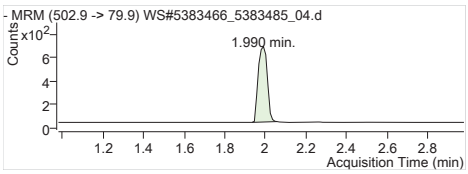



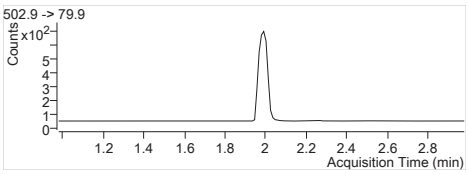

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Calibration



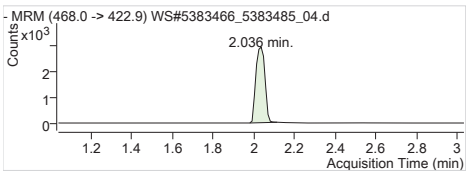



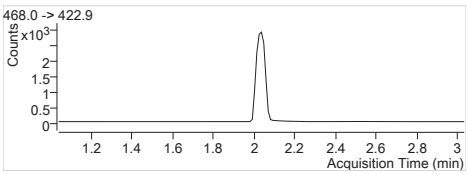

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Calibration



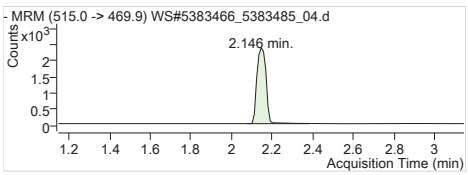



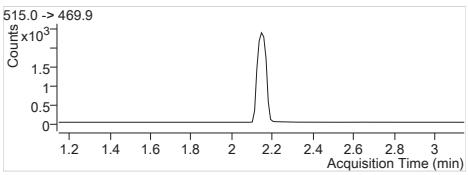

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



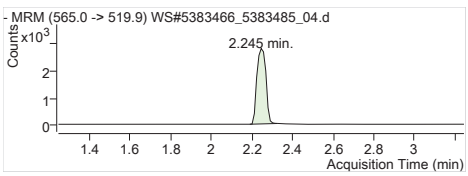



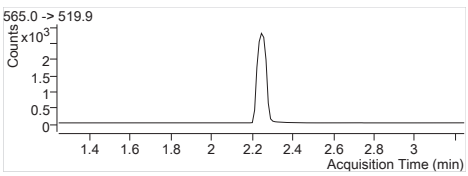

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Calibration



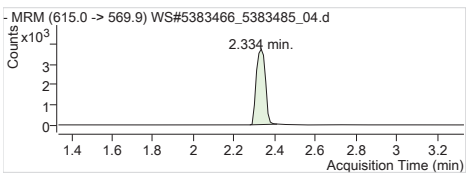



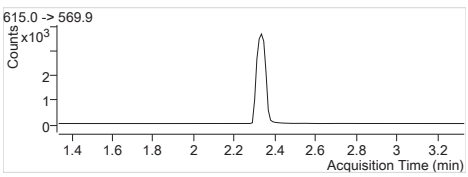

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



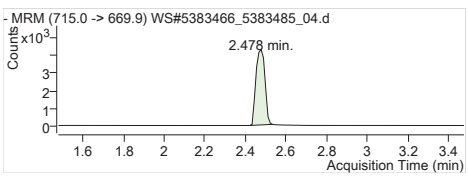



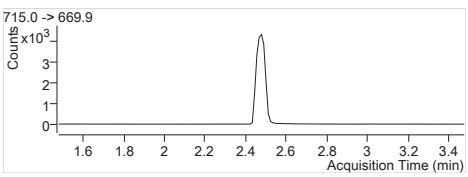

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Calibration



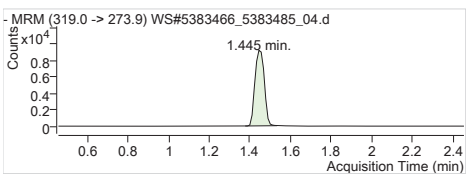



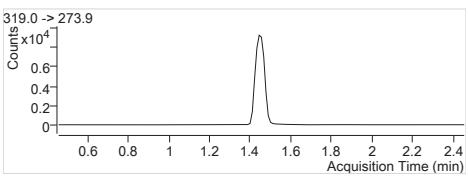

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Calibration



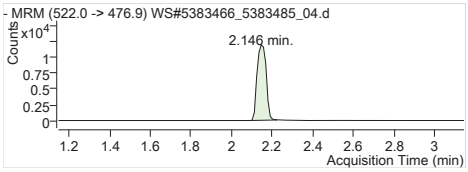



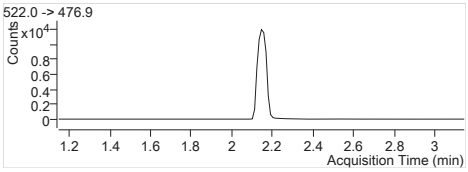

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Calibration



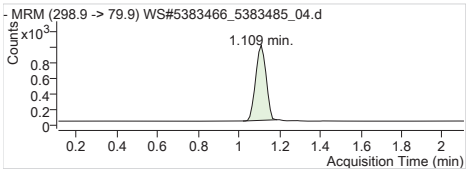



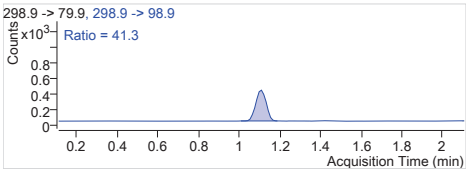

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.445 (1.456)
Concentration: 1 µg/L
Sample type: Calibration



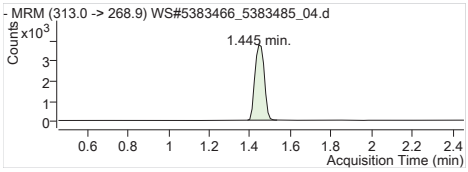



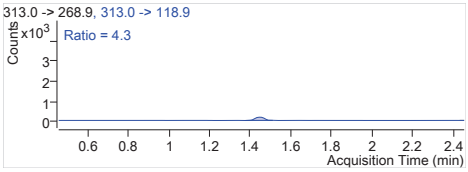

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



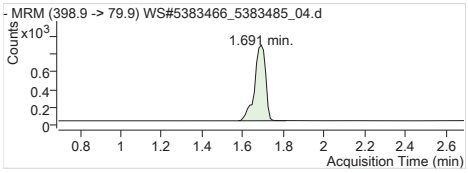



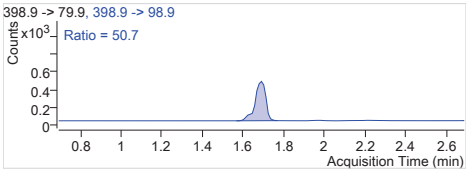

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 5.00 µg/L
Area ratio: 2.14455
Sample type: Calibration



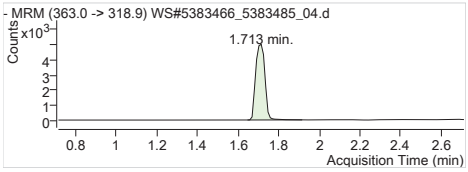



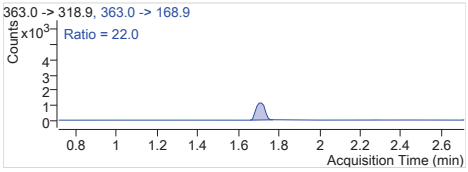

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.445 (1.456)
Calc. conc. 4.56 µg/L
Area ratio: 1.71564
Sample type: Calibration



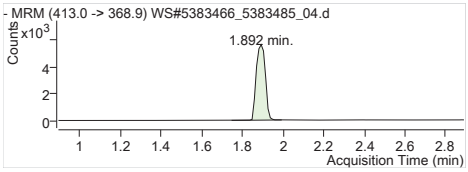



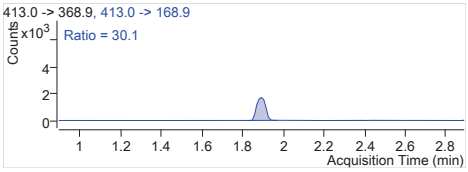

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 4.73 µg/L
Area ratio: 2.00249
Sample type: Calibration



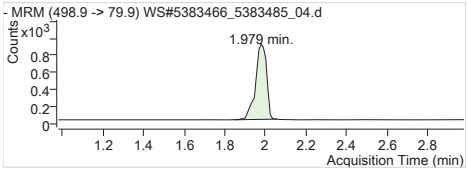



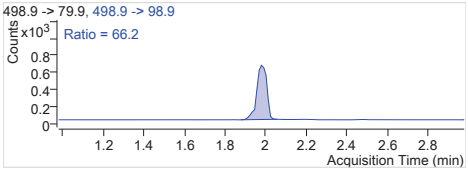

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 4.55 µg/L
Area ratio: 1.83823
Sample type: Calibration



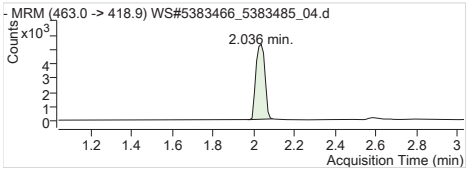



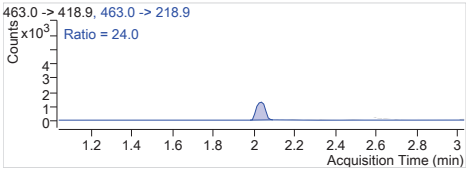

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 4.82 µg/L
Area ratio: 1.97999
Sample type: Calibration



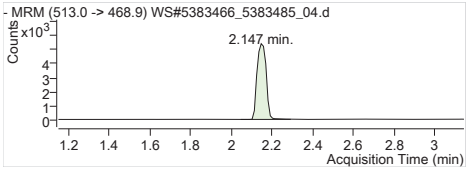



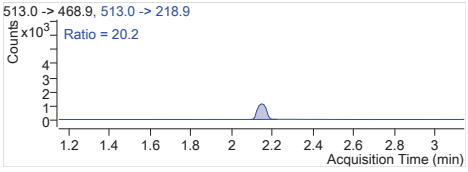

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 4.87 µg/L
Area ratio: 1.65915
Sample type: Calibration



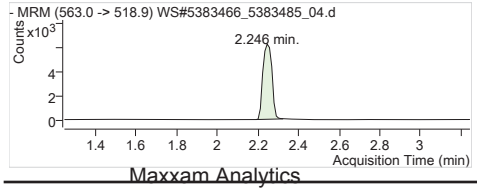



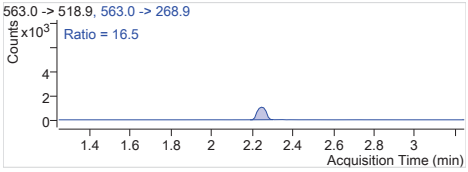

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 4.95 µg/L
Area ratio: 1.81821
Sample type: Calibration



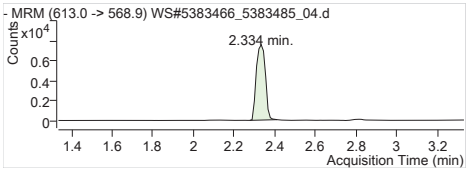



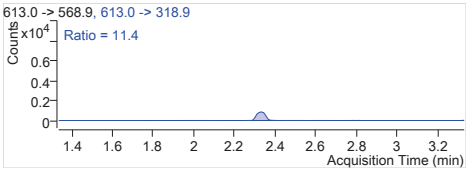

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.147)
Calc. conc. 4.92 µg/L
Area ratio: 2.28114
Sample type: Calibration



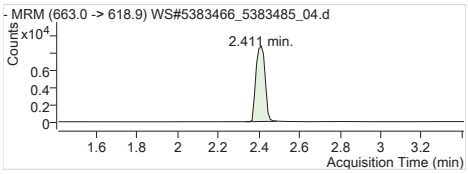



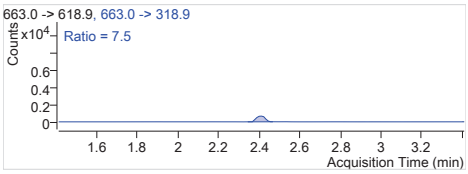

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 5.32 µg/L
Area ratio: 2.25418
Sample type: Calibration



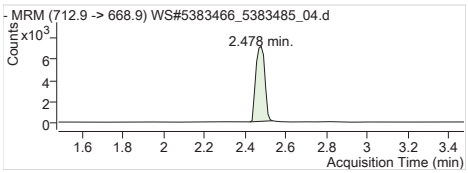



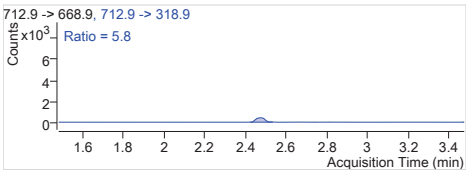

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 5.11 µg/L
Area ratio: 2.04830
Sample type: Calibration



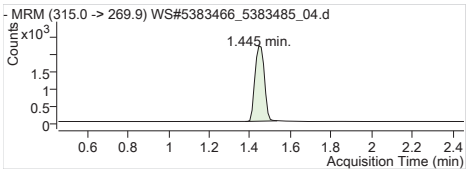



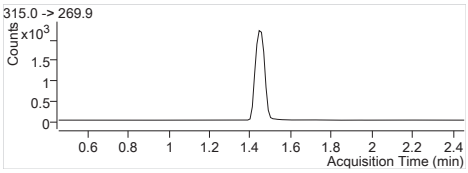

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.411 (2.411)
Calc. conc. 5.05 µg/L
Area ratio: 2.07461
Sample type: Calibration



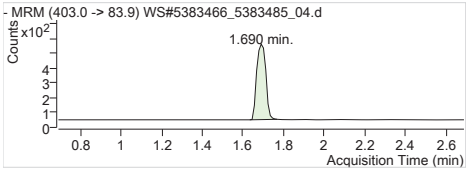



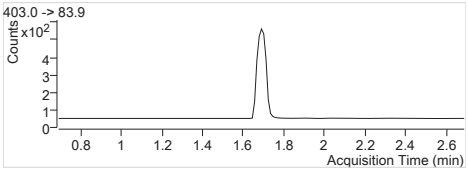

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 4.89 µg/L
Area ratio: 1.67353
Sample type: Calibration



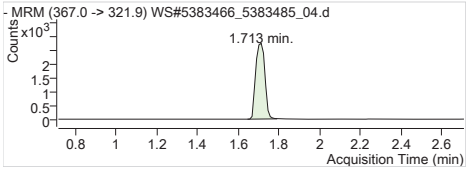



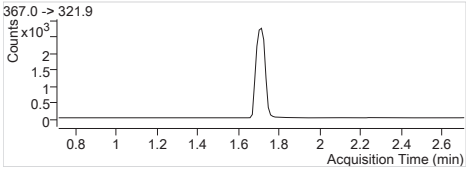

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.445 (1.456)
Calc. conc. 100.18 µg/L
Area ratio: 0.23736
Sample type: Calibration



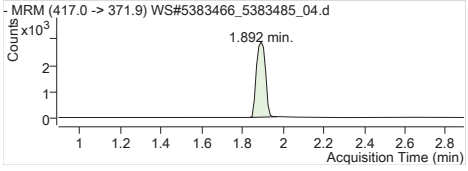



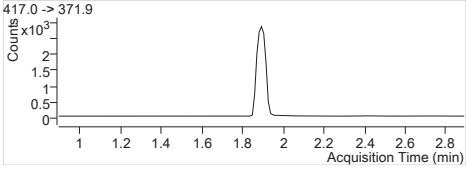

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 93.87 µg/L
Area ratio: 0.05455
Sample type: Calibration



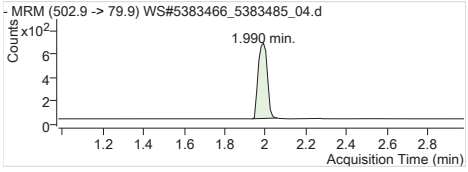



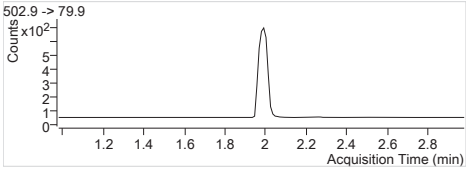

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 99.74 µg/L
Area ratio: 0.29139
Sample type: Calibration



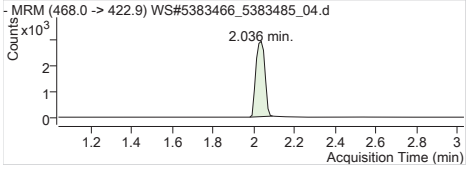



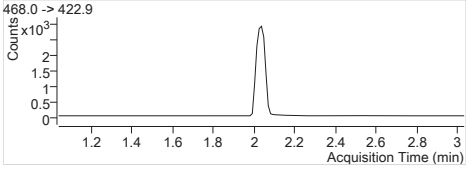

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 94.68 µg/L
Area ratio: 0.29721
Sample type: Calibration



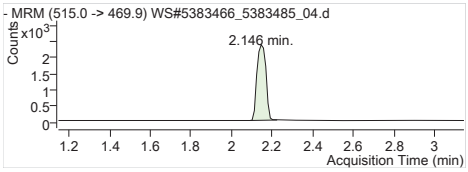



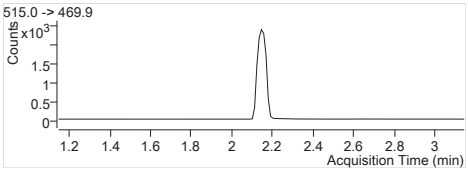

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.990 (1.979)
Calc. conc. 98.23 µg/L
Area ratio: 0.06780
Sample type: Calibration



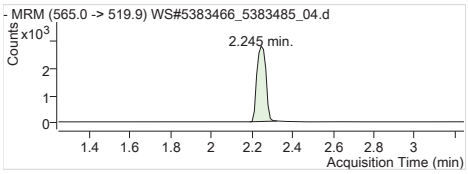



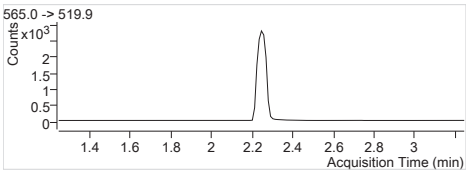

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 97.30 µg/L
Area ratio: 0.30094
Sample type: Calibration



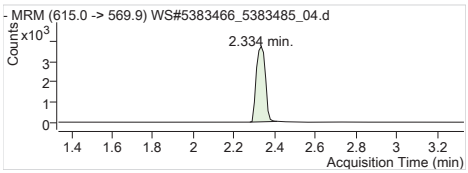



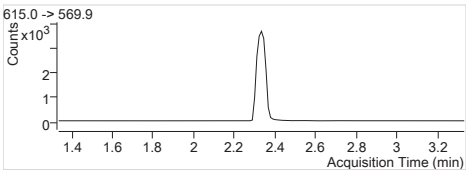

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 97.75 µg/L
Area ratio: 0.19616
Sample type: Calibration



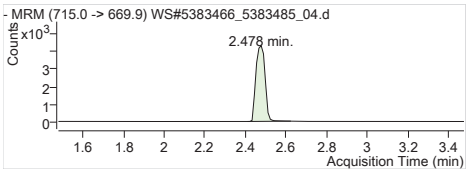



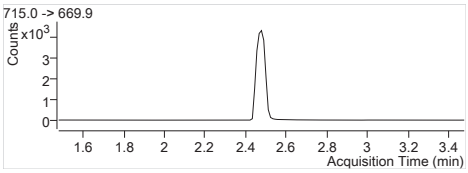

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 94.94 µg/L
Area ratio: 0.22963
Sample type: Calibration



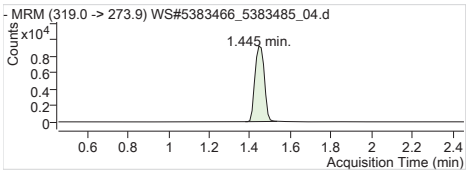



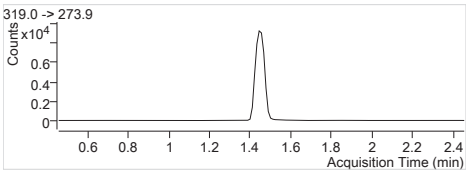

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 95.54 µg/L
Area ratio: 0.30756
Sample type: Calibration



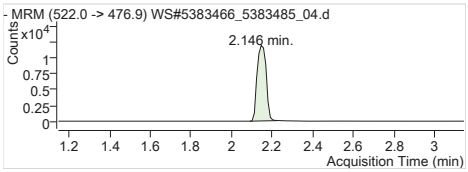



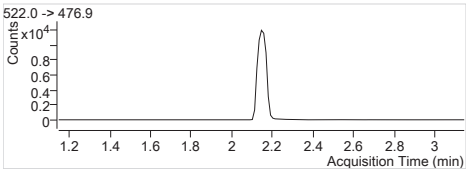

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 98.84 µg/L
Area ratio: 0.36252
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.445 (1.456)
Calc. conc. 103.50 µg/L
Area ratio: 0
Sample type: Calibration



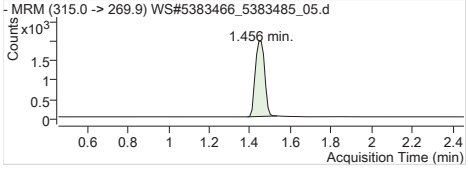

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 103.30 µg/L
Area ratio: 0
Sample type: Calibration

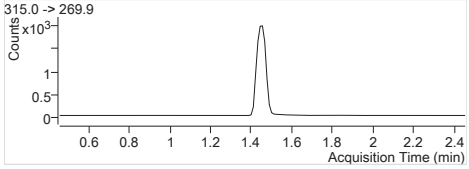
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_ETOxics

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 4** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_05.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/06 6:26:36 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

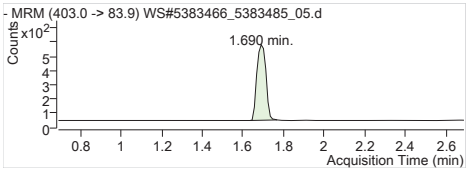
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6243 | 1.46 | 1 µg/L | | |
| MPFHxS | 1661 | 1.69 | 1 µg/L | | |
| MPFHpA | 8024 | 1.71 | 1 µg/L | | |
| MPFOA | 9155 | 1.89 | 1 µg/L | | |
| MPFOS | 1938 | 1.98 | 1 µg/L | | |
| MPFNA | 8771 | 2.04 | 1 µg/L | | |
| MPFDA | 6833 | 2.15 | 1 µg/L | | |
| MPFUnA | 8424 | 2.25 | 1 µg/L | | |
| MPFDoA | 11550 | 2.33 | 1 µg/L | | |
| MPFTeDA | 12631 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 28147 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 35314 | 2.15 | 1 µg/L | | |

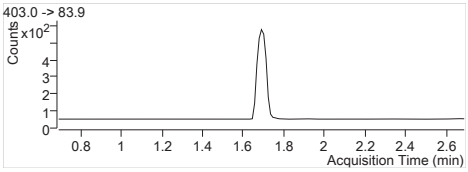
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 7910 | 1.11 | 12.50 | 10.92 µg/L | 87.38 |
| PFHxA 1 | 29220 | 1.46 | 12.50 | 11.87 µg/L | 94.99 |
| PFHxS 1 | 7832 | 1.69 | 12.50 | 10.80 µg/L | 86.37 |
| PFHpA 1 | 38005 | 1.71 | 12.50 | 11.43 µg/L | 91.43 |
| PFOA 1 | 42523 | 1.89 | 12.50 | 11.06 µg/L | 88.50 |
| PFOS 1 | 7727 | 1.98 | 12.50 | 11.63 µg/L | 93.05 |
| PFNA 1 | 37466 | 2.04 | 12.50 | 11.49 µg/L | 91.94 |
| PFDA 1 | 39281 | 2.15 | 12.50 | 12.26 µg/L | 98.10 |
| PFUnA 1 | 42745 | 2.25 | 12.50 | 11.98 µg/L | 95.83 |
| PFDoA 1 | 54842 | 2.33 | 12.50 | 11.67 µg/L | 93.40 |
| PFTrDA 1 | 61125 | 2.41 | 12.50 | 11.72 µg/L | 93.76 |
| PFTeDA 1 | 50660 | 2.48 | 12.50 | 11.67 µg/L | 93.35 |
| 13C2-PFHxA | 6243 | 1.46 | 100.00 | 93.61 µg/L | 93.61 |
| 18O2-PFHxS | 1661 | 1.69 | 100.00 | 101.55 µg/L | 101.55 |
| 13C4-PFHpA | 8024 | 1.71 | 100.00 | 97.58 µg/L | 97.58 |
| 13C4-PFOA | 9155 | 1.89 | 100.00 | 103.62 µg/L | 103.62 |
| 13C4-PFOS | 1938 | 1.98 | 100.00 | 99.75 µg/L | 99.75 |
| 13C5-PFNA | 8771 | 2.04 | 100.00 | 100.75 µg/L | 100.75 |
| 13C2-PFDA | 6743 | 2.15 | 100.00 | 95.15 µg/L | 95.15 |
| 13C2-PFUnA | 8424 | 2.25 | 100.00 | 98.62 µg/L | 98.62 |
| 13C2-PFDoA | 11550 | 2.33 | 100.00 | 101.60 µg/L | 101.60 |
| 13C2-PFTeDA | 12873 | 2.48 | 100.00 | 99.38 µg/L | 99.38 |
| 13C6-PFHxA | 28147 | 1.46 | 100.00 | 99.01 µg/L | 99.01 |
| 13C9-PFDA | 35314 | 2.15 | 100.00 | 98.72 µg/L | 98.72 |



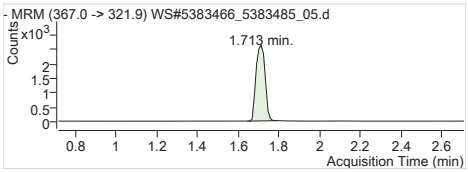



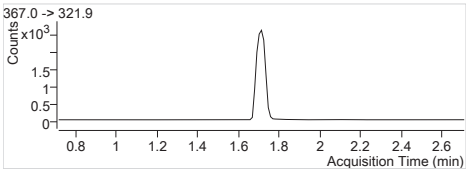

**MPFHxA** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: Calibration



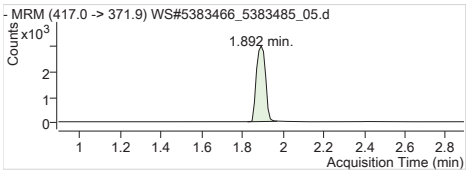



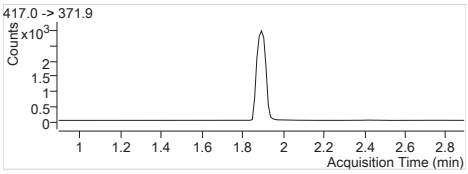

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Calibration



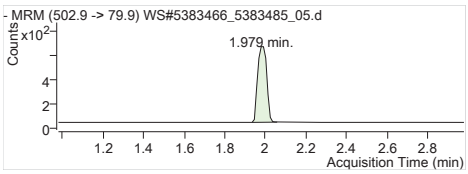



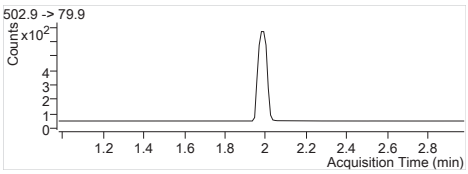

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Calibration



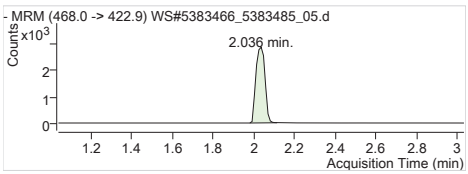



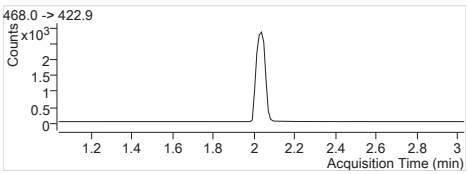

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Calibration



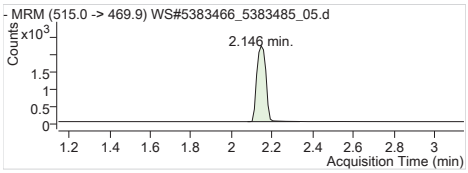



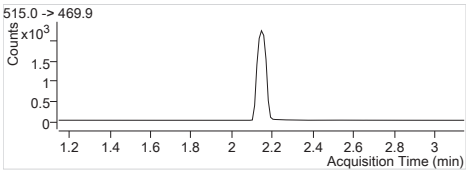

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



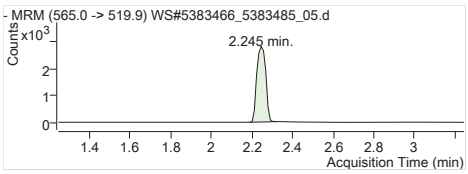



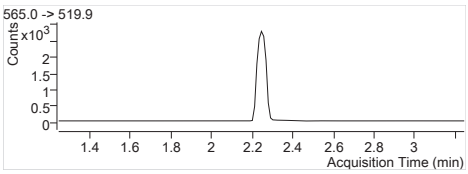

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Calibration



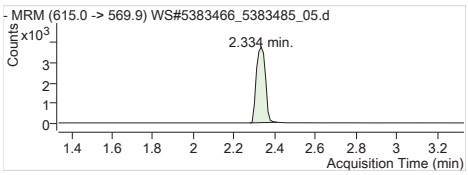



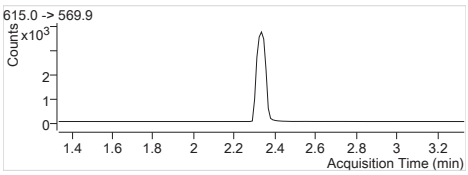

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



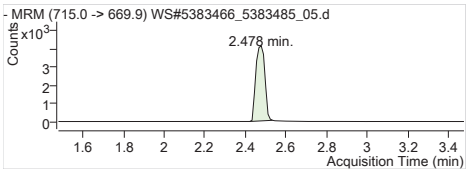



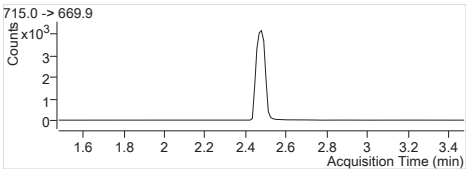

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Calibration



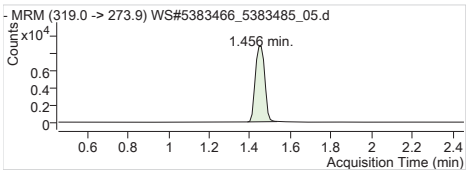



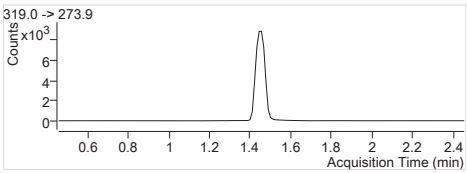

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Calibration



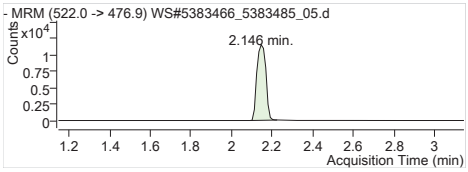



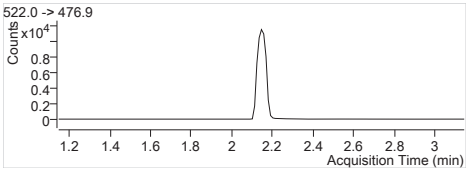

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Calibration



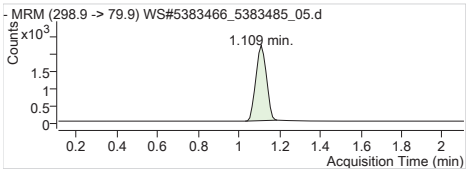



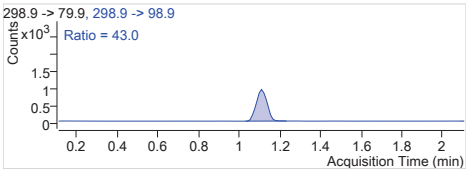

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: Calibration



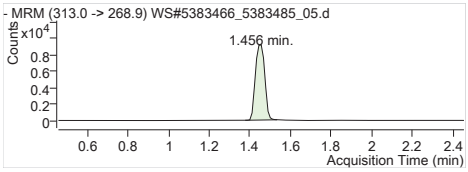



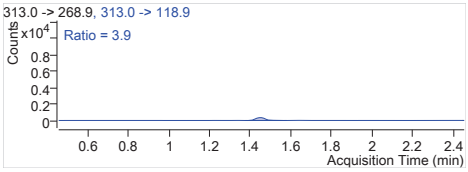

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



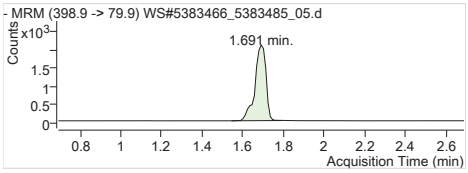



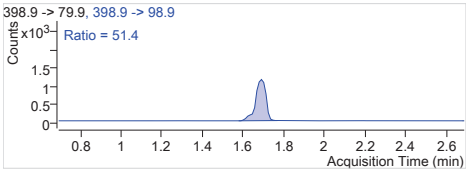

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 10.92 µg/L
Area ratio: 4.76219
Sample type: Calibration



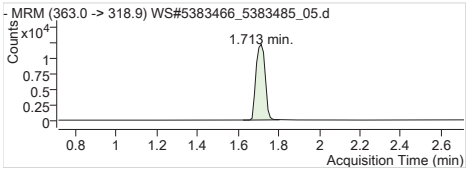



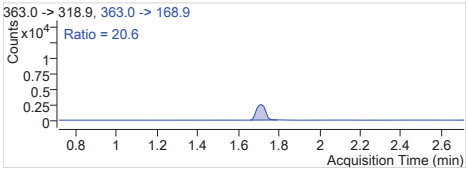

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 11.87 µg/L
Area ratio: 4.68044
Sample type: Calibration



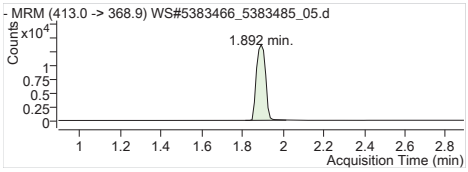



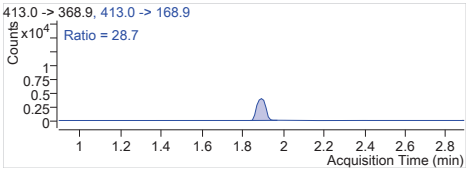

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 10.80 µg/L
Area ratio: 4.71523
Sample type: Calibration



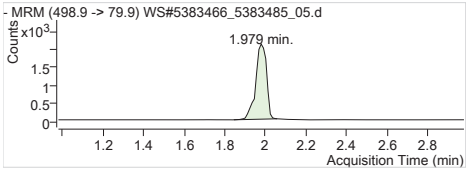



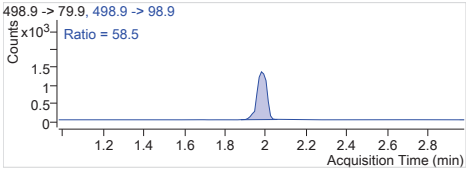

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 11.43 µg/L
Area ratio: 4.73642
Sample type: Calibration



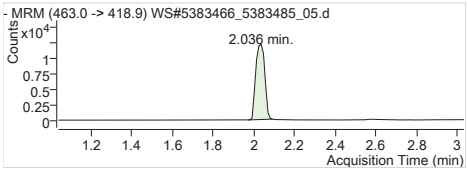



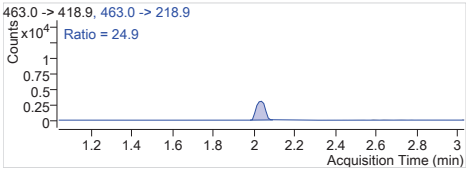

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 11.06 µg/L
Area ratio: 4.64478
Sample type: Calibration



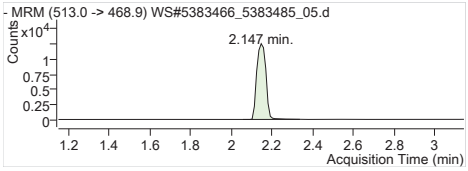



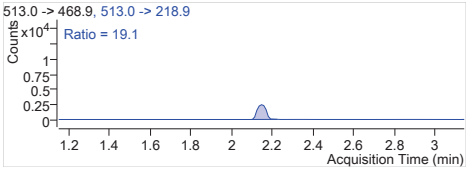

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 11.63 µg/L
Area ratio: 3.98710
Sample type: Calibration



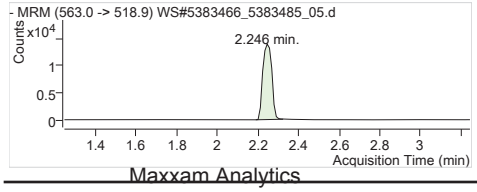



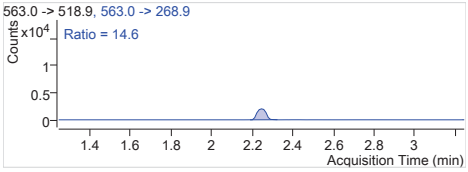

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 11.49 µg/L
Area ratio: 4.27158
Sample type: Calibration



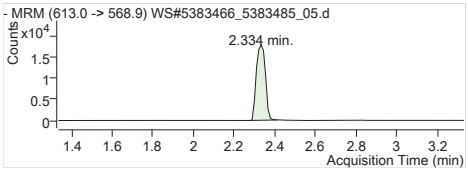



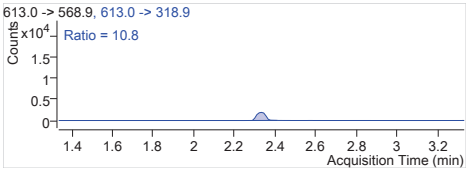

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.147)
Calc. conc. 12.26 µg/L
Area ratio: 5.74872
Sample type: Calibration



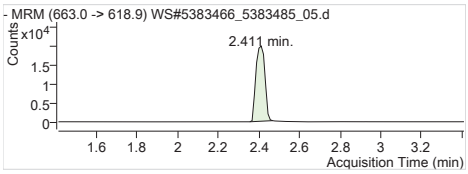



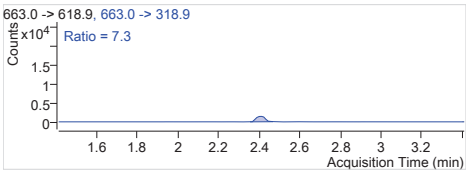

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 11.98 µg/L
Area ratio: 5.07419
Sample type: Calibration



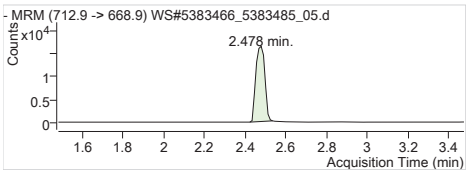



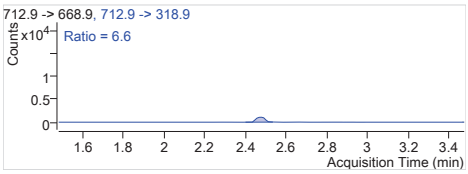

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.334 (2.334) |
| Calc. conc. | 11.67 µg/L |
| Area ratio: | 4.74823 |
| Sample type: | Calibration |



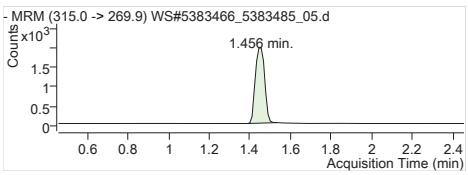



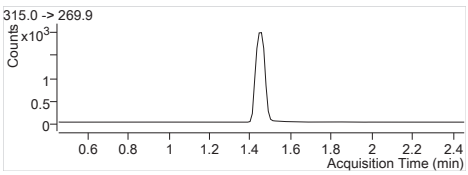

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.411 (2.411) |
| Calc. conc. | 11.72 µg/L |
| Area ratio: | 4.83928 |
| Sample type: | Calibration |



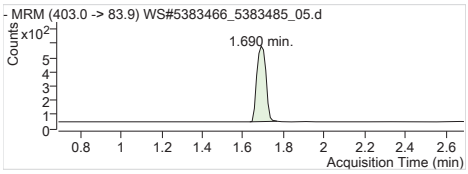



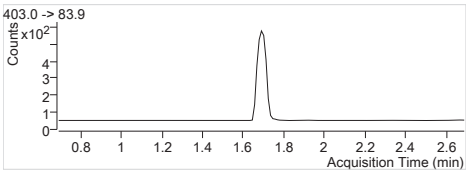

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.478 (2.478) |
| Calc. conc. | 11.67 µg/L |
| Area ratio: | 4.01077 |
| Sample type: | Calibration |



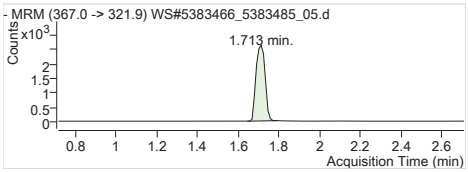



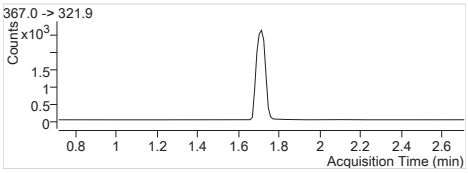

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.456 (1.456) |
| Calc. conc. | 93.61 µg/L |
| Area ratio: | 0.22180 |
| Sample type: | Calibration |



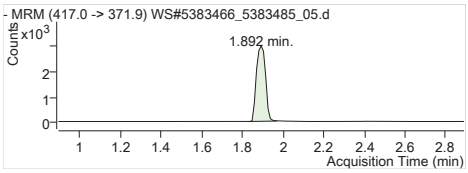



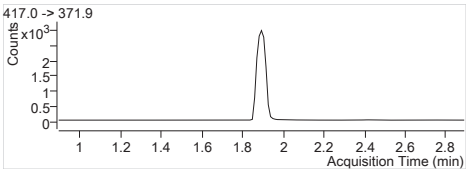

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 101.55 µg/L |
| Area ratio: | 0.05901 |
| Sample type: | Calibration |



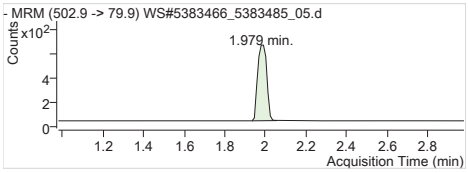



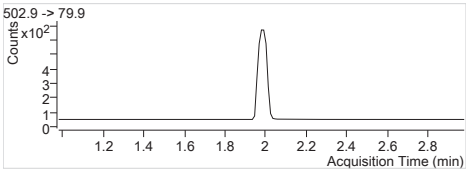

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.713 (1.713) |
| Calc. conc. | 97.58 µg/L |
| Area ratio: | 0.28507 |
| Sample type: | Calibration |



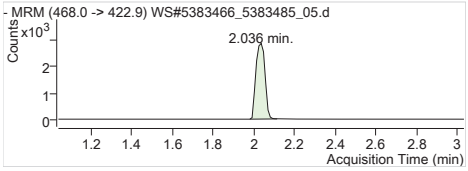



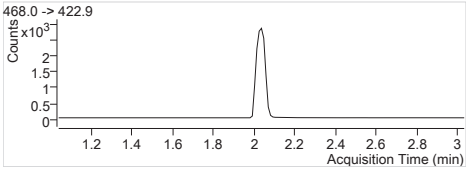

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.892 (1.892) |
| Calc. conc. | 103.62 µg/L |
| Area ratio: | 0.32526 |
| Sample type: | Calibration |



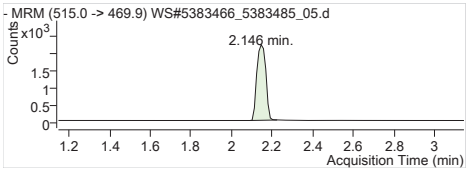



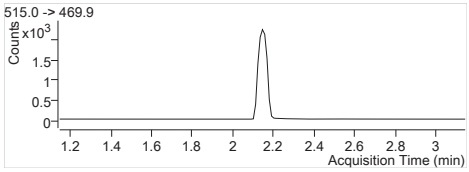

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.979 (1.979) |
| Calc. conc. | 99.75 µg/L |
| Area ratio: | 0.06885 |
| Sample type: | Calibration |



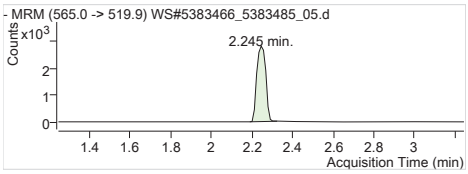



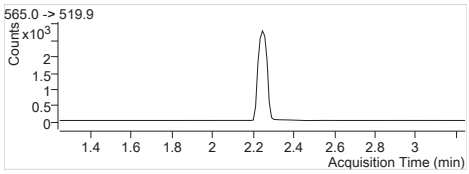

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.036 (2.036) |
| Calc. conc. | 100.75 µg/L |
| Area ratio: | 0.31161 |
| Sample type: | Calibration |



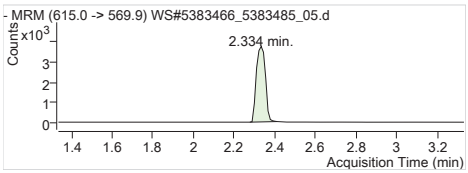



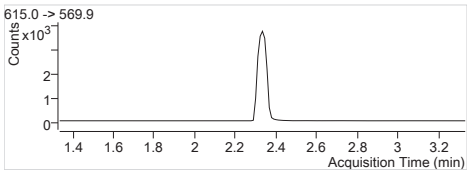

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 95.15 µg/L
Area ratio: 0.19094
Sample type: Calibration



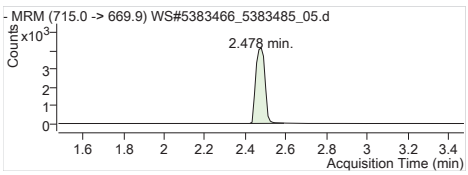



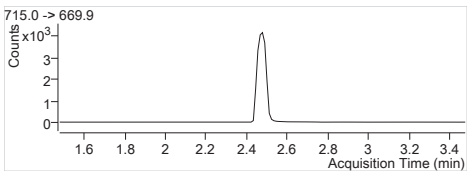

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 98.62 µg/L
Area ratio: 0.23855
Sample type: Calibration



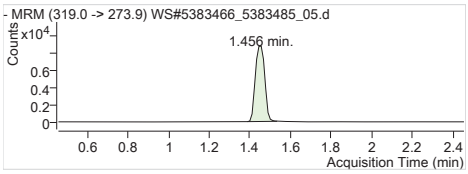



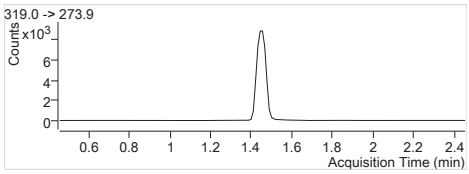

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 101.60 µg/L
Area ratio: 0.32707
Sample type: Calibration



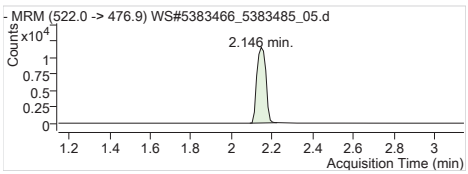



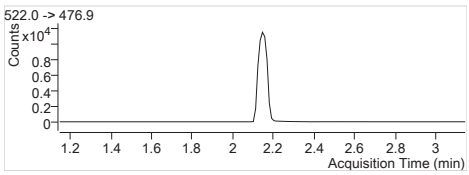

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 99.38 µg/L
Area ratio: 0.36453
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 99.01 µg/L
Area ratio: 0
Sample type: Calibration



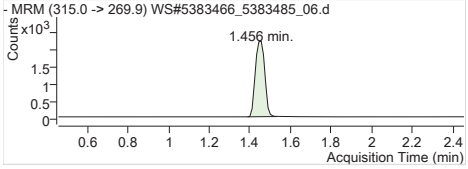

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 98.72 µg/L
Area ratio: 0
Sample type: Calibration

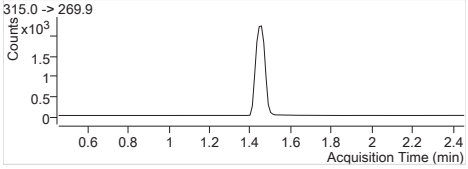
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 5** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_06.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A6 |
| **Acq. Date** | 2018/02/06 6:31:33 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

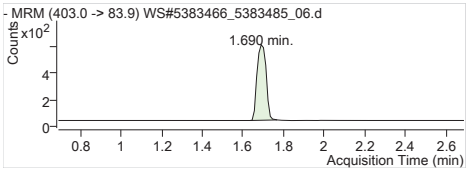
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 7067 | 1.46 | 1 µg/L | | |
| MPFHxS | 1740 | 1.69 | 1 µg/L | | |
| MPFHpA | 7902 | 1.71 | 1 µg/L | | |
| MPFOA | 9039 | 1.89 | 1 µg/L | | |
| MPFOS | 2042 | 1.99 | 1 µg/L | | |
| MPFNA | 8933 | 2.04 | 1 µg/L | | |
| MPFDA | 7276 | 2.15 | 1 µg/L | | |
| MPFUnA | 8922 | 2.25 | 1 µg/L | | |
| MPFDoA | 11545 | 2.33 | 1 µg/L | | |
| MPFTeDA | 12948 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 29859 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 36873 | 2.15 | 1 µg/L | | |

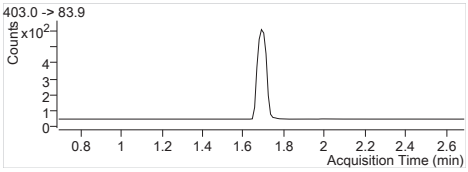
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 18029 | 1.11 | 25.00 | 23.59 µg/L | 94.36 |
| PFHxA 1 | 67616 | 1.45 | 25.00 | 23.94 µg/L | 95.75 |
| PFHxS 1 | 17949 | 1.69 | 25.00 | 23.32 µg/L | 93.28 |
| PFHpA 1 | 87578 | 1.71 | 25.00 | 26.49 µg/L | 105.94 |
| PFOA 1 | 94546 | 1.89 | 25.00 | 24.69 µg/L | 98.75 |
| PFOS 1 | 17307 | 1.98 | 25.00 | 24.66 µg/L | 98.64 |
| PFNA 1 | 84183 | 2.04 | 25.00 | 25.23 µg/L | 100.91 |
| PFDA 1 | 87430 | 2.15 | 25.00 | 25.54 µg/L | 102.15 |
| PFUnA 1 | 96084 | 2.25 | 25.00 | 25.43 µg/L | 101.73 |
| PFDoA 1 | 122186 | 2.33 | 25.00 | 25.87 µg/L | 103.48 |
| PFTrDA 1 | 138442 | 2.41 | 25.00 | 25.85 µg/L | 103.40 |
| PFTeDA 1 | 117482 | 2.48 | 25.00 | 26.34 µg/L | 105.38 |
| 13C2-PFHxA | 7067 | 1.46 | 100.00 | 99.89 µg/L | 99.89 |
| 18O2-PFHxS | 1740 | 1.69 | 100.00 | 100.28 µg/L | 100.28 |
| 13C4-PFHpA | 7902 | 1.71 | 100.00 | 90.59 µg/L | 90.59 |
| 13C4-PFOA | 9039 | 1.89 | 100.00 | 96.44 µg/L | 96.44 |
| 13C4-PFOS | 2042 | 1.99 | 100.00 | 99.08 µg/L | 99.08 |
| 13C5-PFNA | 8933 | 2.04 | 100.00 | 96.73 µg/L | 96.73 |
| 13C2-PFDA | 7229 | 2.15 | 100.00 | 97.70 µg/L | 97.70 |
| 13C2-PFUnA | 8922 | 2.25 | 100.00 | 100.04 µg/L | 100.04 |
| 13C2-PFDoA | 11545 | 2.33 | 100.00 | 97.26 µg/L | 97.26 |
| 13C2-PFTeDA | 13153 | 2.48 | 100.00 | 97.25 µg/L | 97.25 |
| 13C6-PFHxA | 29859 | 1.46 | 100.00 | 105.03 µg/L | 105.03 |
| 13C9-PFDA | 36873 | 2.15 | 100.00 | 103.07 µg/L | 103.07 |



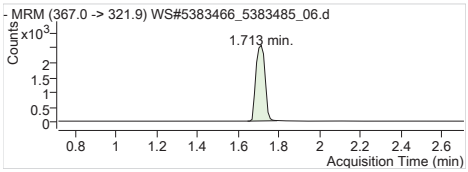



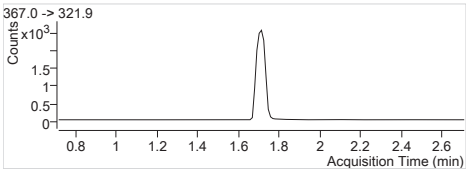

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | Calibration |



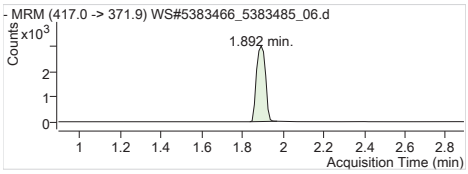



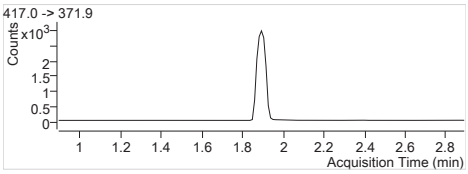

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Calibration



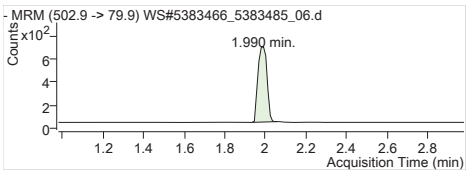



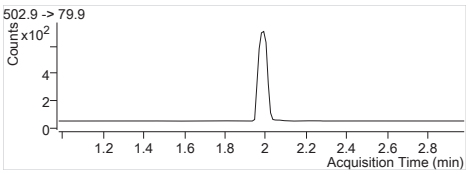

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Calibration



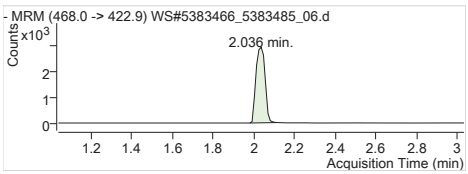



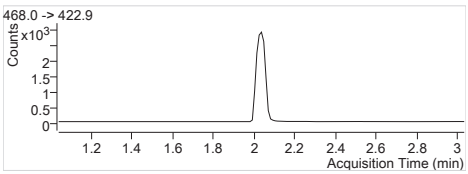

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Calibration



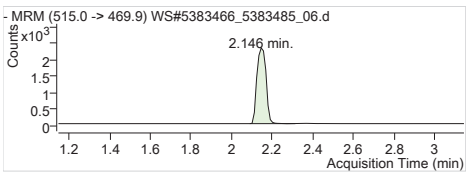



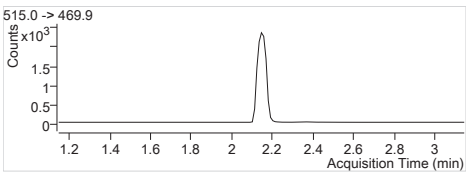

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



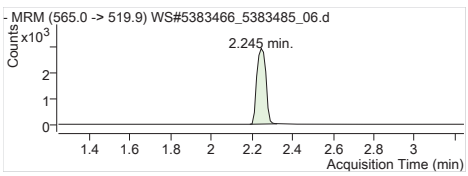



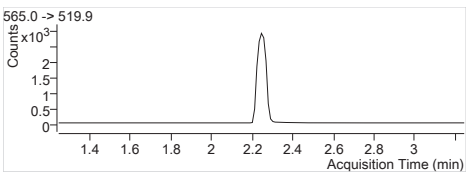

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Calibration



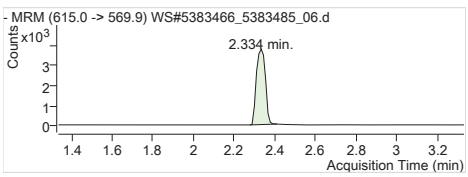



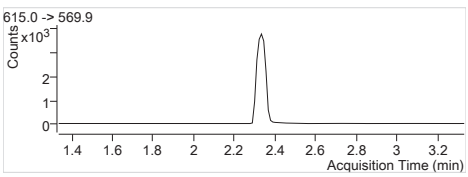

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



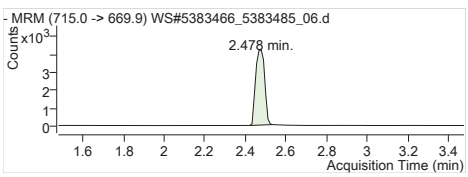



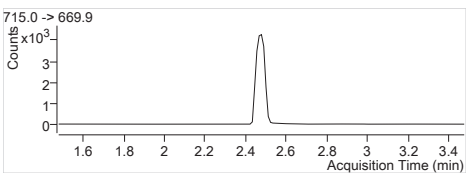

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Calibration



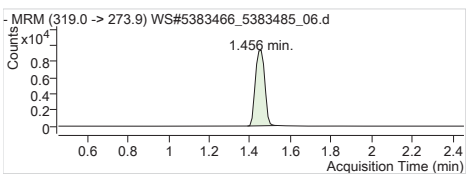



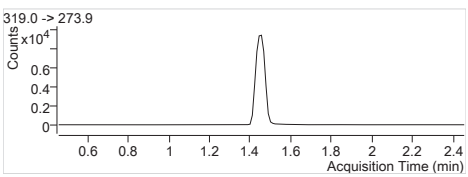

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Calibration



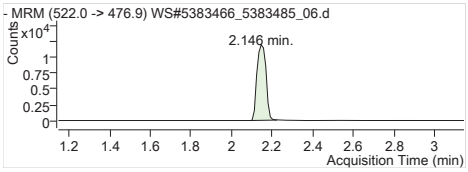



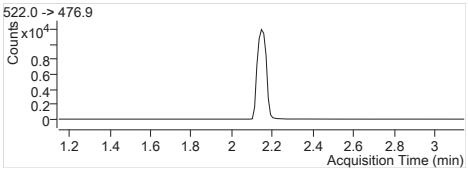

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Calibration



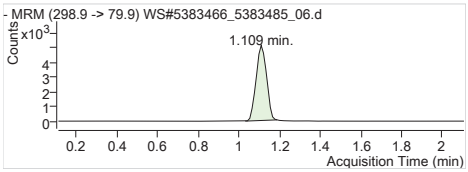



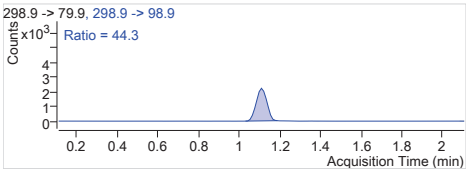

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: Calibration



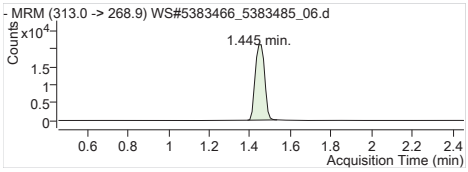



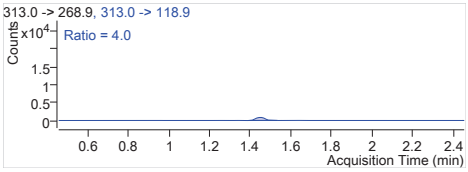

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



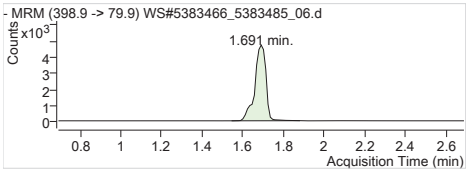



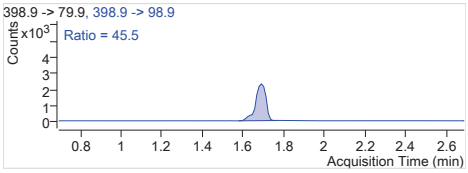

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 23.59 µg/L
Area ratio: 10.36149
Sample type: Calibration



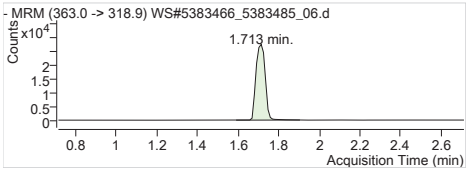



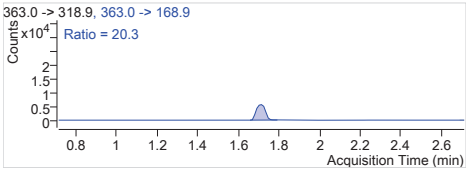

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.445 (1.456)
Calc. conc. 23.94 µg/L
Area ratio: 9.56785
Sample type: Calibration



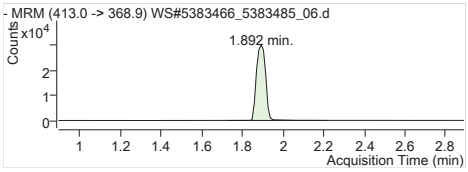



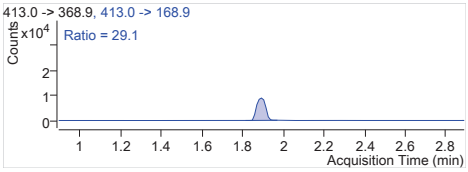

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 23.32 µg/L
Area ratio: 10.31552
Sample type: Calibration



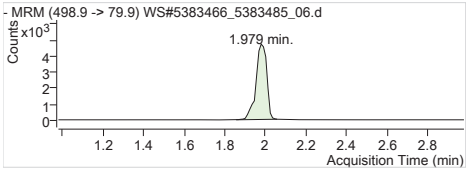



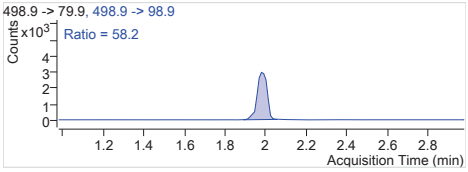

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 26.49 µg/L
Area ratio: 11.08302
Sample type: Calibration



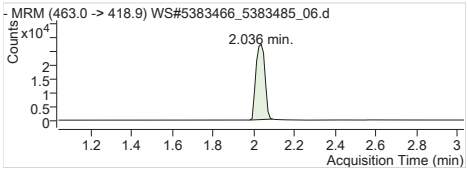



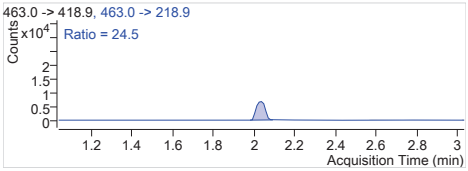

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 24.69 µg/L
Area ratio: 10.45979
Sample type: Calibration



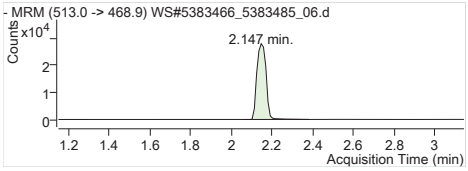



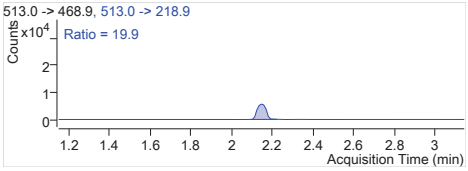

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 24.66 µg/L
Area ratio: 8.47551
Sample type: Calibration



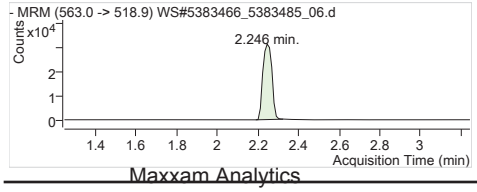



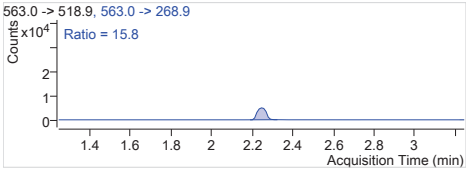

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 25.23 µg/L
Area ratio: 9.42382
Sample type: Calibration



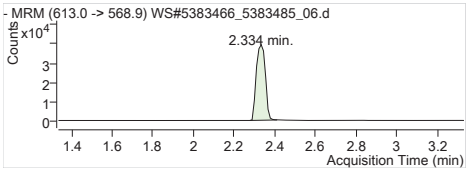



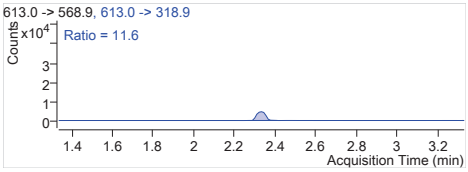

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.147)
Calc. conc. 25.54 µg/L
Area ratio: 12.01622
Sample type: Calibration



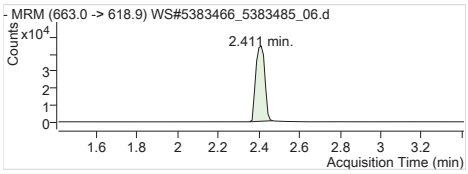



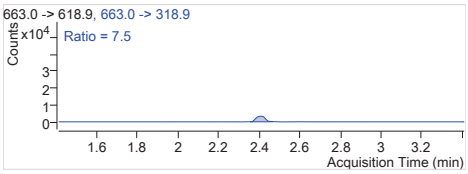

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 25.43 µg/L
Area ratio: 10.76933
Sample type: Calibration



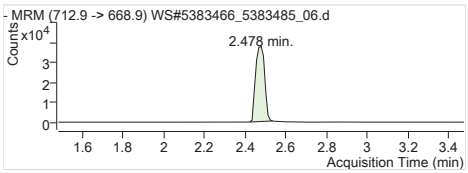



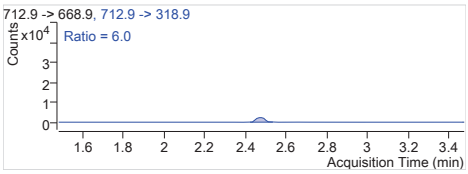

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 25.87 µg/L
Area ratio: 10.58346
Sample type: Calibration



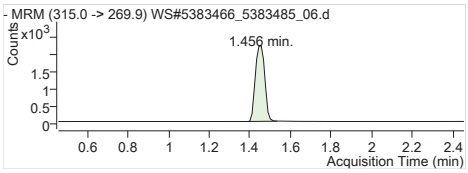



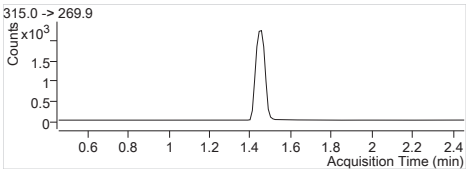

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.411 (2.411)
Calc. conc. 25.85 µg/L
Area ratio: 10.69215
Sample type: Calibration



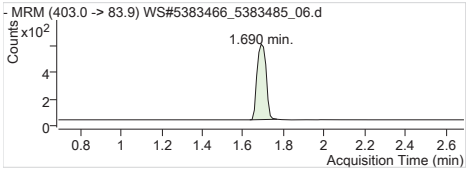



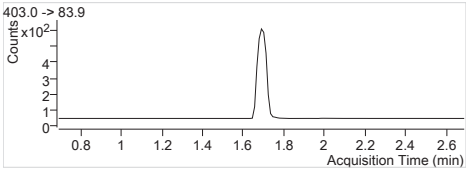

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 26.34 µg/L
Area ratio: 9.07337
Sample type: Calibration



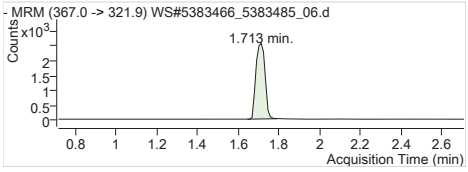



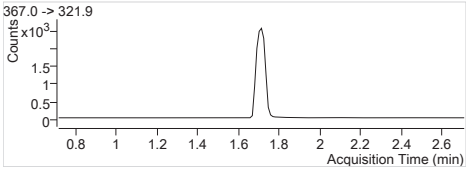

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 99.89 µg/L
Area ratio: 0.23668
Sample type: Calibration



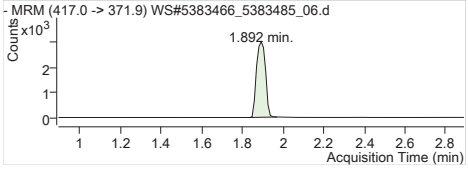



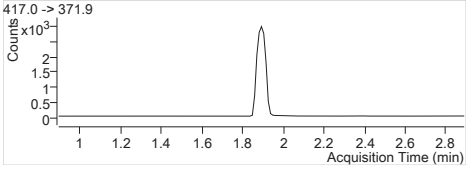

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 100.28 µg/L
Area ratio: 0.05827
Sample type: Calibration



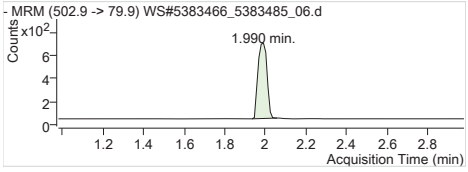



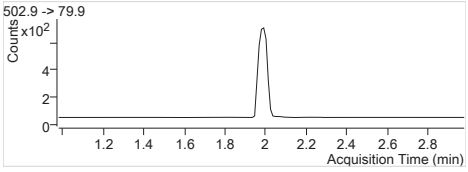

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 90.59 µg/L
Area ratio: 0.26464
Sample type: Calibration



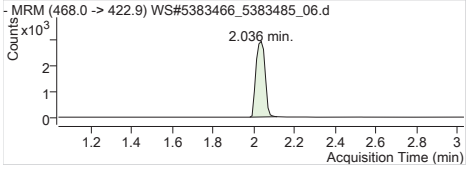



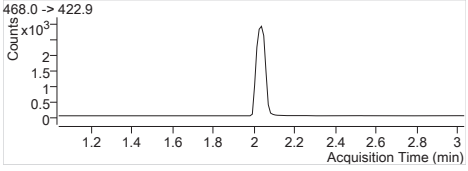

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 96.44 µg/L
Area ratio: 0.30272
Sample type: Calibration



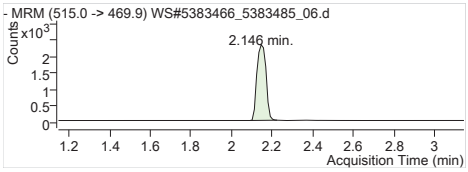



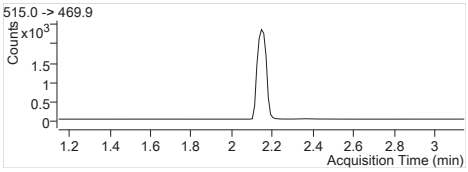

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.990 (1.979)
Calc. conc. 99.08 µg/L
Area ratio: 0.06839
Sample type: Calibration



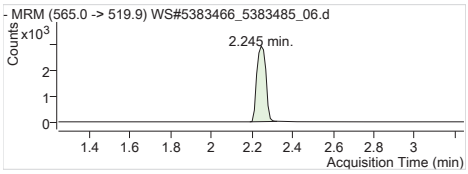



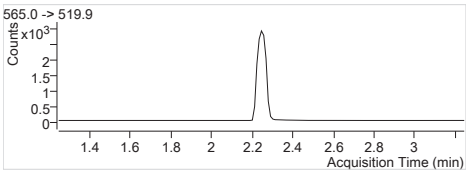

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 96.73 µg/L
Area ratio: 0.29917
Sample type: Calibration



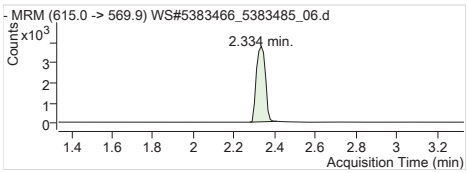



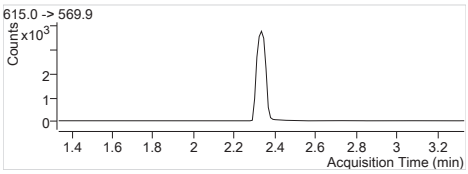

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 97.70 µg/L
Area ratio: 0.19605
Sample type: Calibration



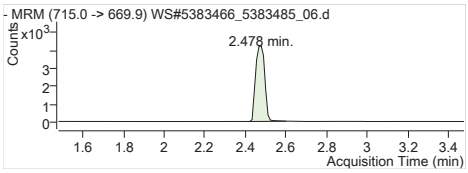



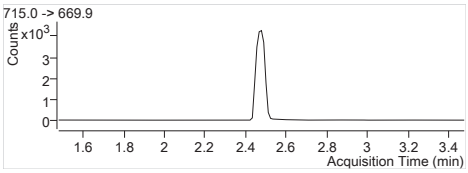

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 100.04 µg/L
Area ratio: 0.24197
Sample type: Calibration



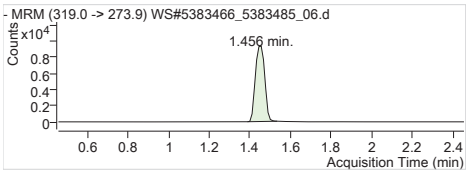



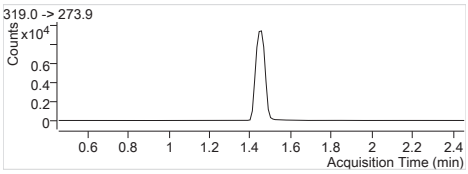

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 97.26 µg/L
Area ratio: 0.31310
Sample type: Calibration



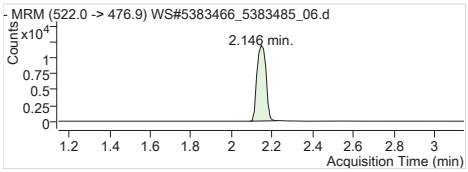



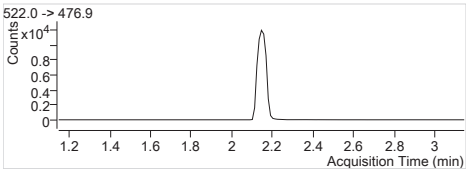

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 97.25 µg/L
Area ratio: 0.35671
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 105.03 µg/L
Area ratio: 0
Sample type: Calibration



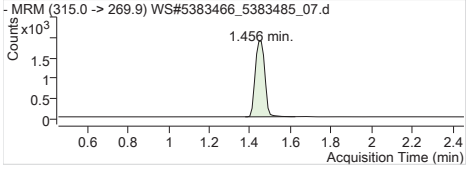

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 103.07 µg/L
Area ratio: 0
Sample type: Calibration

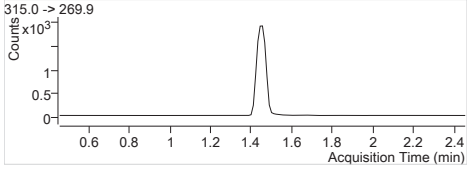
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 6** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_07.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A7 |
| **Acq. Date** | 2018/02/06 6:36:29 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

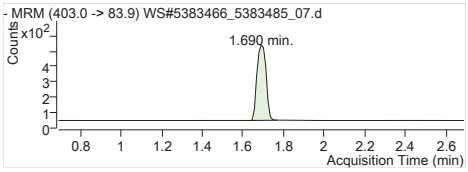
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6099 | 1.46 | 1 µg/L | | |
| MPFHxS | 1532 | 1.69 | 1 µg/L | | |
| MPFHpA | 8269 | 1.71 | 1 µg/L | | |
| MPFOA | 8383 | 1.89 | 1 µg/L | | |
| MPFOS | 2017 | 1.99 | 1 µg/L | | |
| MPFNA | 8652 | 2.04 | 1 µg/L | | |
| MPFDA | 7210 | 2.15 | 1 µg/L | | |
| MPFUnA | 8626 | 2.25 | 1 µg/L | | |
| MPFDoA | 10899 | 2.33 | 1 µg/L | | |
| MPFTeDA | 13063 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 29422 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 35570 | 2.15 | 1 µg/L | | |

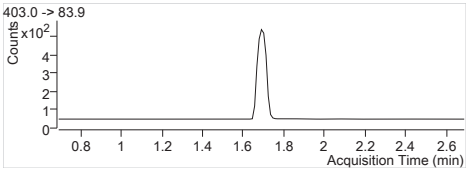
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 30068 | 1.11 | 41.70 | 44.55 µg/L | 106.85 |
| PFHxA 1 | 107039 | 1.46 | 41.70 | 43.64 µg/L | 104.65 |
| PFHxS 1 | 30772 | 1.69 | 41.70 | 45.17 µg/L | 108.32 |
| PFHpA 1 | 144581 | 1.71 | 41.70 | 41.67 µg/L | 99.93 |
| PFOA 1 | 154971 | 1.89 | 41.70 | 43.49 µg/L | 104.30 |
| PFOS 1 | 29880 | 1.98 | 41.70 | 43.06 µg/L | 103.25 |
| PFNA 1 | 137494 | 2.04 | 41.70 | 42.47 µg/L | 101.85 |
| PFDA 1 | 147759 | 2.15 | 41.70 | 43.49 µg/L | 104.29 |
| PFUnA 1 | 162248 | 2.25 | 41.70 | 44.42 µg/L | 106.53 |
| PFDoA 1 | 206576 | 2.33 | 41.70 | 46.23 µg/L | 110.87 |
| PFTrDA 1 | 231782 | 2.41 | 41.70 | 42.87 µg/L | 102.82 |
| PFTeDA 1 | 192586 | 2.48 | 41.70 | 42.78 µg/L | 102.59 |
| 13C2-PFHxA | 6099 | 1.46 | 100.00 | 87.49 µg/L | 87.49 |
| 18O2-PFHxS | 1532 | 1.69 | 100.00 | 89.61 µg/L | 89.61 |
| 13C4-PFHpA | 8269 | 1.71 | 100.00 | 96.20 µg/L | 96.20 |
| 13C4-PFOA | 8383 | 1.89 | 100.00 | 90.77 µg/L | 90.77 |
| 13C4-PFOS | 2017 | 1.99 | 100.00 | 99.32 µg/L | 99.32 |
| 13C5-PFNA | 8578 | 2.04 | 100.00 | 94.26 µg/L | 94.26 |
| 13C2-PFDA | 7078 | 2.15 | 100.00 | 99.16 µg/L | 99.16 |
| 13C2-PFUnA | 8626 | 2.25 | 100.00 | 100.26 µg/L | 100.26 |
| 13C2-PFDoA | 10899 | 2.33 | 100.00 | 95.18 µg/L | 95.18 |
| 13C2-PFTeDA | 13464 | 2.48 | 100.00 | 103.20 µg/L | 103.20 |
| 13C6-PFHxA | 29422 | 1.46 | 100.00 | 103.49 µg/L | 103.49 |
| 13C9-PFDA | 35570 | 2.15 | 100.00 | 99.43 µg/L | 99.43 |



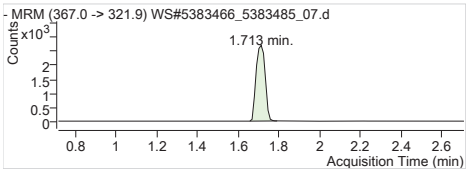



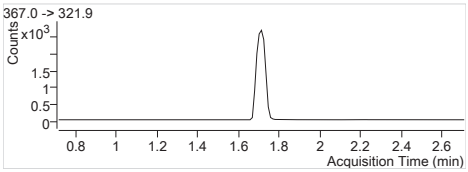

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | Calibration |



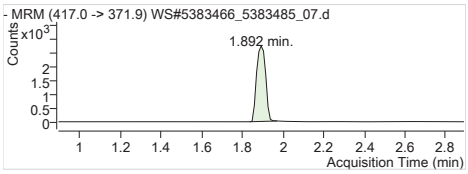



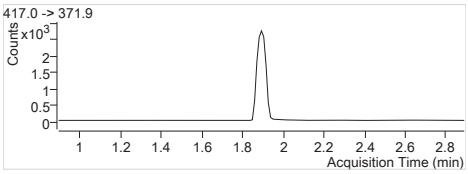

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Calibration



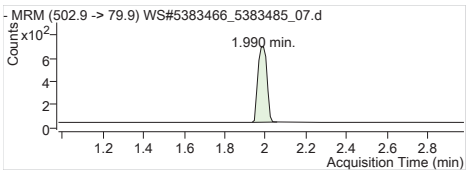



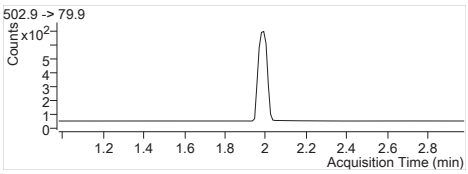

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: Calibration



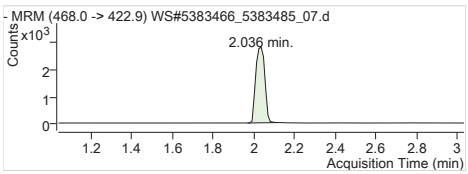



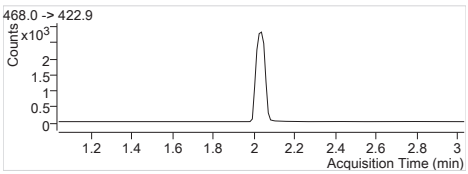

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: Calibration



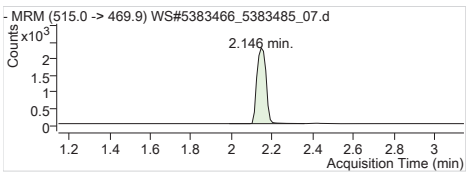



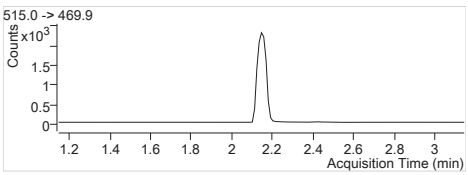

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



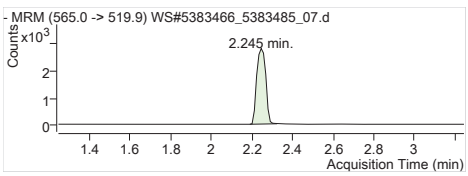



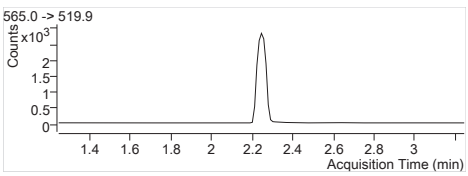

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: Calibration



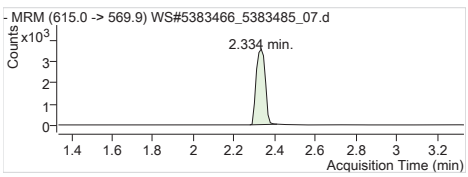



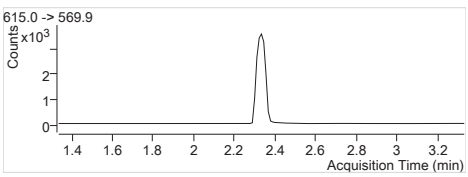

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



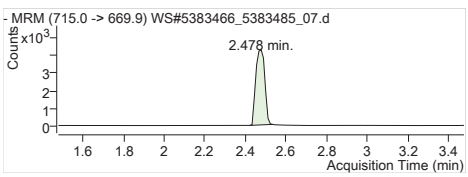



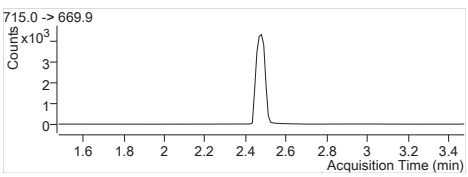

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Calibration



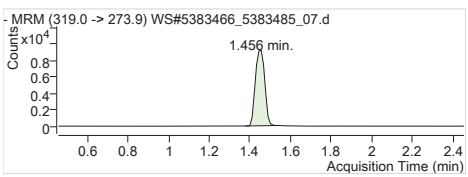



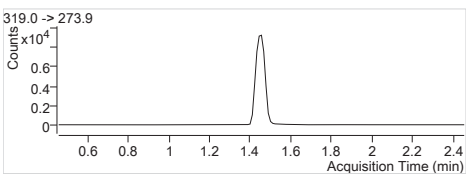

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: Calibration



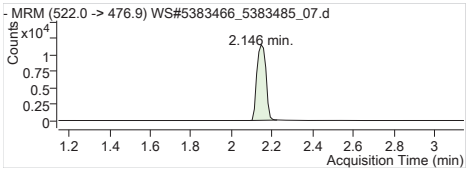



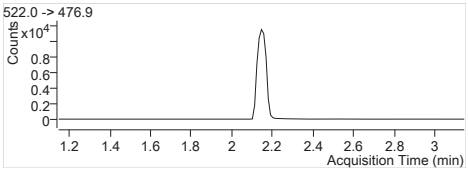

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: Calibration



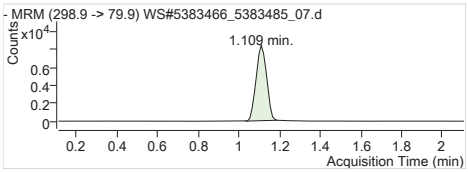



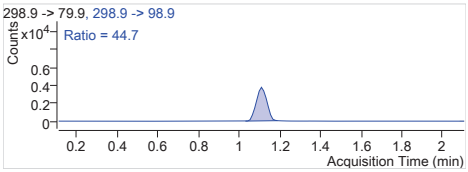

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: Calibration



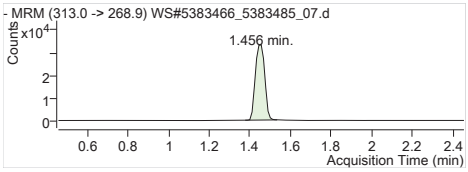



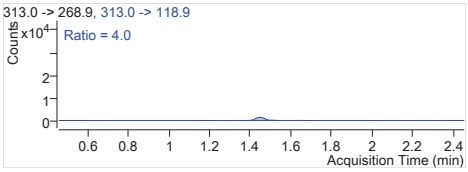

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



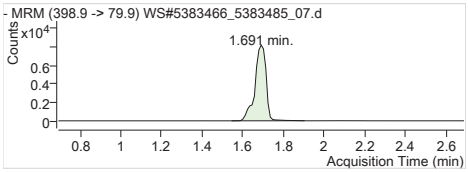



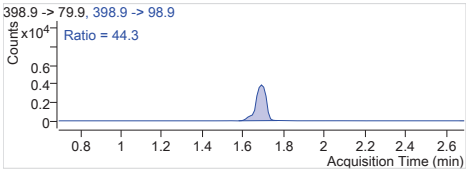

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 44.55 µg/L
Area ratio: 19.62663
Sample type: Calibration



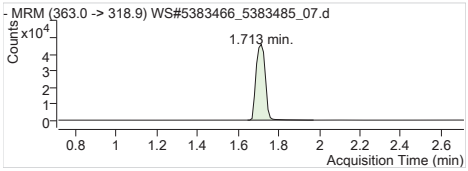



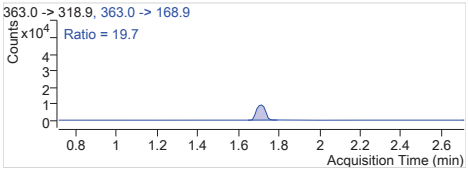

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 43.64 µg/L
Area ratio: 17.55025
Sample type: Calibration



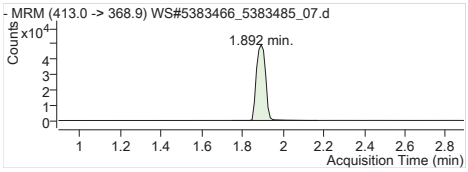



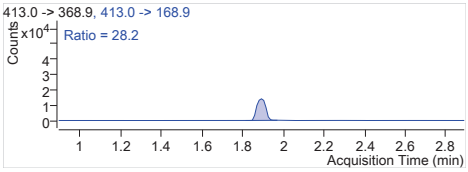

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 45.17 µg/L
Area ratio: 20.08616
Sample type: Calibration



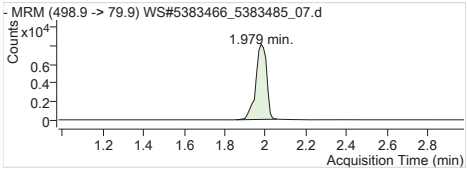



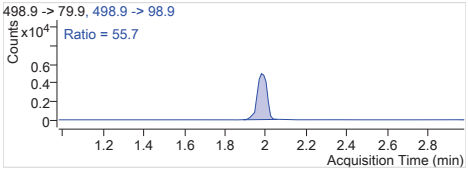

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 41.67 µg/L
Area ratio: 17.48470
Sample type: Calibration



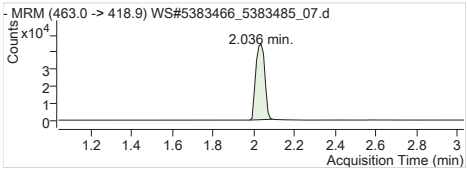



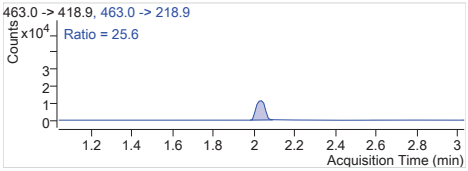

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 43.49 µg/L
Area ratio: 18.48634
Sample type: Calibration



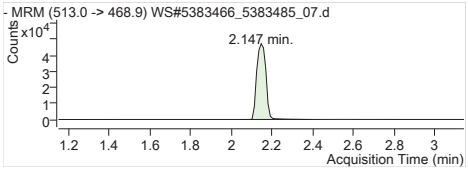



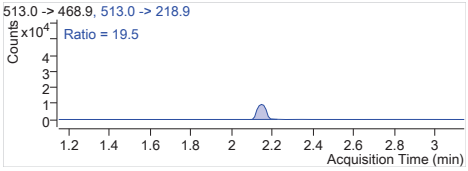

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 43.06 µg/L
Area ratio: 14.81408
Sample type: Calibration



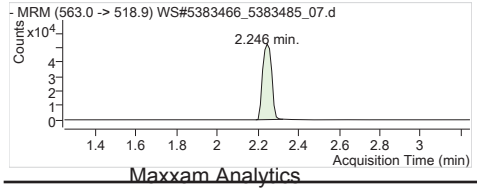



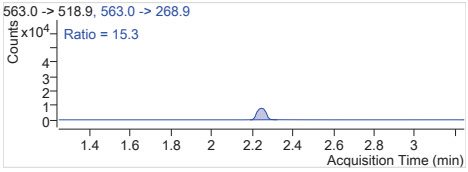

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 42.47 µg/L
Area ratio: 15.89159
Sample type: Calibration



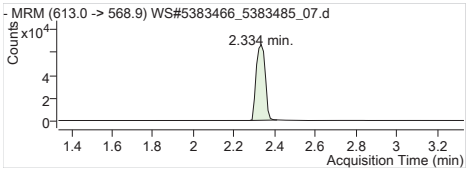



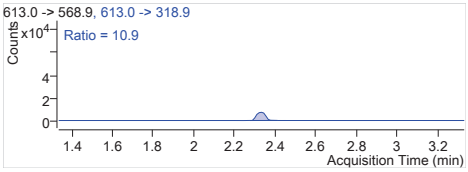

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.147)
Calc. conc. 43.49 µg/L
Area ratio: 20.49362
Sample type: Calibration



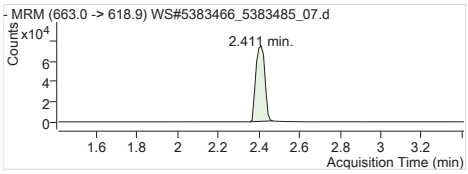



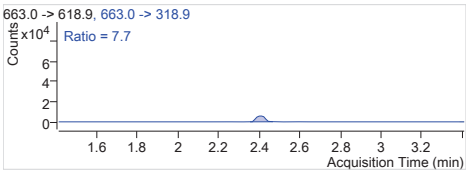

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 44.42 µg/L
Area ratio: 18.80918
Sample type: Calibration



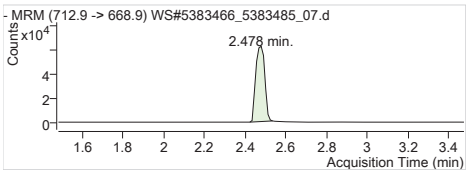



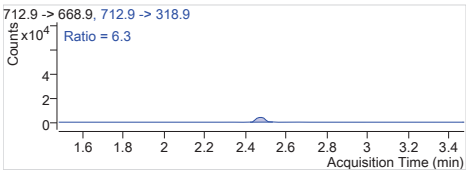

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.334 (2.334) |
| Calc. conc. | 46.23 µg/L |
| Area ratio: | 18.95367 |
| Sample type: | Calibration |



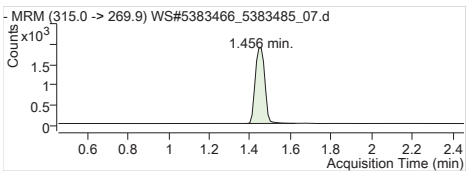



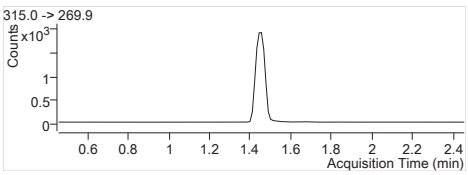

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.411 (2.411) |
| Calc. conc. | 42.87 µg/L |
| Area ratio: | 17.74340 |
| Sample type: | Calibration |



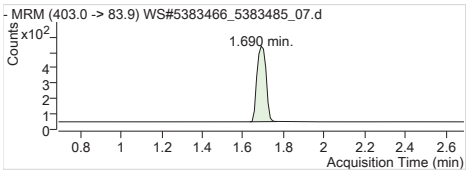



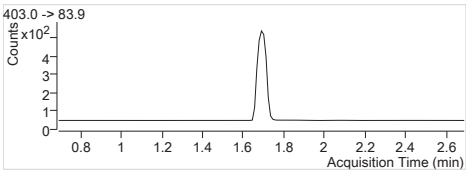

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.478 (2.478) |
| Calc. conc. | 42.78 µg/L |
| Area ratio: | 14.74286 |
| Sample type: | Calibration |



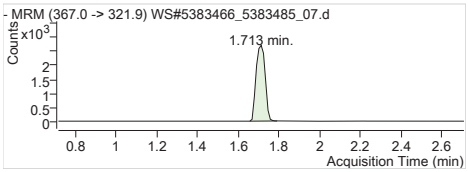



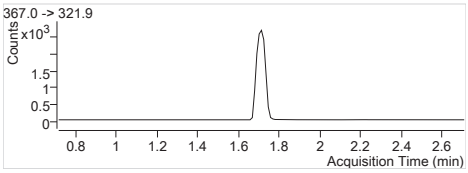

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.456 (1.456) |
| Calc. conc. | 87.49 µg/L |
| Area ratio: | 0.20729 |
| Sample type: | Calibration |



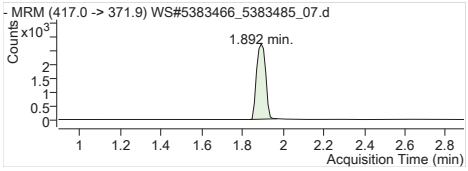



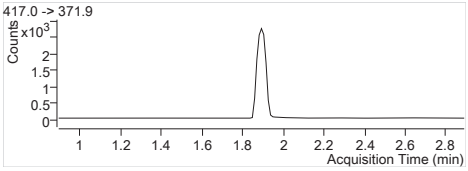

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 89.61 µg/L |
| Area ratio: | 0.05207 |
| Sample type: | Calibration |



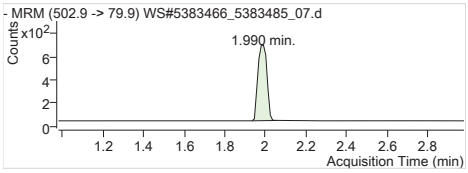



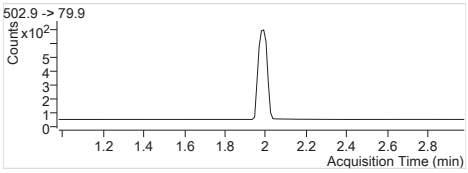

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.713 (1.713) |
| Calc. conc. | 96.20 µg/L |
| Area ratio: | 0.28105 |
| Sample type: | Calibration |



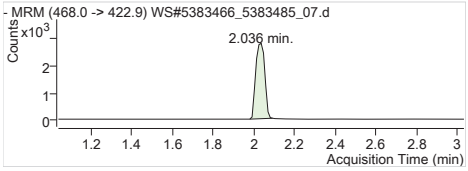



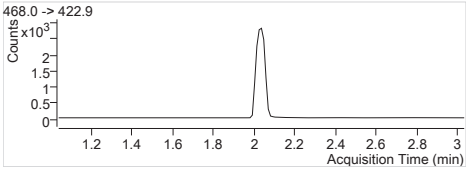

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.892 (1.892) |
| Calc. conc. | 90.77 µg/L |
| Area ratio: | 0.28492 |
| Sample type: | Calibration |



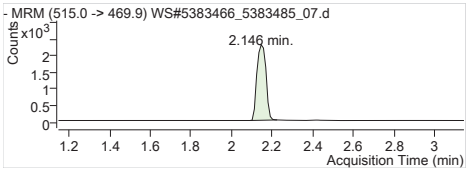



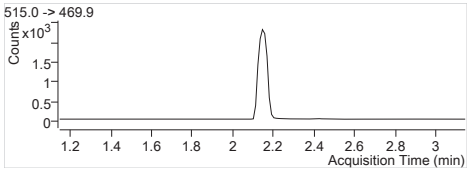

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.990 (1.979) |
| Calc. conc. | 99.32 µg/L |
| Area ratio: | 0.06855 |
| Sample type: | Calibration |



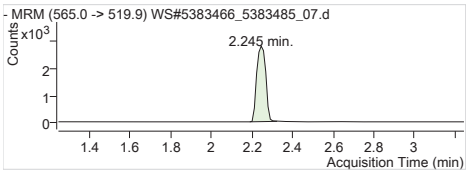



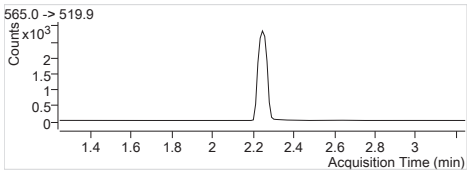

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.036 (2.036) |
| Calc. conc. | 94.26 µg/L |
| Area ratio: | 0.29155 |
| Sample type: | Calibration |



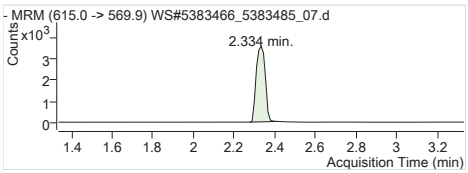



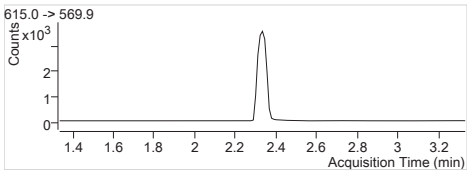

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 99.16 µg/L
Area ratio: 0.19899
Sample type: Calibration



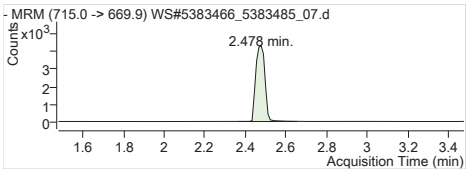



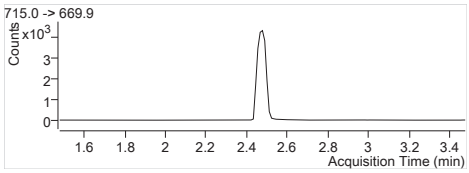

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 100.26 µg/L
Area ratio: 0.24251
Sample type: Calibration



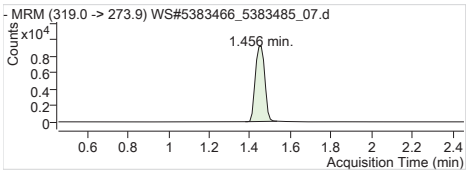



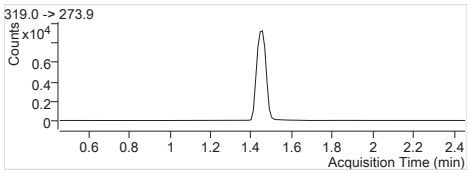

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 95.18 µg/L
Area ratio: 0.30641
Sample type: Calibration



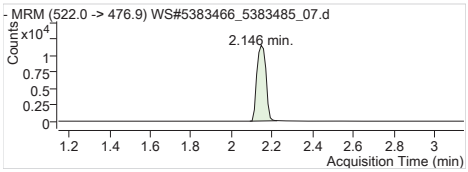



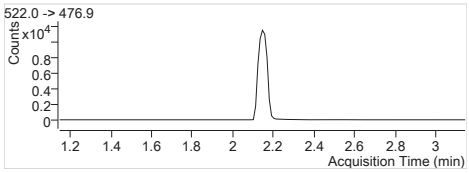

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 103.20 µg/L
Area ratio: 0.37852
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 103.49 µg/L
Area ratio: 0
Sample type: Calibration




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 99.43 µg/L
Area ratio: 0
Sample type: Calibration

# Quantitation Results

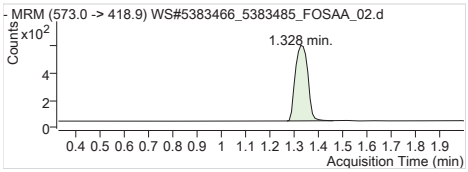
Agilent Technologies

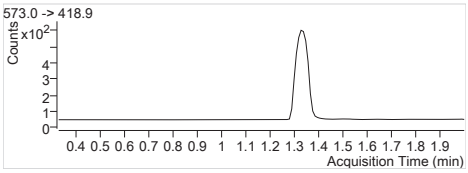
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 1** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_02.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A2 |
| **Acq. Date** | 2018/02/06 12:28:01 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

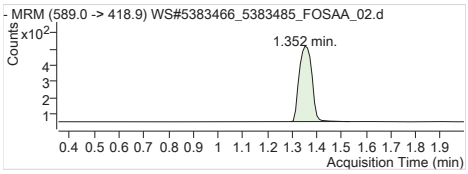
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1974 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1666 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 26354 | 0.96 | 1 µg/L | | |

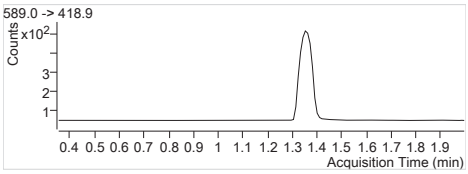
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 581 | 1.33 | 0.83 | 0.84 µg/L | 101.53 |
| EtFOSAA 1 | 520 | 1.35 | 0.83 | 0.89 µg/L | 107.39 |
| D3-MeFOSAA | 1974 | 1.33 | 100.00 | 114.03 µg/L | 114.03 |
| D5-EtFOSAA | 1666 | 1.35 | 100.00 | 111.70 µg/L | 111.70 |
| 13C9-PFDA | 26183 | 0.96 | 100.00 | 92.88 µg/L | 92.88 |



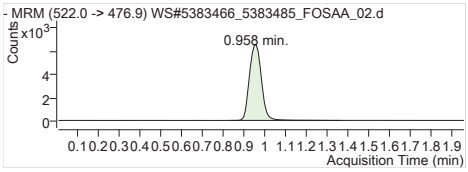



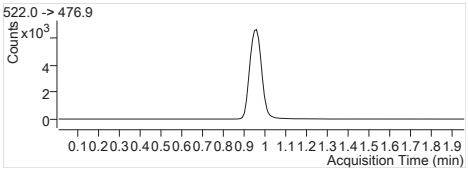

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Calibration



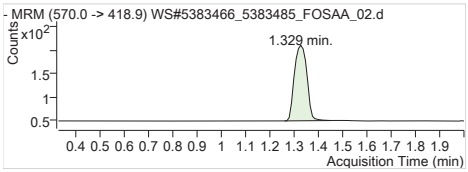



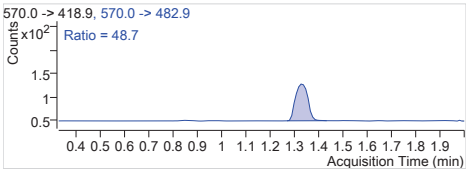

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Calibration



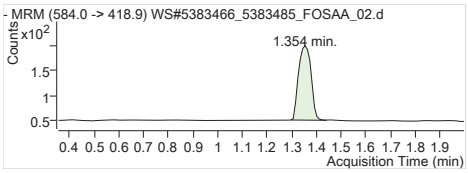



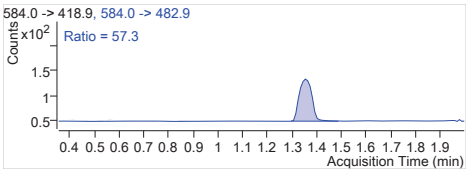

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.958 (0.958)
Concentration: 1 µg/L
Sample type: Calibration



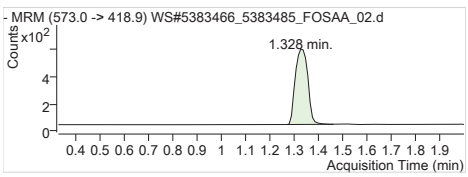



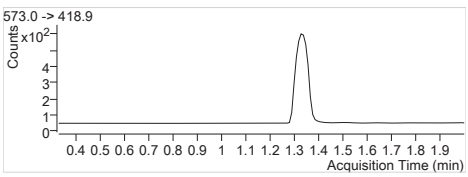

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 0.84 µg/L
Area ratio: 0.29433
Sample type: Calibration



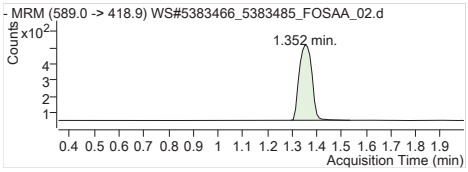



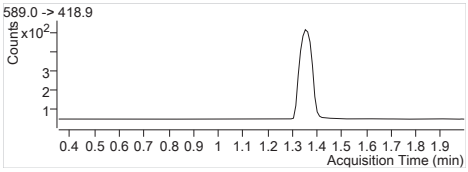

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 0.89 µg/L
Area ratio: 0.31212
Sample type: Calibration



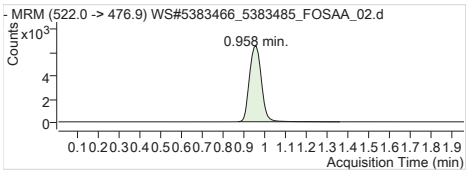



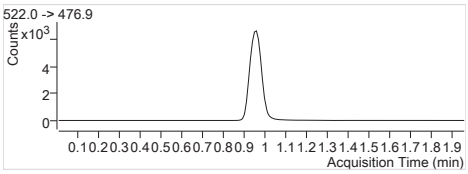

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 114.03 µg/L
Area ratio: 0.07490
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 111.70 µg/L |
| Area ratio: | 0.06322 |
| Sample type: | Calibration |



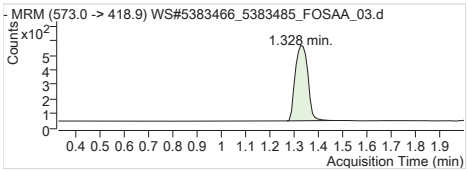

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.958 (0.958) |
| Calc. conc. | 92.88 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

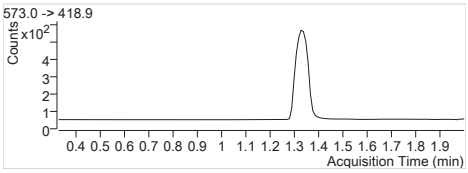
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 2** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_03.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A3 |
| **Acq. Date** | 2018/02/06 12:30:26 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

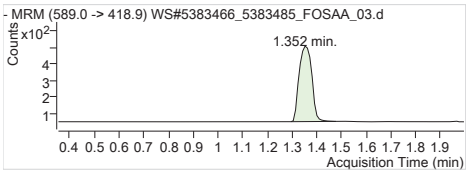
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1862 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1641 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 28857 | 0.95 | 1 µg/L | | |

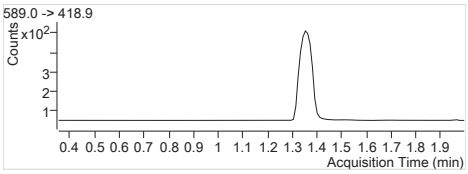
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 1088 | 1.33 | 1.70 | 1.64 µg/L | 96.66 |
| EtFOSAA 1 | 1054 | 1.35 | 1.70 | 1.66 µg/L | 97.93 |
| D3-MeFOSAA | 1862 | 1.33 | 100.00 | 98.23 µg/L | 98.23 |
| D5-EtFOSAA | 1641 | 1.35 | 100.00 | 100.48 µg/L | 100.48 |
| 13C9-PFDA | 28851 | 0.95 | 100.00 | 102.34 µg/L | 102.34 |



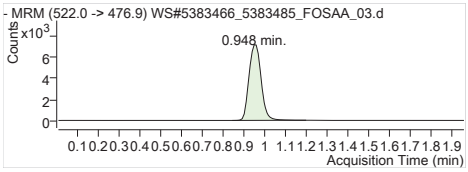



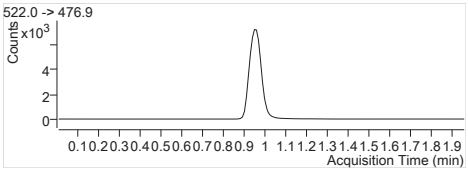

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Calibration



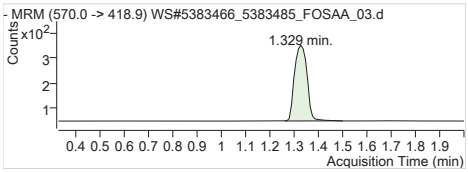



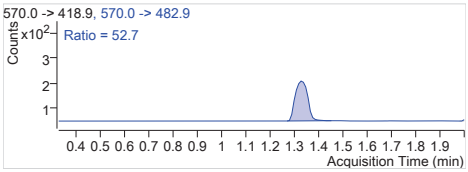

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Calibration



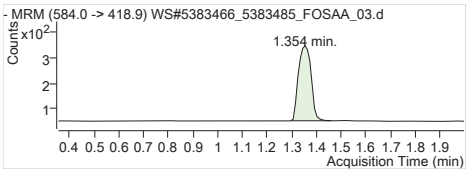



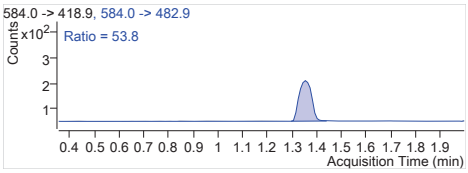

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.948 (0.958)
Concentration: 1 µg/L
Sample type: Calibration



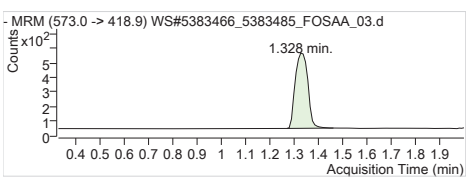



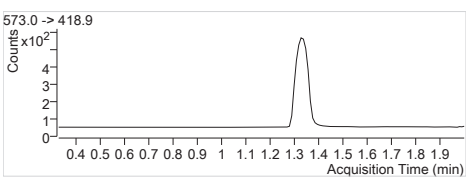

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 1.64 µg/L
Area ratio: 0.58432
Sample type: Calibration



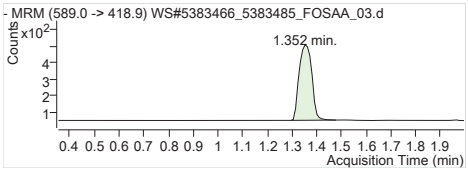



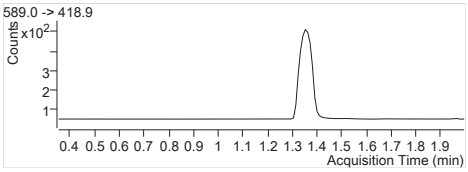

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 1.66 µg/L
Area ratio: 0.64229
Sample type: Calibration



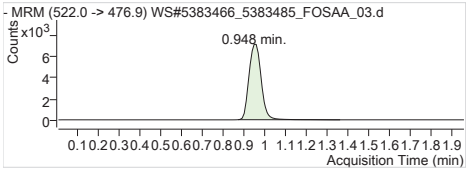



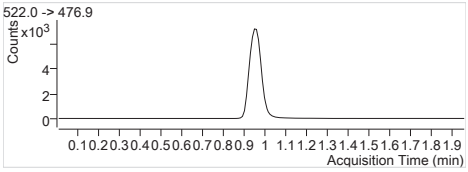

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 98.23 µg/L
Area ratio: 0.06453
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 100.48 µg/L |
| Area ratio: | 0.05687 |
| Sample type: | Calibration |



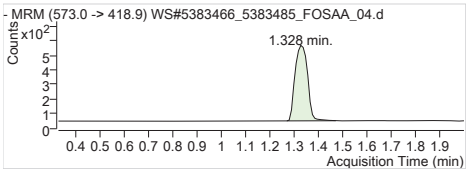

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.948 (0.958) |
| Calc. conc. | 102.34 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

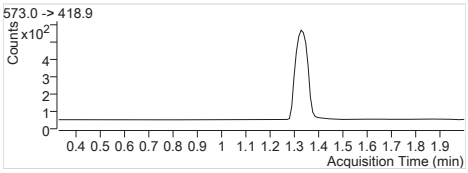
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 3** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_04.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A4 |
| **Acq. Date** | 2018/02/06 12:32:51 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

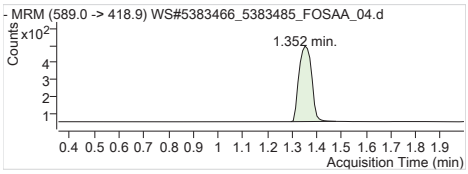
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1845 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1589 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 29034 | 0.95 | 1 µg/L | | |

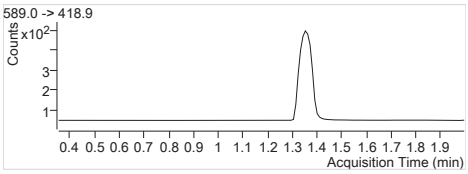
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 3380 | 1.33 | 5.00 | 5.09 µg/L | 101.74 |
| EtFOSAA 1 | 3261 | 1.35 | 5.00 | 4.97 µg/L | 99.35 |
| D3-MeFOSAA | 1845 | 1.33 | 100.00 | 96.74 µg/L | 96.74 |
| D5-EtFOSAA | 1589 | 1.35 | 100.00 | 96.70 µg/L | 96.70 |
| 13C9-PFDA | 29289 | 0.95 | 100.00 | 103.90 µg/L | 103.90 |



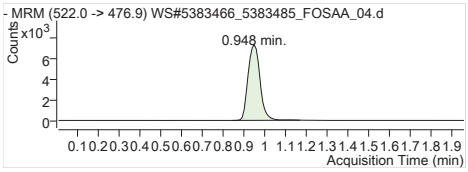



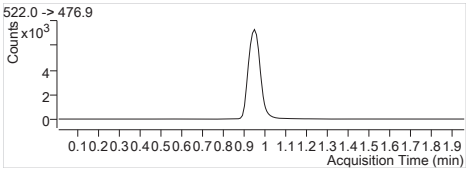

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Calibration



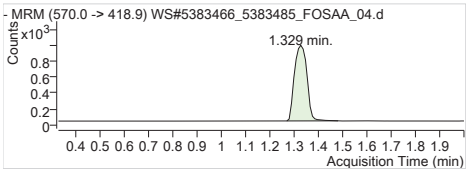



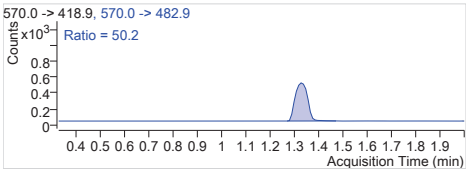

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Calibration



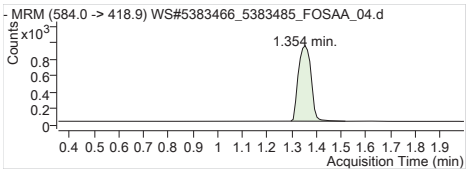



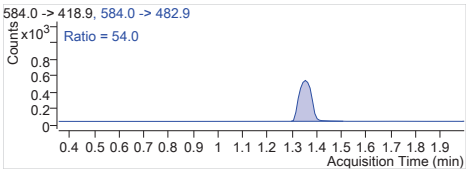

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.948 (0.958)
Concentration: 1 µg/L
Sample type: Calibration



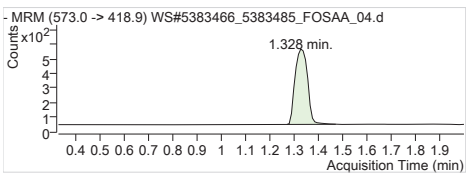



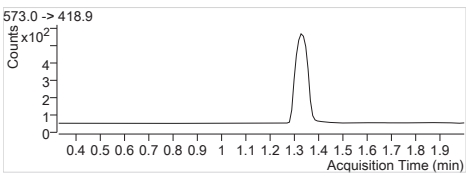

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 5.09 µg/L
Area ratio: 1.83198
Sample type: Calibration



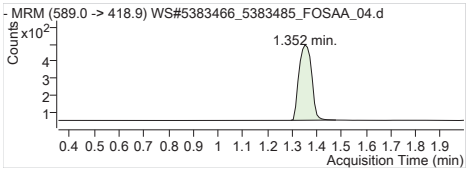



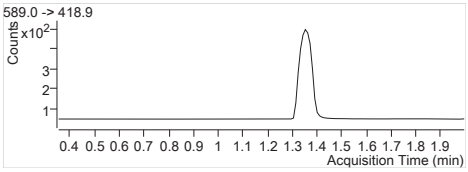

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 4.97 µg/L
Area ratio: 2.05223
Sample type: Calibration



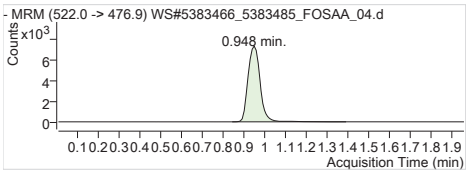



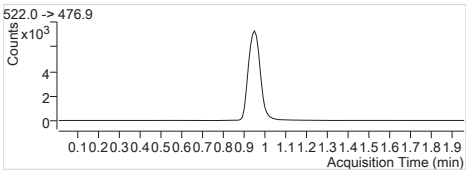

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 96.74 µg/L
Area ratio: 0.06355
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 96.70 µg/L |
| Area ratio: | 0.05473 |
| Sample type: | Calibration |



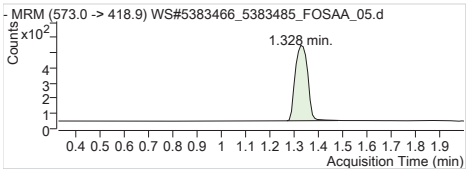

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.948 (0.958) |
| Calc. conc. | 103.90 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

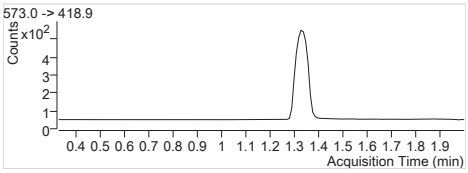
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 4** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_05.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/06 12:35:16 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

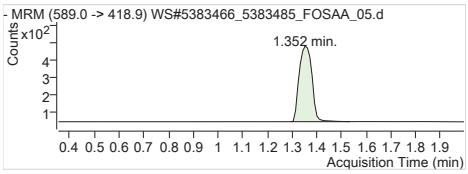
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1774 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1559 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 28453 | 0.96 | 1 µg/L | | |

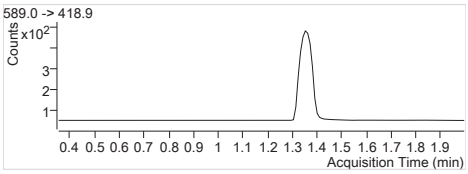
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 7647 | 1.33 | 12.50 | 11.93 µg/L | 95.43 |
| EtFOSAA 1 | 7583 | 1.35 | 12.50 | 11.55 µg/L | 92.43 |
| D3-MeFOSAA | 1774 | 1.33 | 100.00 | 94.91 µg/L | 94.91 |
| D5-EtFOSAA | 1559 | 1.35 | 100.00 | 96.81 µg/L | 96.81 |
| 13C9-PFDA | 28326 | 0.96 | 100.00 | 100.48 µg/L | 100.48 |



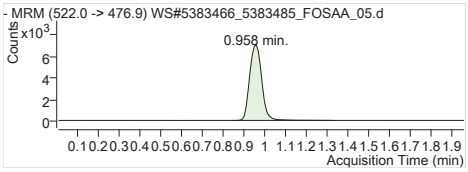



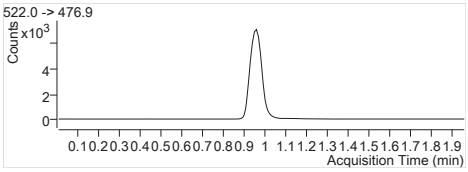

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Calibration



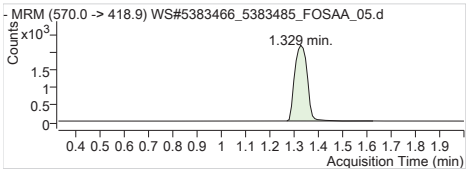



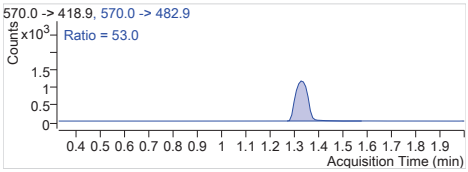

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Calibration



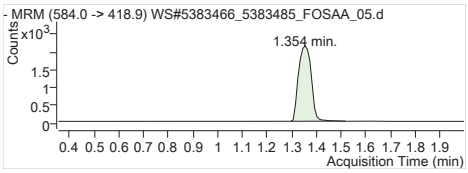



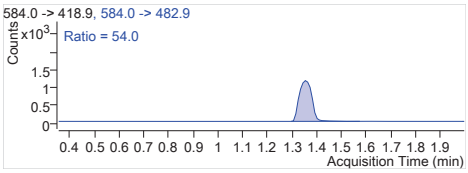

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.958 (0.958)
Concentration: 1 µg/L
Sample type: Calibration



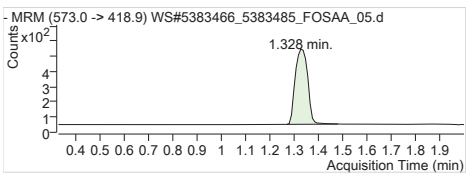



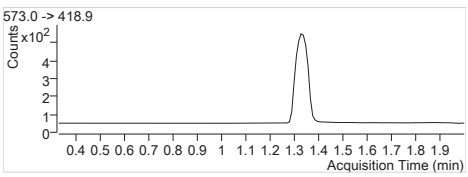

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 11.93 µg/L
Area ratio: 4.31060
Sample type: Calibration



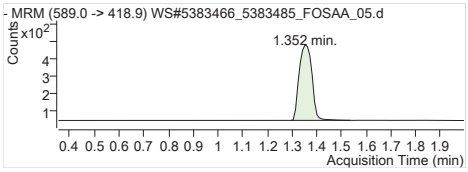



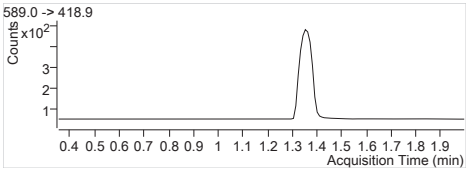

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 11.55 µg/L
Area ratio: 4.86402
Sample type: Calibration



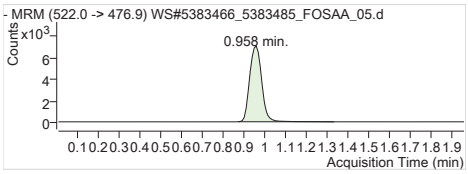



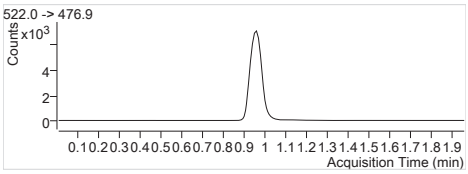

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 94.91 µg/L
Area ratio: 0.06235
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 96.81 µg/L |
| Area ratio: | 0.05479 |
| Sample type: | Calibration |



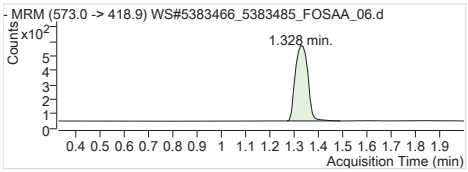

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.958 (0.958) |
| Calc. conc. | 100.48 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

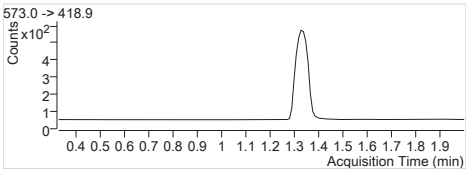
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 5** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_06.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A6 |
| **Acq. Date** | 2018/02/06 12:37:42 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

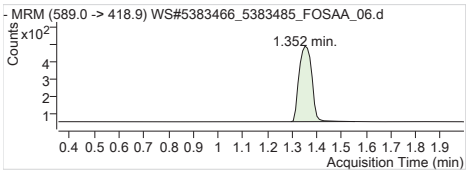
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1881 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1587 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 28628 | 0.96 | 1 µg/L | | |

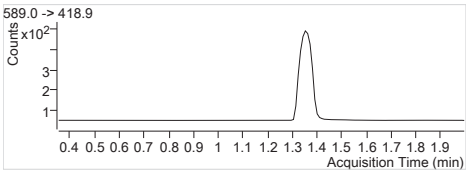
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 17314 | 1.33 | 25.00 | 25.44 µg/L | 101.75 |
| EtFOSAA 1 | 17091 | 1.35 | 25.00 | 25.39 µg/L | 101.55 |
| D3-MeFOSAA | 1881 | 1.33 | 100.00 | 100.02 µg/L | 100.02 |
| D5-EtFOSAA | 1587 | 1.35 | 100.00 | 97.95 µg/L | 97.95 |
| 13C9-PFDA | 28590 | 0.96 | 100.00 | 101.42 µg/L | 101.42 |



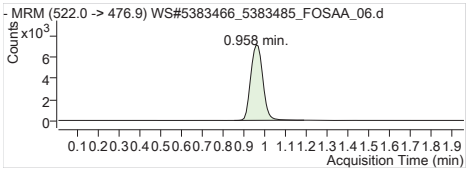



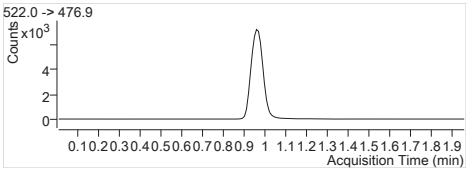

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Calibration



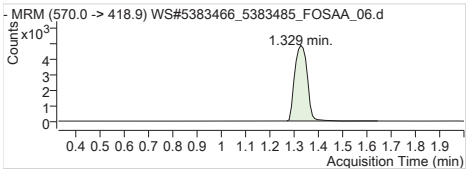



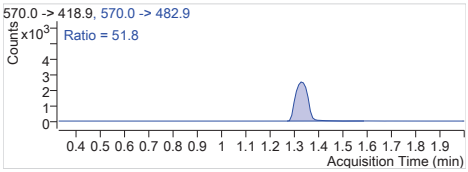

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Calibration



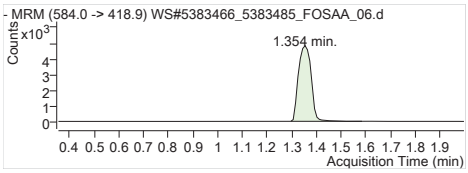



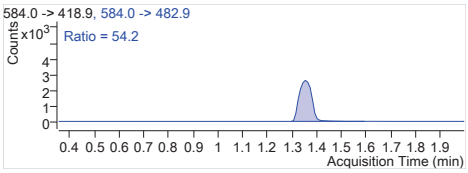

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.958 (0.958)
Concentration: 1 µg/L
Sample type: Calibration



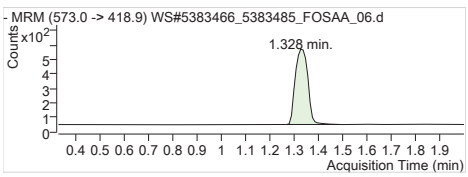



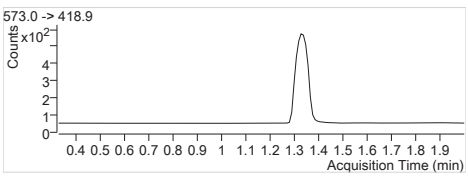

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 25.44 µg/L
Area ratio: 9.20468
Sample type: Calibration



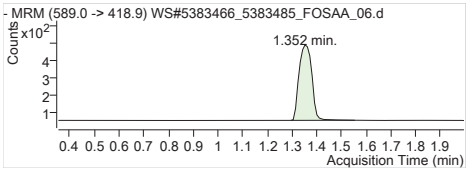



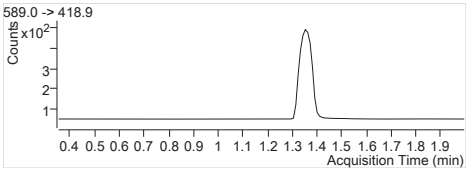

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 25.39 µg/L
Area ratio: 10.76938
Sample type: Calibration



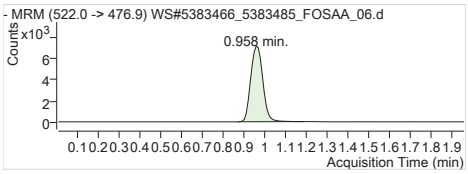



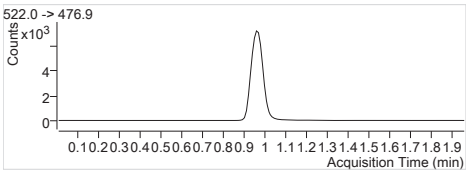

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 100.02 µg/L
Area ratio: 0.06570
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 97.95 µg/L |
| Area ratio: | 0.05544 |
| Sample type: | Calibration |



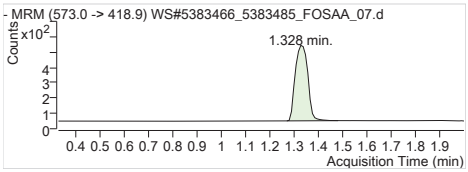

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.958 (0.958) |
| Calc. conc. | 101.42 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

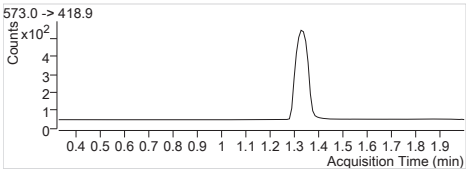
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 6** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_07.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A7 |
| **Acq. Date** | 2018/02/06 12:40:07 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

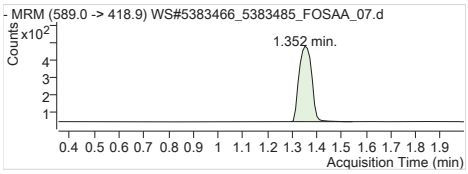
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1774 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1533 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 28110 | 0.95 | 1 µg/L | | |

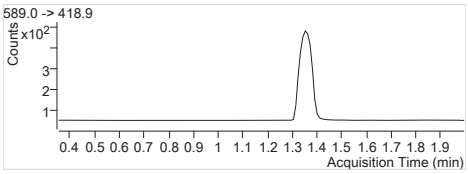
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 27554 | 1.33 | 41.70 | 42.90 µg/L | 102.89 |
| EtFOSAA 1 | 27557 | 1.35 | 41.70 | 42.27 µg/L | 101.36 |
| D3-MeFOSAA | 1774 | 1.33 | 100.00 | 96.07 µg/L | 96.07 |
| D5-EtFOSAA | 1533 | 1.35 | 100.00 | 96.36 µg/L | 96.36 |
| 13C9-PFDA | 27901 | 0.95 | 100.00 | 98.97 µg/L | 98.97 |



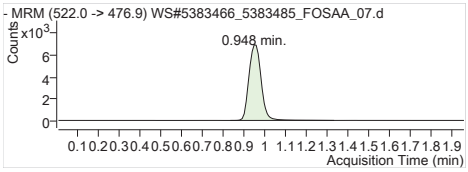



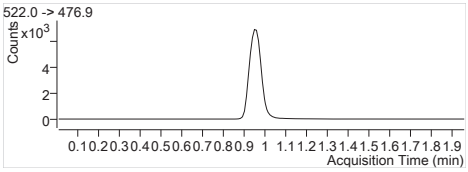

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: Calibration



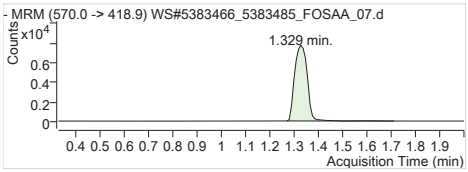



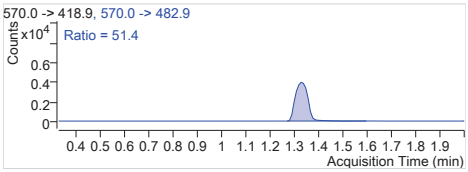

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: Calibration



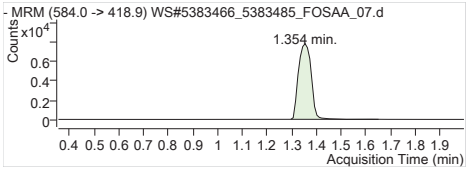



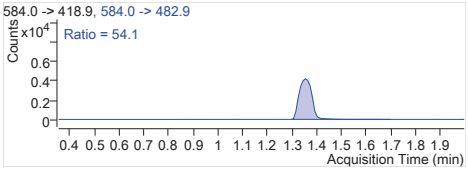

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.948 (0.958)
Concentration: 1 µg/L
Sample type: Calibration



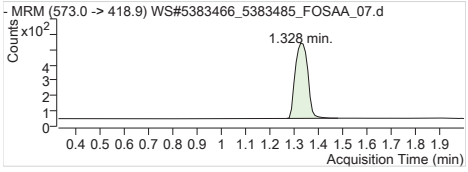



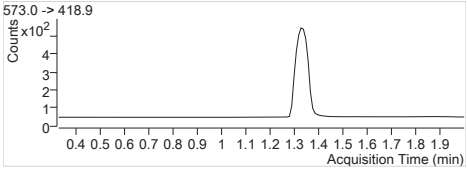

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 42.90 µg/L
Area ratio: 15.53213
Sample type: Calibration



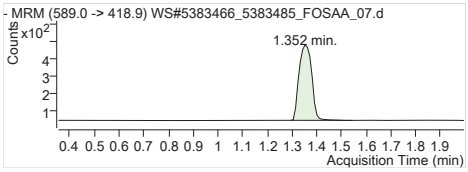



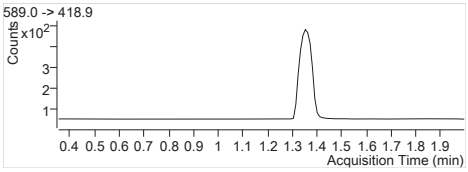

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 42.27 µg/L
Area ratio: 17.97586
Sample type: Calibration



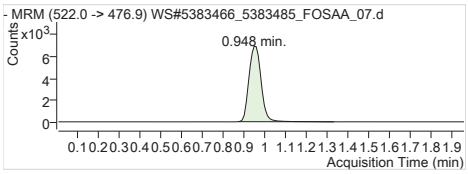



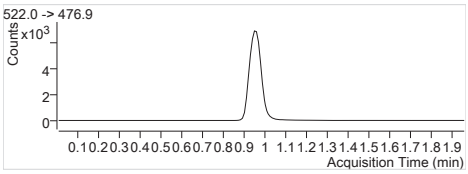

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 96.07 µg/L
Area ratio: 0.06311
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 96.36 µg/L |
| Area ratio: | 0.05454 |
| Sample type: | Calibration |



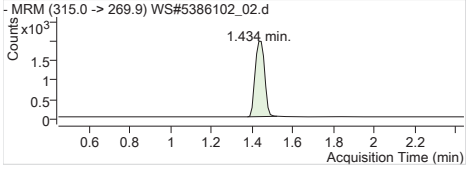

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.948 (0.958) |
| Calc. conc. | 98.97 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

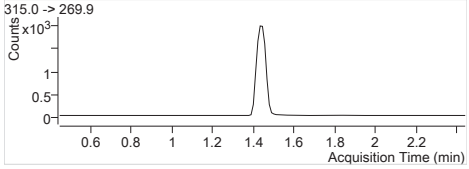
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 1** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_02.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-C8 |
| **Acq. Date** | 2018/02/08 3:11:49 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

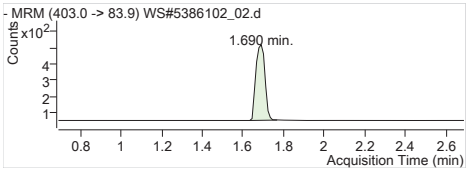
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6286 | 1.43 | 1 µg/L | | |
| MPFHxS | 1473 | 1.69 | 1 µg/L | | |
| MPFHpA | 8019 | 1.70 | 1 µg/L | | |
| MPFOA | 8729 | 1.88 | 1 µg/L | | |
| MPFOS | 1860 | 1.98 | 1 µg/L | | |
| MPFNA | 8353 | 2.02 | 1 µg/L | | |
| MPFDA | 7066 | 2.14 | 1 µg/L | | |
| MPFUnA | 8650 | 2.23 | 1 µg/L | | |
| MPFDoA | 11533 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12719 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 31547 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 40575 | 2.15 | 1 µg/L | | |

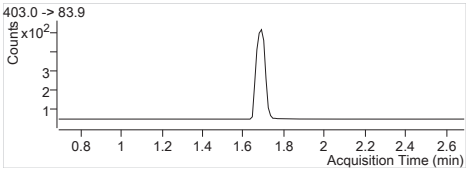
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 497 | 1.10 | 0.83 | 0.85 µg/L | 102.97 |
| PFHxA 1 | 2077 | 1.43 | 0.83 | 0.90 µg/L | 108.78 |
| PFHxS 1 | 500 | 1.68 | 0.83 | 0.77 µg/L | 92.65 |
| PFHpA 1 | 2450 | 1.70 | 0.83 | 0.84 µg/L | 100.97 |
| PFOA 1 | 2739 | 1.88 | 0.83 | 0.87 µg/L | 104.99 |
| PFOS 1 | 497 | 1.97 | 0.83 | 0.83 µg/L | 100.24 |
| PFNA 1 | 2263 | 2.03 | 0.83 | 0.79 µg/L | 95.06 |
| PFDA 1 | 2942 | 2.14 | 0.83 | 0.85 µg/L | 102.34 |
| PFUnA 1 | 3263 | 2.25 | 0.83 | 0.92 µg/L | 110.36 |
| PFDoA 1 | 3755 | 2.32 | 0.83 | 0.86 µg/L | 103.20 |
| PFTrDA 1 | 3880 | 2.40 | 0.83 | 0.83 µg/L | 99.93 |
| PFTeDA 1 | 3584 | 2.47 | 0.83 | 0.86 µg/L | 103.09 |
| 13C2-PFHxA | 6286 | 1.43 | 100.00 | 102.54 µg/L | 102.54 |
| 18O2-PFHxS | 1473 | 1.69 | 100.00 | 93.91 µg/L | 93.91 |
| 13C4-PFHpA | 8019 | 1.70 | 100.00 | 99.89 µg/L | 99.89 |
| 13C4-PFOA | 8729 | 1.88 | 100.00 | 103.07 µg/L | 103.07 |
| 13C4-PFOS | 1860 | 1.98 | 100.00 | 97.38 µg/L | 97.38 |
| 13C5-PFNA | 8354 | 2.02 | 100.00 | 98.83 µg/L | 98.83 |
| 13C2-PFDA | 6953 | 2.14 | 100.00 | 100.68 µg/L | 100.68 |
| 13C2-PFUnA | 8650 | 2.23 | 100.00 | 105.62 µg/L | 105.62 |
| 13C2-PFDoA | 11533 | 2.32 | 100.00 | 101.44 µg/L | 101.44 |
| 13C2-PFTeDA | 12880 | 2.47 | 100.00 | 99.31 µg/L | 99.31 |
| 13C6-PFHxA | 31547 | 1.43 | 100.00 | 99.45 µg/L | 99.45 |
| 13C9-PFDA | 40575 | 2.15 | 100.00 | 100.05 µg/L | 100.05 |



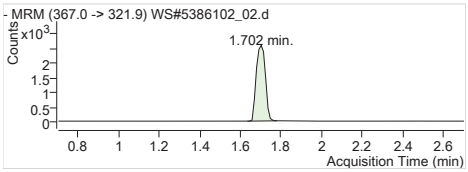



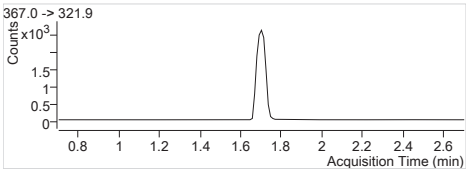

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.445)
Concentration: 1 µg/L
Sample type: Calibration



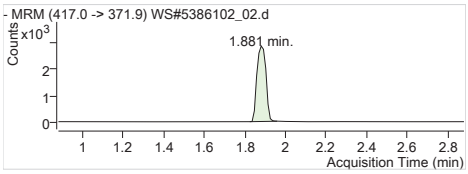



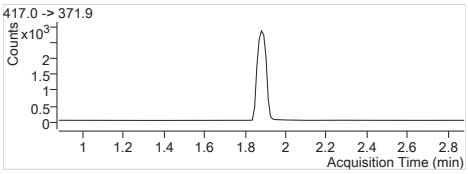

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Calibration



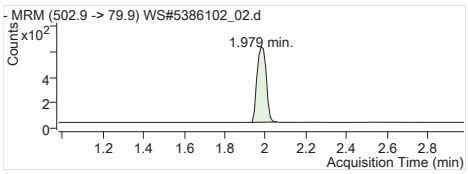



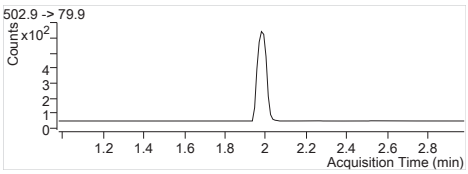

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: Calibration



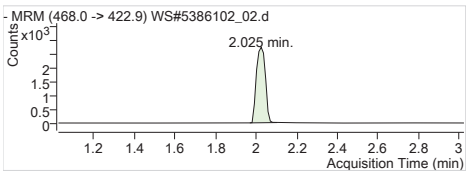



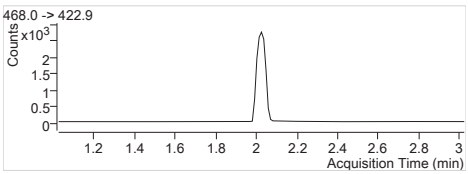

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



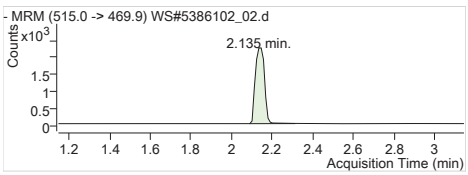



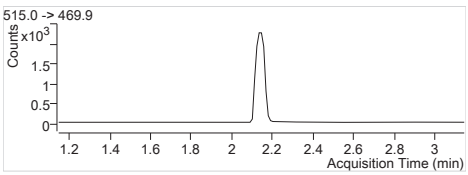

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



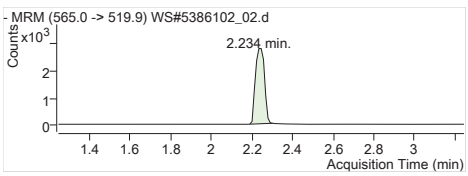



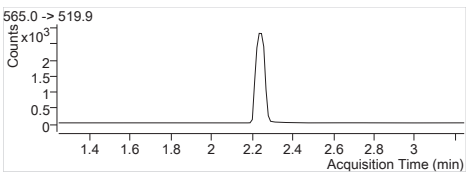

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: Calibration



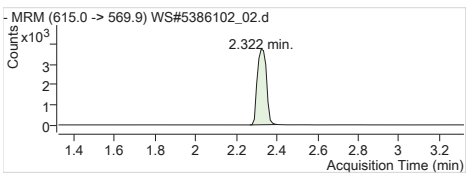



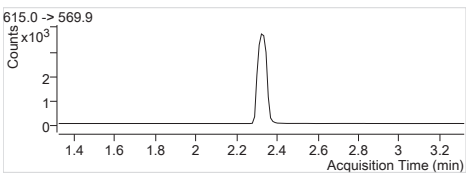

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



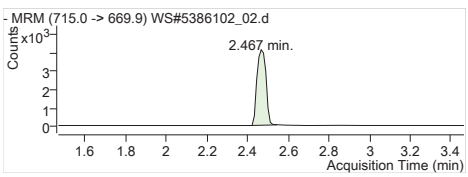



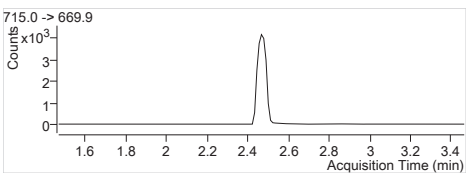

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.245)
Concentration: 1 µg/L
Sample type: Calibration



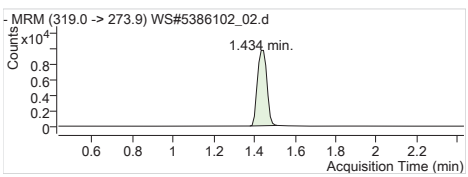



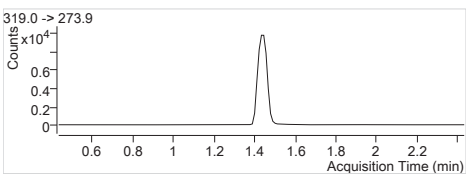

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



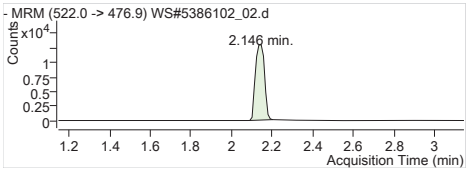



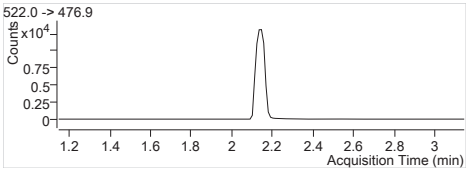

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



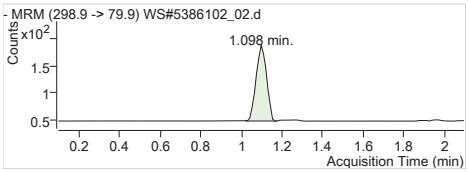



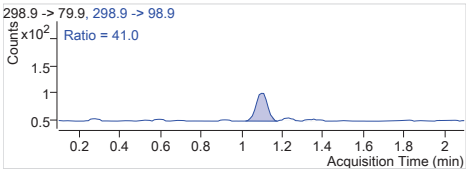

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



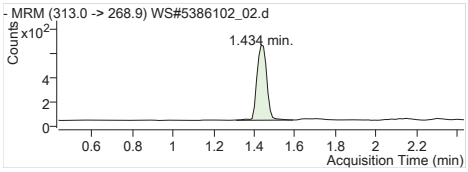



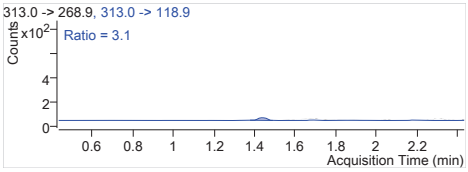

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



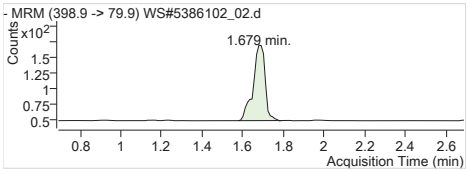



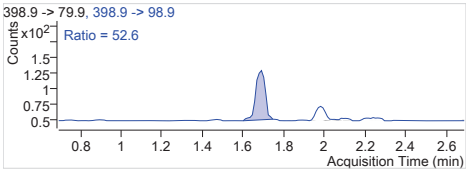

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.098 (1.098)
Calc. conc. 0.85 µg/L
Area ratio: 0.33741
Sample type: Calibration



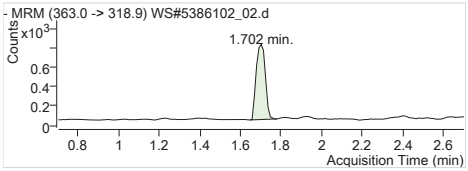



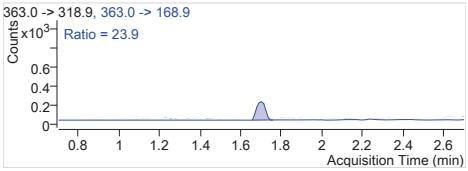

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 0.90 µg/L
Area ratio: 0.33042
Sample type: Calibration



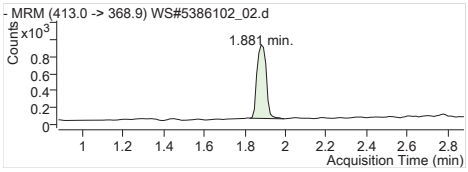



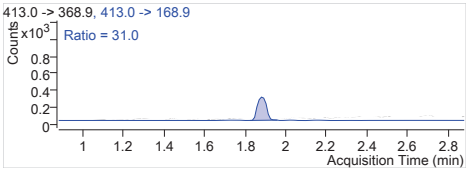

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.691)
Calc. conc. 0.77 µg/L
Area ratio: 0.33944
Sample type: Calibration



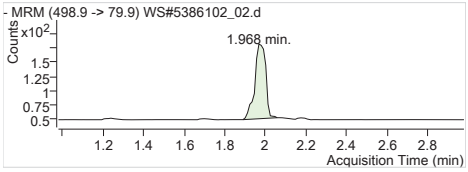



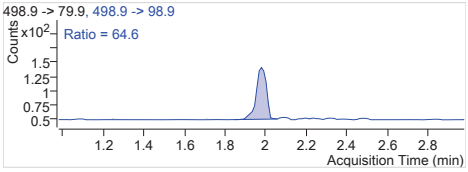

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 0.84 µg/L
Area ratio: 0.30552
Sample type: Calibration



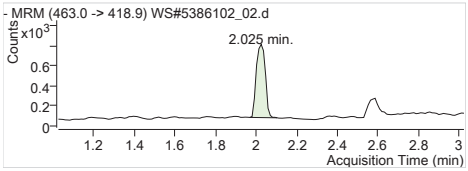



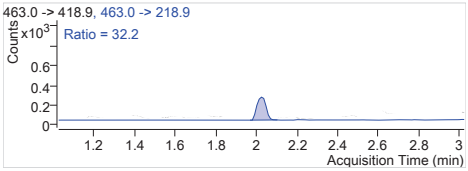

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 0.87 µg/L
Area ratio: 0.31378
Sample type: Calibration



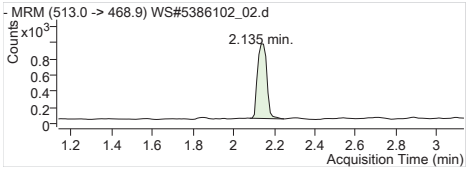



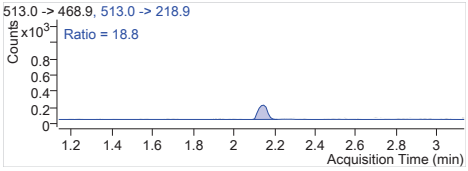

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.979)
Calc. conc. 0.83 µg/L
Area ratio: 0.26720
Sample type: Calibration



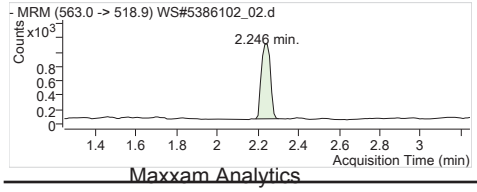



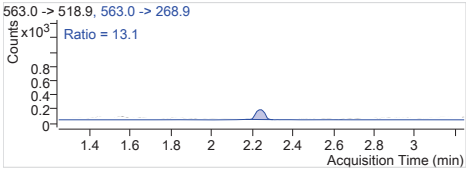

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 0.79 µg/L
Area ratio: 0.27092
Sample type: Calibration



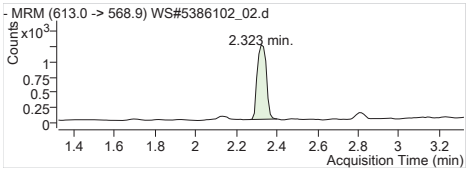



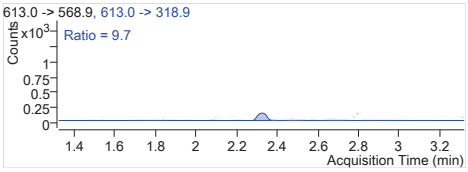

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 0.85 µg/L
Area ratio: 0.41636
Sample type: Calibration



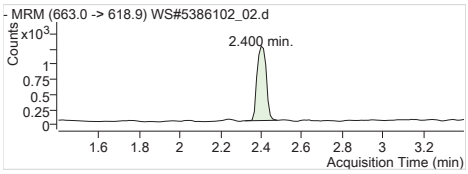



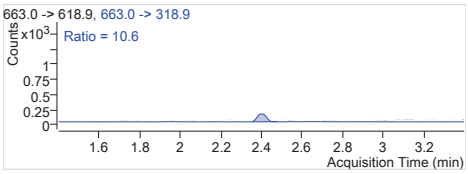

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 0.92 µg/L
Area ratio: 0.37723
Sample type: Calibration



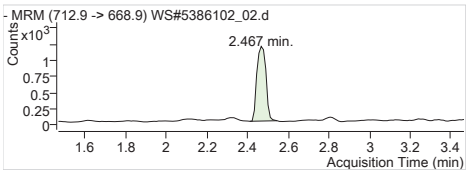



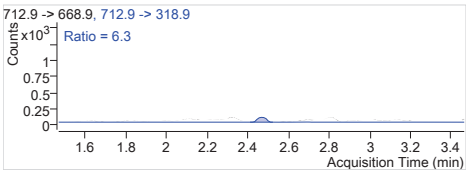

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.86 µg/L
Area ratio: 0.32559
Sample type: Calibration



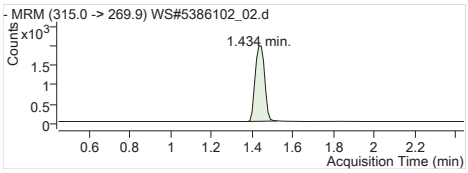



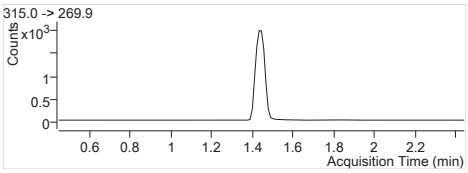

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.83 µg/L
Area ratio: 0.30506
Sample type: Calibration



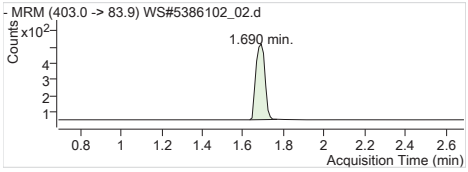



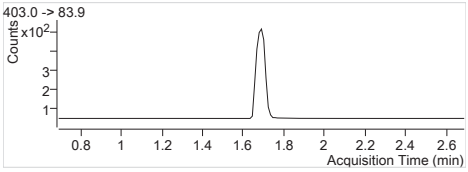

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 0.86 µg/L
Area ratio: 0.28178
Sample type: Calibration



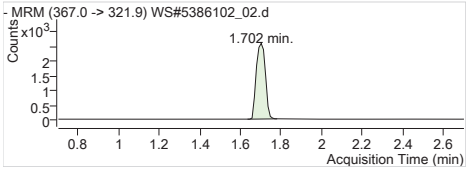



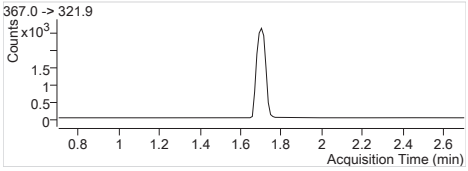

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 102.54 µg/L
Area ratio: 0.19926
Sample type: Calibration



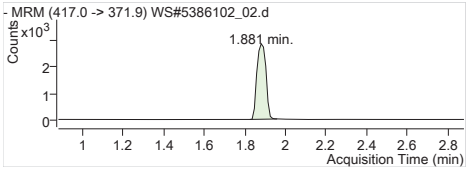



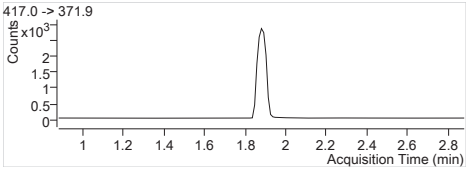

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 93.91 µg/L
Area ratio: 0.04669
Sample type: Calibration



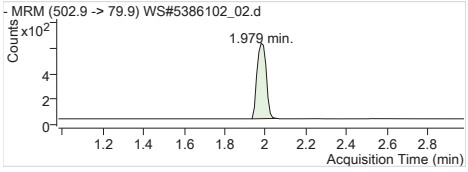



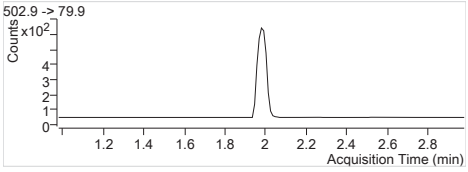

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 99.89 µg/L
Area ratio: 0.25419
Sample type: Calibration



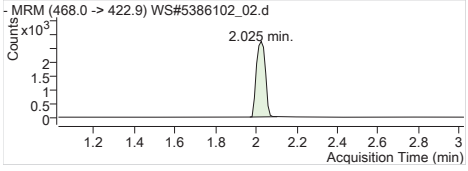



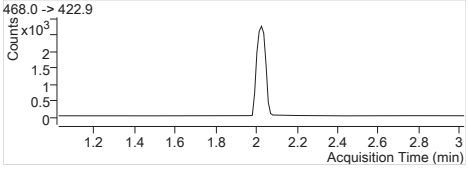

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 103.07 µg/L
Area ratio: 0.27670
Sample type: Calibration



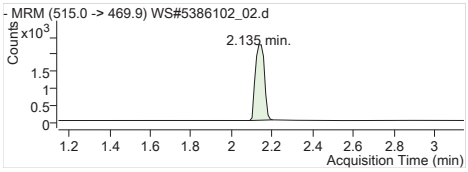



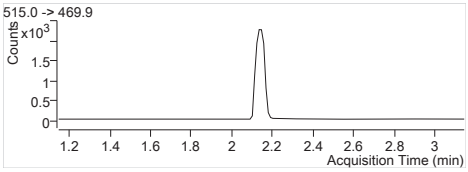

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 97.38 µg/L
Area ratio: 0.05896
Sample type: Calibration



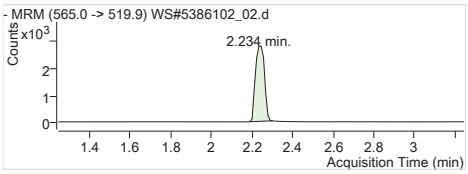



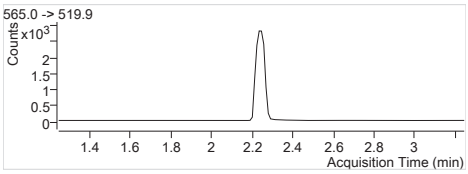

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 98.83 µg/L
Area ratio: 0.26481
Sample type: Calibration



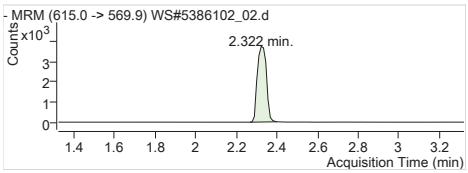



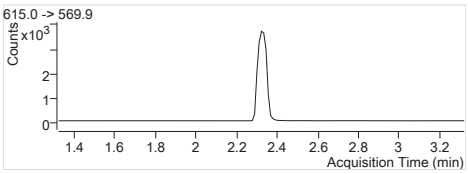

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 100.68 µg/L
Area ratio: 0.17136
Sample type: Calibration



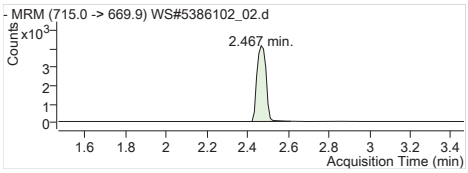



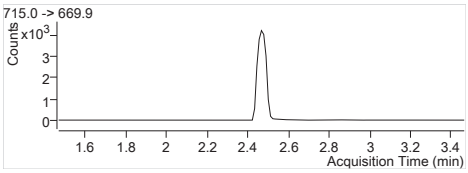

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.245)
Calc. conc. 105.62 µg/L
Area ratio: 0.21319
Sample type: Calibration



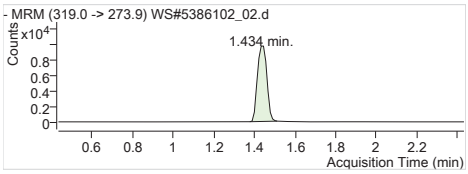



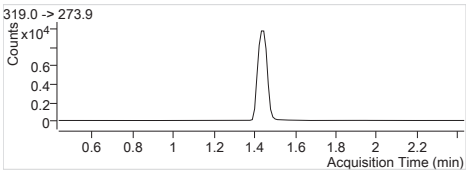

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 101.44 µg/L
Area ratio: 0.28424
Sample type: Calibration



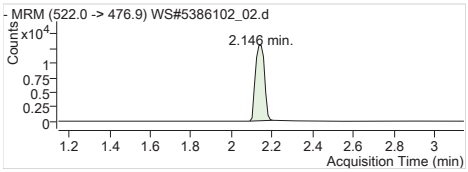



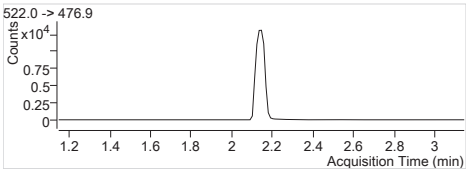

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 99.31 µg/L
Area ratio: 0.31744
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 99.45 µg/L
Area ratio: 0
Sample type: Calibration



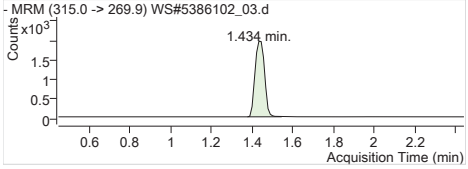

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 100.05 µg/L
Area ratio: 0
Sample type: Calibration

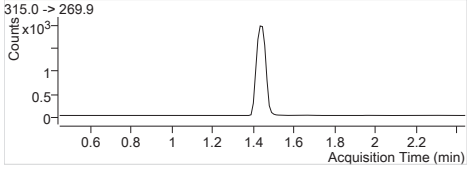
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 2** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_03.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-C9 |
| **Acq. Date** | 2018/02/08 3:16:45 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

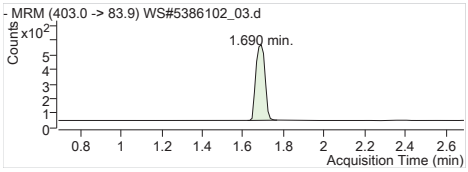
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6287 | 1.43 | 1 µg/L | | |
| MPFHxS | 1637 | 1.69 | 1 µg/L | | |
| MPFHpA | 8116 | 1.70 | 1 µg/L | | |
| MPFOA | 8477 | 1.88 | 1 µg/L | | |
| MPFOS | 2005 | 1.98 | 1 µg/L | | |
| MPFNA | 8739 | 2.02 | 1 µg/L | | |
| MPFDA | 7334 | 2.15 | 1 µg/L | | |
| MPFUnA | 8638 | 2.25 | 1 µg/L | | |
| MPFDoA | 12169 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13023 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 31482 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 42308 | 2.15 | 1 µg/L | | |

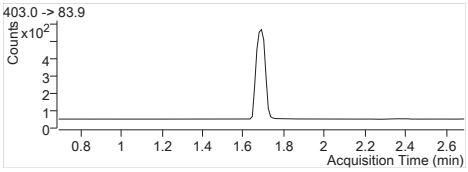
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 1093 | 1.10 | 1.70 | 1.63 µg/L | 95.94 |
| PFHxA 1 | 3838 | 1.43 | 1.70 | 1.59 µg/L | 93.53 |
| PFHxS 1 | 1272 | 1.68 | 1.70 | 1.83 µg/L | 107.51 |
| PFHpA 1 | 5287 | 1.70 | 1.70 | 1.71 µg/L | 100.48 |
| PFOA 1 | 5595 | 1.88 | 1.70 | 1.70 µg/L | 99.80 |
| PFOS 1 | 1227 | 1.98 | 1.70 | 1.76 µg/L | 103.82 |
| PFNA 1 | 5567 | 2.03 | 1.70 | 1.79 µg/L | 105.25 |
| PFDA 1 | 5859 | 2.15 | 1.70 | 1.64 µg/L | 96.50 |
| PFUnA 1 | 6188 | 2.23 | 1.70 | 1.64 µg/L | 96.22 |
| PFDoA 1 | 7818 | 2.32 | 1.70 | 1.62 µg/L | 95.03 |
| PFTrDA 1 | 8552 | 2.40 | 1.70 | 1.68 µg/L | 98.64 |
| PFTeDA 1 | 7309 | 2.47 | 1.70 | 1.65 µg/L | 97.34 |
| 13C2-PFHxA | 6287 | 1.43 | 100.00 | 102.76 µg/L | 102.76 |
| 18O2-PFHxS | 1637 | 1.69 | 100.00 | 104.58 µg/L | 104.58 |
| 13C4-PFHpA | 8116 | 1.70 | 100.00 | 101.30 µg/L | 101.30 |
| 13C4-PFOA | 8477 | 1.88 | 100.00 | 100.30 µg/L | 100.30 |
| 13C4-PFOS | 2005 | 1.98 | 100.00 | 105.18 µg/L | 105.18 |
| 13C5-PFNA | 8739 | 2.02 | 100.00 | 103.60 µg/L | 103.60 |
| 13C2-PFDA | 7177 | 2.15 | 100.00 | 99.66 µg/L | 99.66 |
| 13C2-PFUnA | 8638 | 2.25 | 100.00 | 101.15 µg/L | 101.15 |
| 13C2-PFDoA | 12169 | 2.32 | 100.00 | 102.65 µg/L | 102.65 |
| 13C2-PFTeDA | 13294 | 2.47 | 100.00 | 98.30 µg/L | 98.30 |
| 13C6-PFHxA | 31482 | 1.43 | 100.00 | 99.24 µg/L | 99.24 |
| 13C9-PFDA | 42308 | 2.15 | 100.00 | 104.32 µg/L | 104.32 |



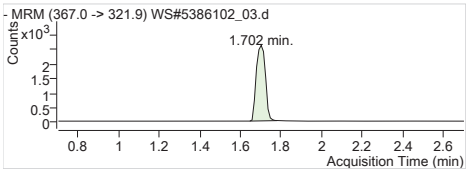



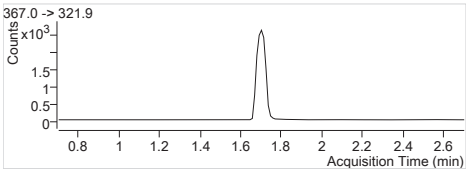

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.445)
Concentration: 1 µg/L
Sample type: Calibration



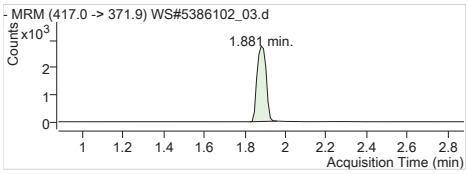



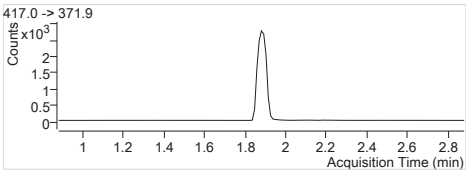

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Calibration



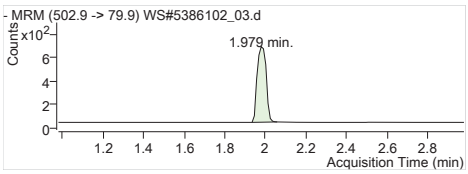



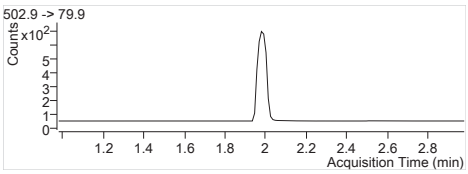

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: Calibration



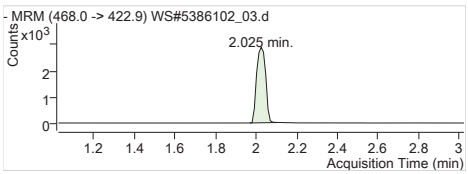



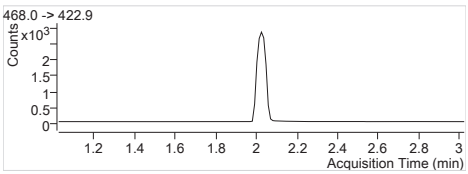

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



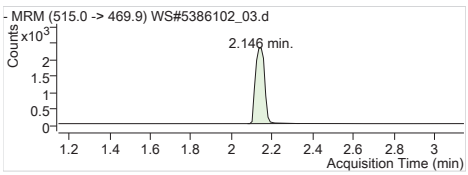



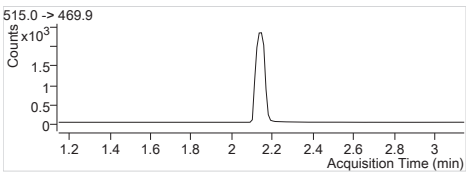

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



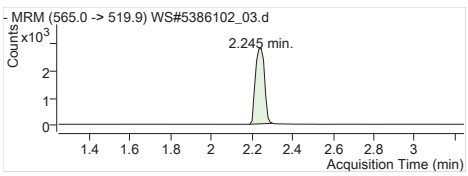



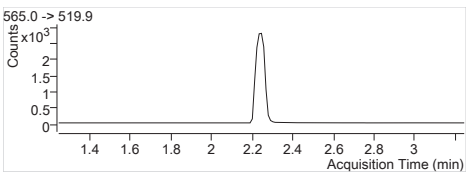

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: Calibration



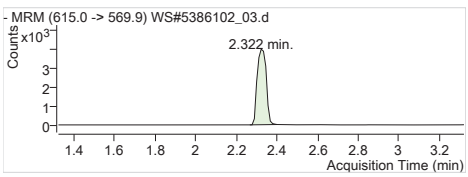



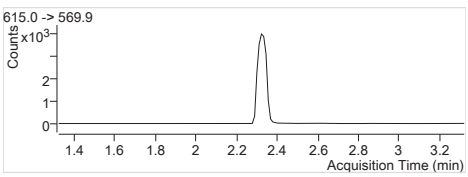

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



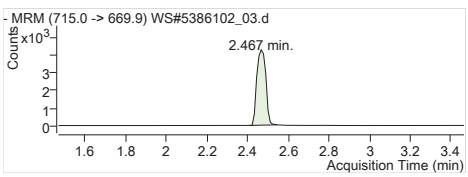



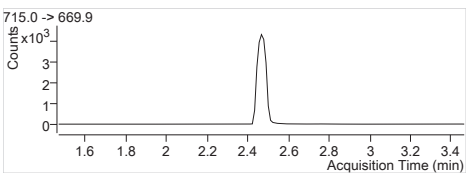

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Calibration



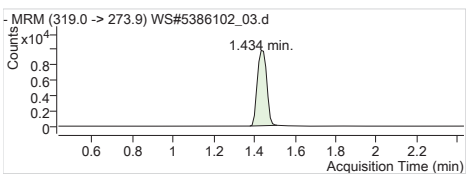



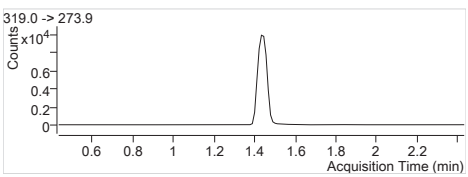

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



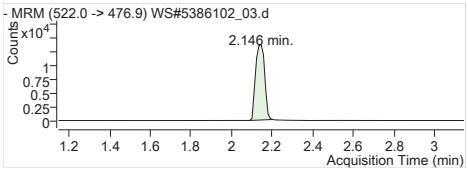



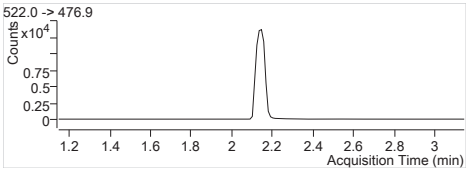

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



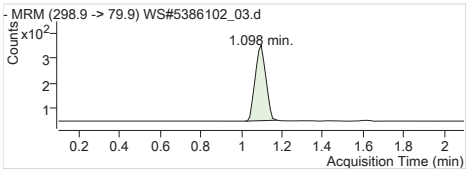



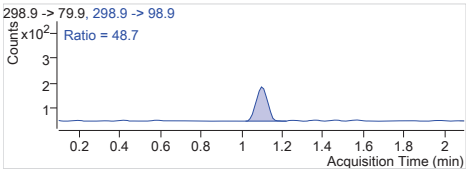

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



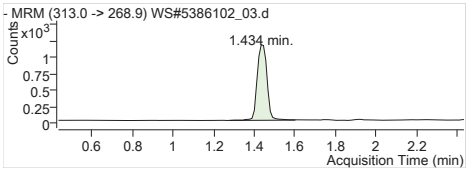



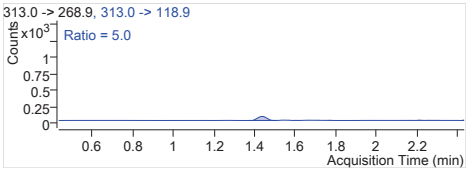

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



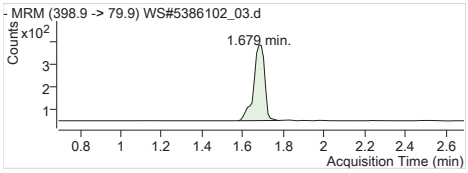



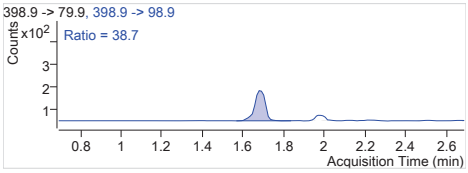

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.098 (1.098)
Calc. conc. 1.63 µg/L
Area ratio: 0.66768
Sample type: Calibration



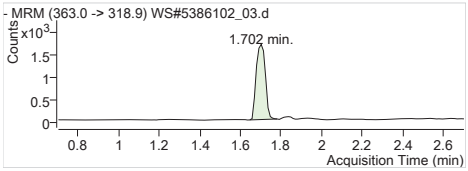



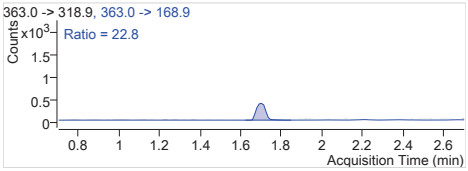

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 1.59 µg/L
Area ratio: 0.61047
Sample type: Calibration



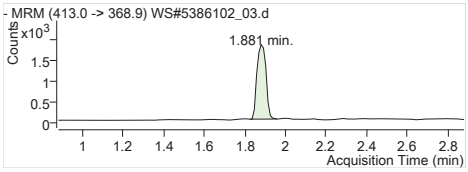



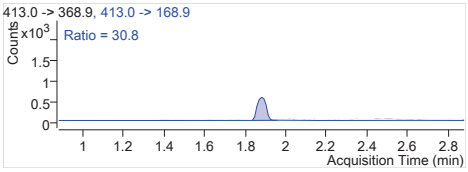

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.691)
Calc. conc. 1.83 µg/L
Area ratio: 0.77703
Sample type: Calibration



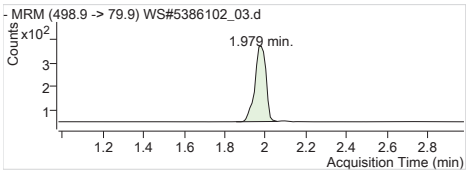



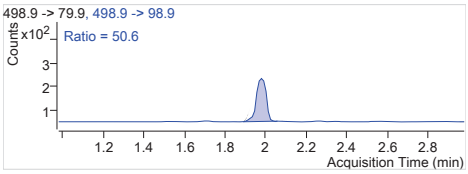

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 1.71 µg/L
Area ratio: 0.65143
Sample type: Calibration



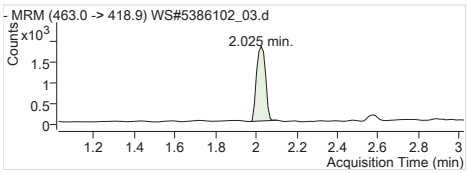



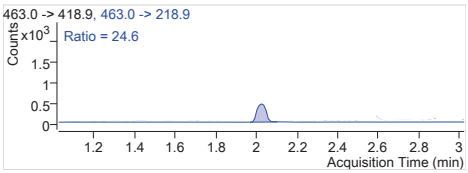

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 1.70 µg/L
Area ratio: 0.66002
Sample type: Calibration



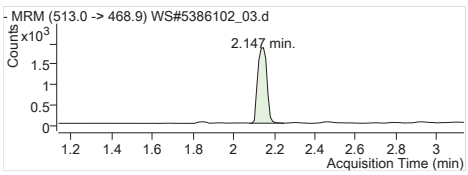



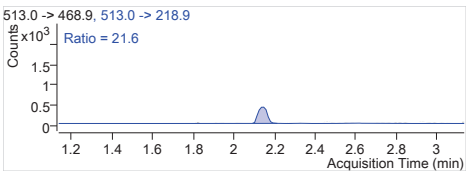

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 1.76 µg/L
Area ratio: 0.61197
Sample type: Calibration



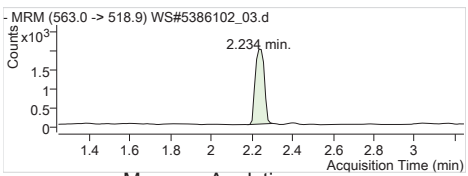



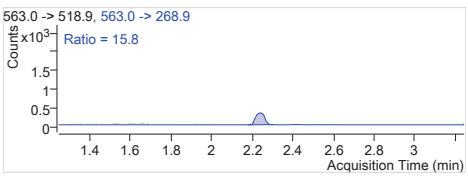

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 1.79 µg/L
Area ratio: 0.63703
Sample type: Calibration



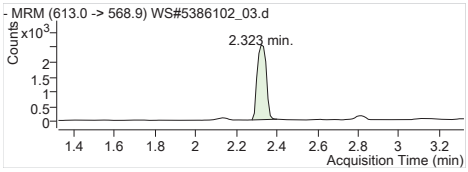



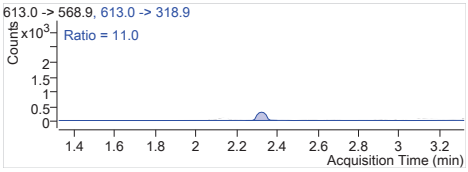

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.135)
Calc. conc. 1.64 µg/L
Area ratio: 0.79888
Sample type: Calibration



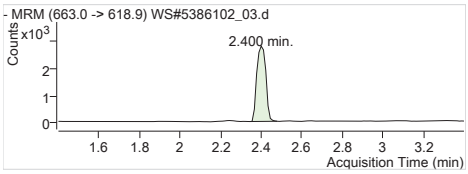



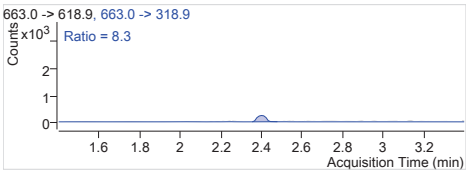

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.246)
Calc. conc. 1.64 µg/L
Area ratio: 0.71637
Sample type: Calibration



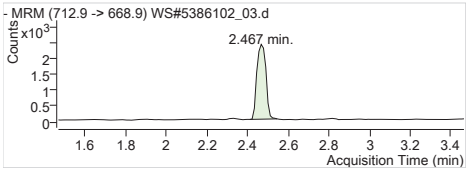



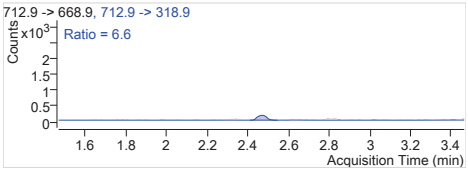

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 1.62 µg/L
Area ratio: 0.64245
Sample type: Calibration



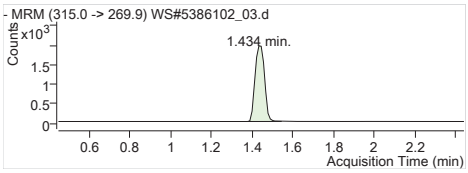



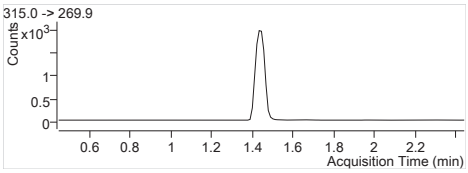

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 1.68 µg/L
Area ratio: 0.65668
Sample type: Calibration



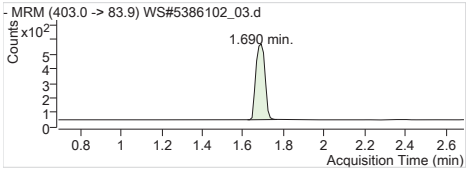



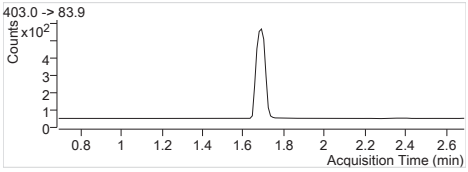

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 1.65 µg/L
Area ratio: 0.56124
Sample type: Calibration



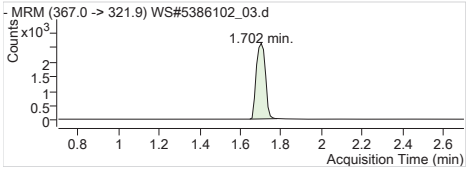



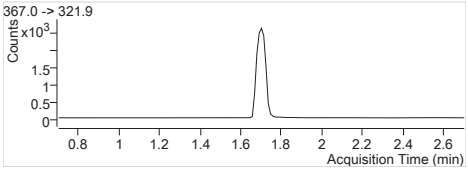

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 102.76 µg/L
Area ratio: 0.19970
Sample type: Calibration



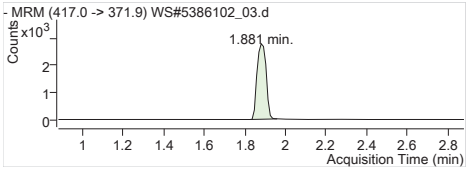



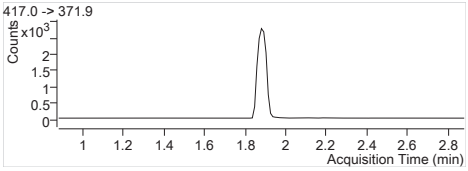

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 104.58 µg/L
Area ratio: 0.05200
Sample type: Calibration



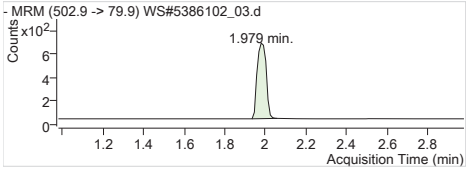



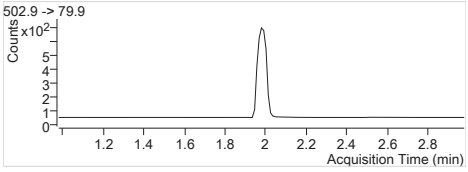

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 101.30 µg/L
Area ratio: 0.25780
Sample type: Calibration



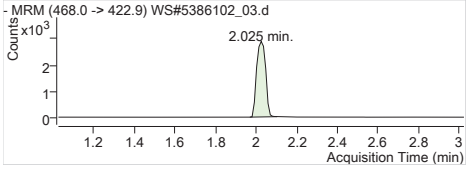



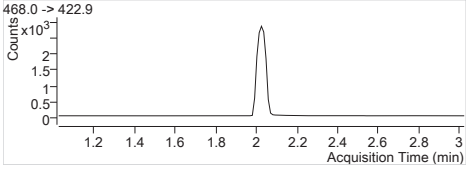

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 100.30 µg/L
Area ratio: 0.26926
Sample type: Calibration



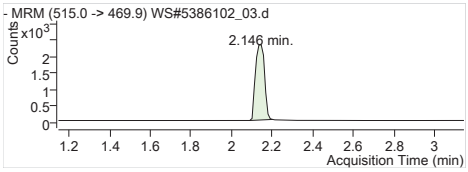



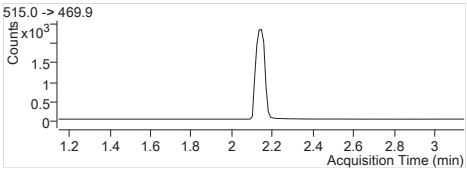

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 105.18 µg/L
Area ratio: 0.06369
Sample type: Calibration



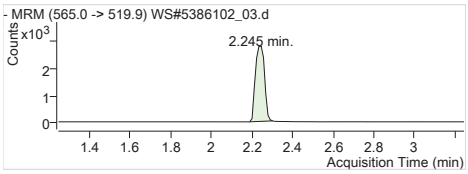



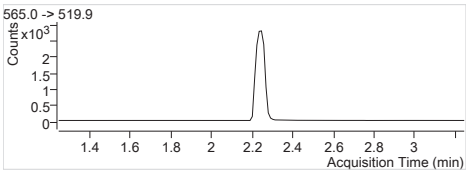

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 103.60 µg/L
Area ratio: 0.27759
Sample type: Calibration



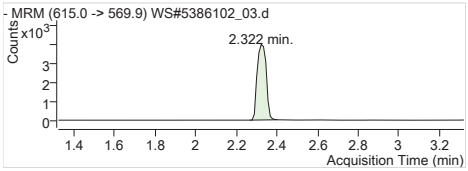



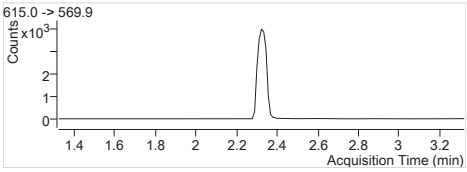

| | |
|---|---|
| **13C2-PFDA** | 515.0 -> 469.9 |
| RT (Exp. RT): | 2.146 (2.146) |
| Calc. conc. | 99.66 µg/L |
| Area ratio: | 0.16964 |
| Sample type: | Calibration |



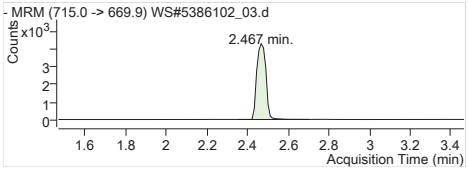



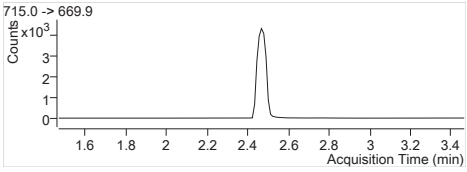

| | |
|---|---|
| **13C2-PFUnA** | 565.0 -> 519.9 |
| RT (Exp. RT): | 2.245 (2.245) |
| Calc. conc. | 101.15 µg/L |
| Area ratio: | 0.20417 |
| Sample type: | Calibration |



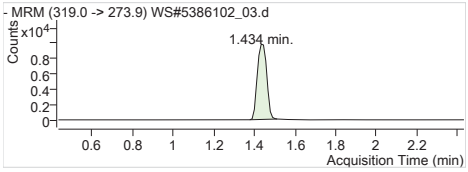



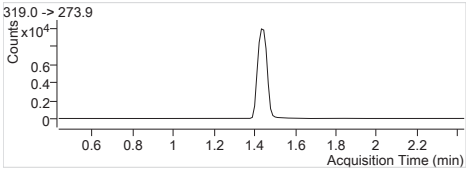

| | |
|---|---|
| **13C2-PFDoA** | 615.0 -> 569.9 |
| RT (Exp. RT): | 2.322 (2.322) |
| Calc. conc. | 102.65 µg/L |
| Area ratio: | 0.28763 |
| Sample type: | Calibration |



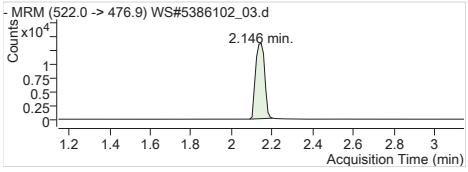



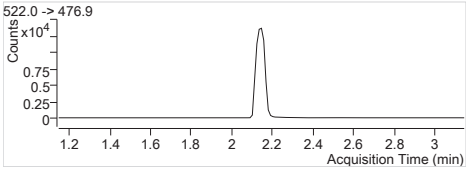

| | |
|---|---|
| **13C2-PFTeDA** | 715.0 -> 669.9 |
| RT (Exp. RT): | 2.467 (2.467) |
| Calc. conc. | 98.30 µg/L |
| Area ratio: | 0.31422 |
| Sample type: | Calibration |




| | |
|---|---|
| **13C6-PFHxA** | 319.0 -> 273.9 |
| RT (Exp. RT): | 1.434 (1.434) |
| Calc. conc. | 99.24 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |



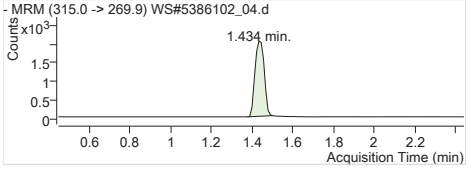

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 2.146 (2.146) |
| Calc. conc. | 104.32 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

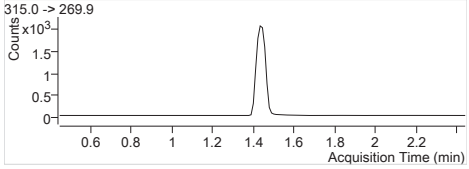
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 3** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_04.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D1 |
| **Acq. Date** | 2018/02/08 3:21:40 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

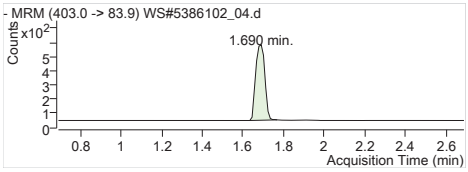
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6406 | 1.43 | 1 µg/L | | |
| MPFHxS | 1675 | 1.69 | 1 µg/L | | |
| MPFHpA | 8624 | 1.70 | 1 µg/L | | |
| MPFOA | 8909 | 1.88 | 1 µg/L | | |
| MPFOS | 2165 | 1.98 | 1 µg/L | | |
| MPFNA | 8912 | 2.02 | 1 µg/L | | |
| MPFDA | 7411 | 2.15 | 1 µg/L | | |
| MPFUnA | 8419 | 2.25 | 1 µg/L | | |
| MPFDoA | 11041 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13095 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 31926 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 40767 | 2.15 | 1 µg/L | | |

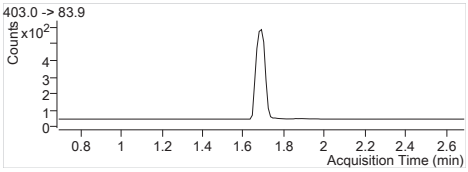
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 3474 | 1.10 | 5.00 | 4.94 µg/L | 98.74 |
| PFHxA 1 | 13004 | 1.43 | 5.00 | 5.07 µg/L | 101.45 |
| PFHxS 1 | 3485 | 1.68 | 5.00 | 4.98 µg/L | 99.63 |
| PFHpA 1 | 16931 | 1.70 | 5.00 | 5.01 µg/L | 100.16 |
| PFOA 1 | 17877 | 1.88 | 5.00 | 4.91 µg/L | 98.12 |
| PFOS 1 | 3588 | 1.98 | 5.00 | 4.59 µg/L | 91.87 |
| PFNA 1 | 16539 | 2.03 | 5.00 | 5.12 µg/L | 102.38 |
| PFDA 1 | 17246 | 2.15 | 5.00 | 4.80 µg/L | 96.01 |
| PFUnA 1 | 19018 | 2.25 | 5.00 | 4.91 µg/L | 98.19 |
| PFDoA 1 | 25147 | 2.32 | 5.00 | 5.53 µg/L | 110.63 |
| PFTrDA 1 | 28657 | 2.40 | 5.00 | 5.37 µg/L | 107.36 |
| PFTeDA 1 | 23410 | 2.47 | 5.00 | 5.16 µg/L | 103.25 |
| 13C2-PFHxA | 6406 | 1.43 | 100.00 | 103.25 µg/L | 103.25 |
| 18O2-PFHxS | 1675 | 1.69 | 100.00 | 105.52 µg/L | 105.52 |
| 13C4-PFHpA | 8624 | 1.70 | 100.00 | 106.15 µg/L | 106.15 |
| 13C4-PFOA | 8909 | 1.88 | 100.00 | 103.94 µg/L | 103.94 |
| 13C4-PFOS | 2165 | 1.98 | 100.00 | 112.00 µg/L | 112.00 |
| 13C5-PFNA | 8905 | 2.02 | 100.00 | 104.10 µg/L | 104.10 |
| 13C2-PFDA | 7232 | 2.15 | 100.00 | 104.22 µg/L | 104.22 |
| 13C2-PFUnA | 8419 | 2.25 | 100.00 | 102.32 µg/L | 102.32 |
| 13C2-PFDoA | 11041 | 2.32 | 100.00 | 96.65 µg/L | 96.65 |
| 13C2-PFTeDA | 13280 | 2.47 | 100.00 | 101.91 µg/L | 101.91 |
| 13C6-PFHxA | 31926 | 1.43 | 100.00 | 100.64 µg/L | 100.64 |
| 13C9-PFDA | 40767 | 2.15 | 100.00 | 100.52 µg/L | 100.52 |



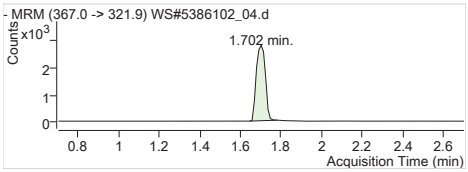



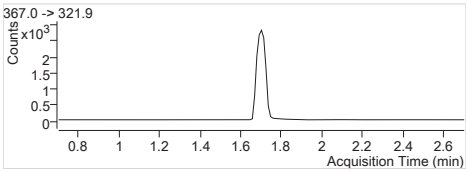

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.445)
Concentration: 1 µg/L
Sample type: Calibration



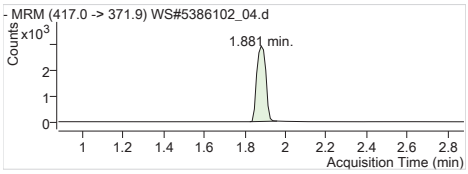



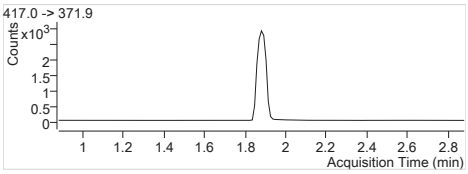

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Calibration



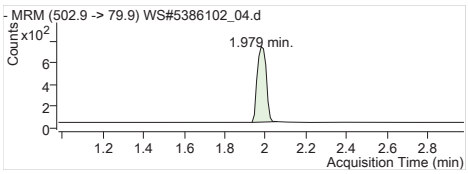



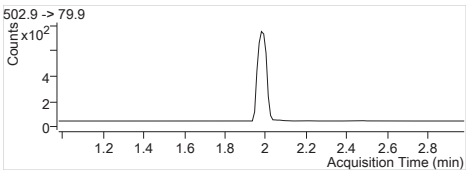

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: Calibration



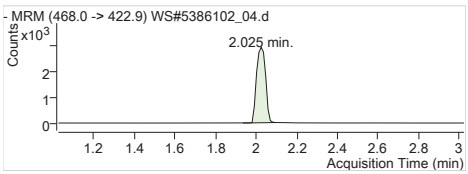



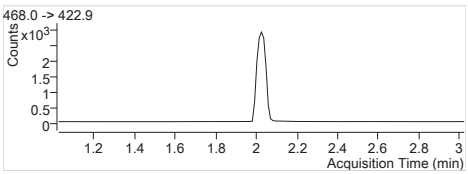

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



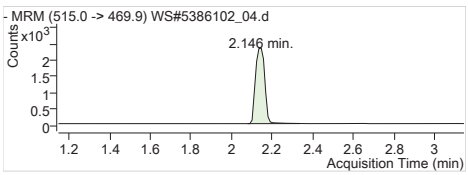



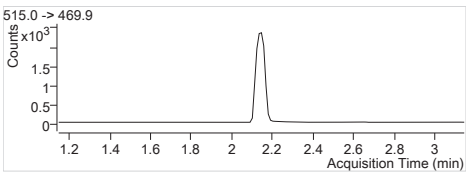

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



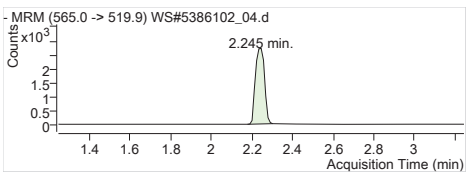



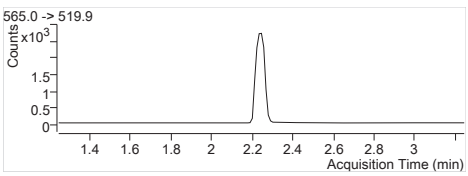

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: Calibration



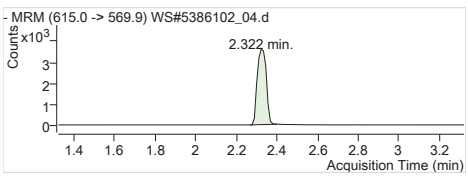



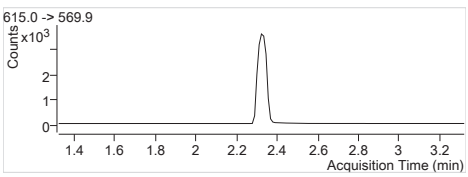

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



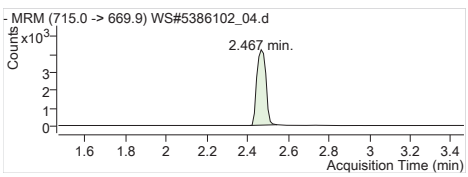



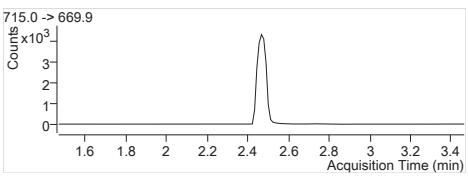

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Calibration



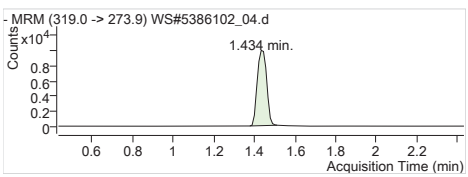



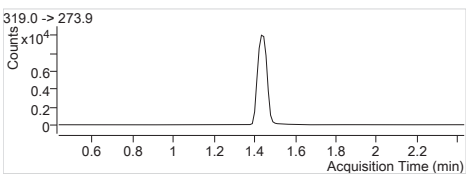

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



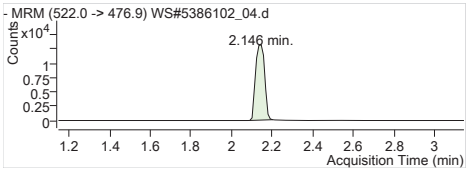



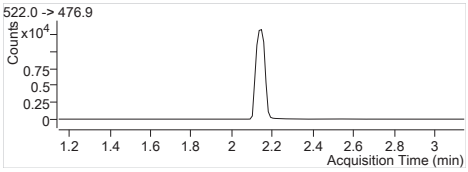

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



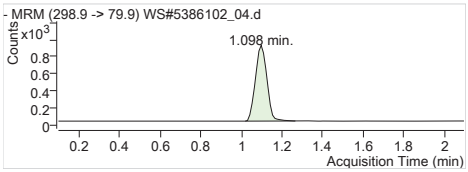



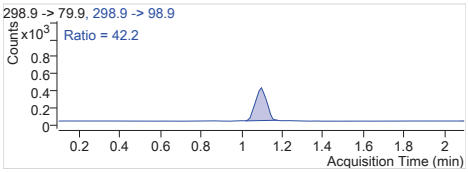

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



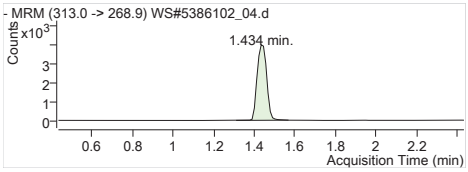



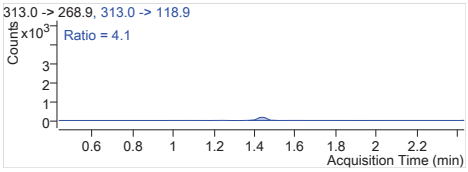

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



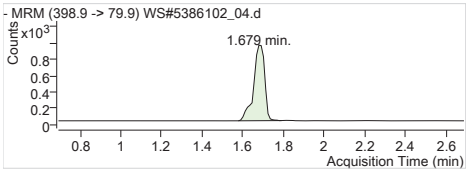



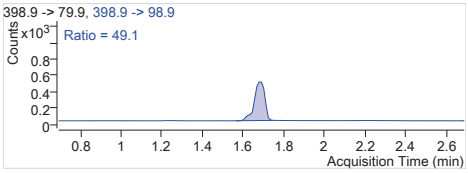

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.098 (1.098)
Calc. conc. 4.94 µg/L
Area ratio: 2.07403
Sample type: Calibration



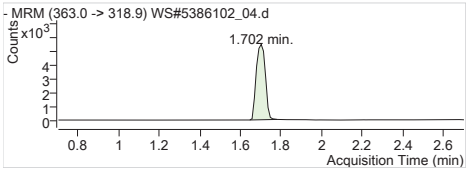



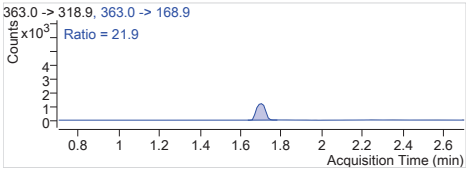

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 5.07 µg/L
Area ratio: 2.02997
Sample type: Calibration



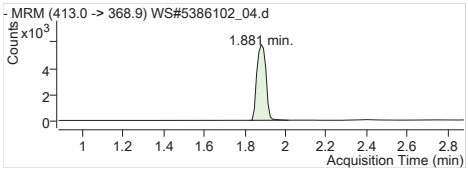



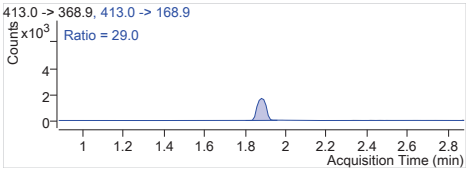

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.691)
Calc. conc. 4.98 µg/L
Area ratio: 2.08060
Sample type: Calibration



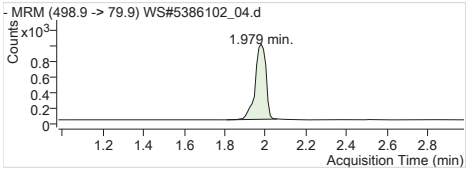



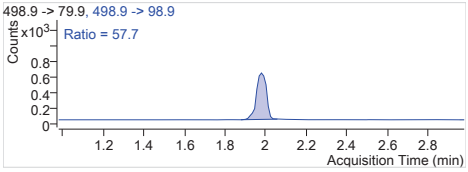

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 5.01 µg/L
Area ratio: 1.96324
Sample type: Calibration



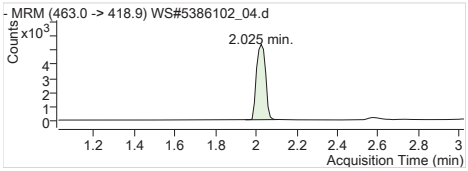



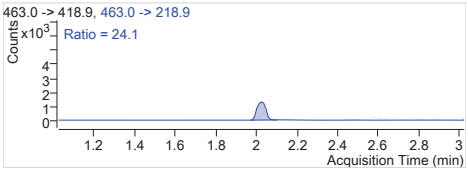

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 4.91 µg/L
Area ratio: 2.00662
Sample type: Calibration



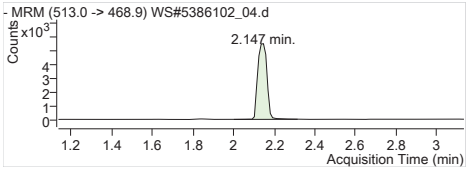



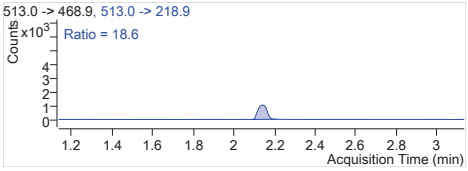

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 4.59 µg/L
Area ratio: 1.65727
Sample type: Calibration



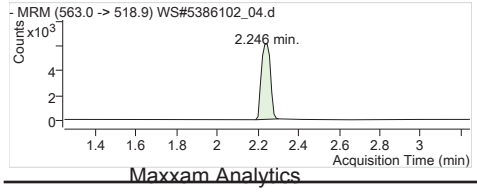



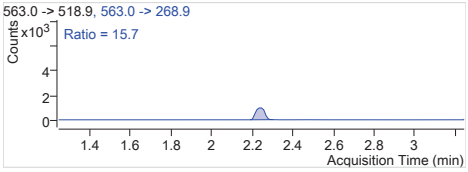

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 5.12 µg/L
Area ratio: 1.85581
Sample type: Calibration



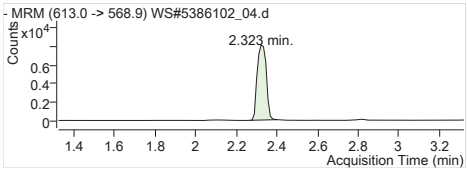



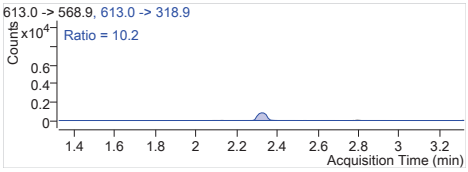

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.135)
Calc. conc. 4.80 µg/L
Area ratio: 2.32708
Sample type: Calibration



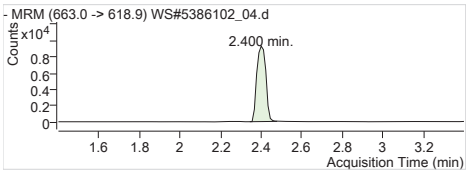



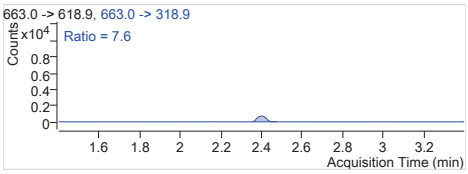

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 4.91 µg/L
Area ratio: 2.25894
Sample type: Calibration



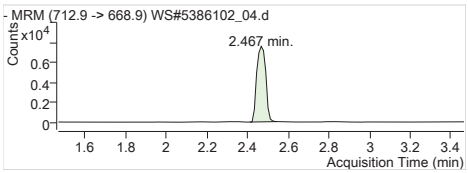



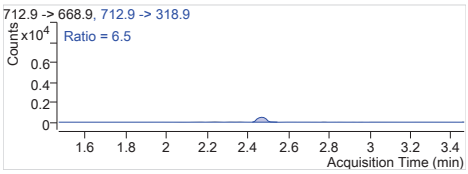

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 5.53 µg/L
Area ratio: 2.27760
Sample type: Calibration



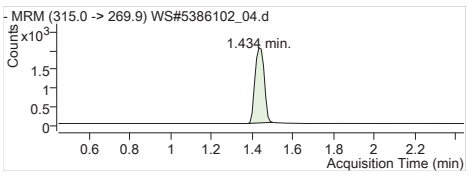



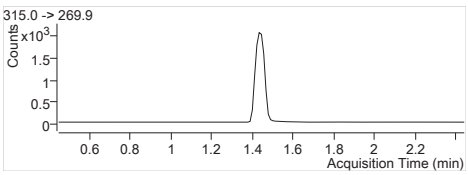

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 5.37 µg/L
Area ratio: 2.18839
Sample type: Calibration



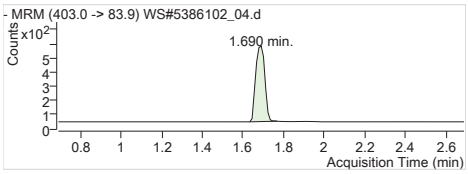



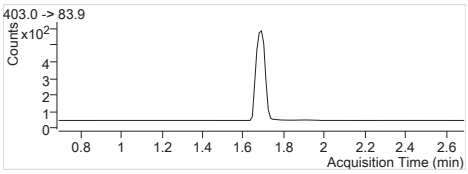

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 5.16 µg/L
Area ratio: 1.78771
Sample type: Calibration



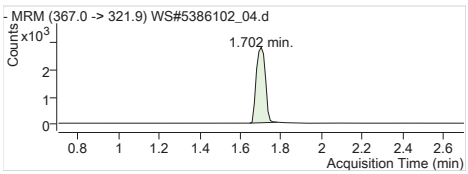



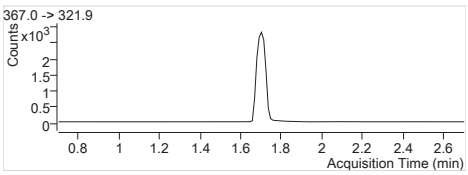

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 103.25 µg/L
Area ratio: 0.20065
Sample type: Calibration



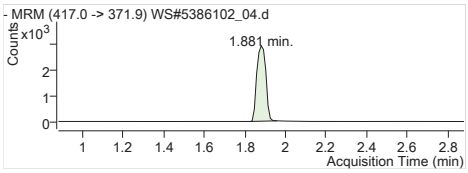



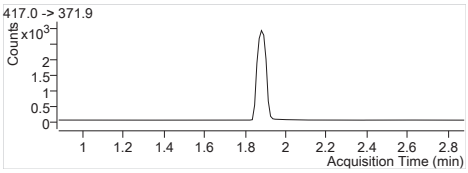

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 105.52 µg/L
Area ratio: 0.05247
Sample type: Calibration



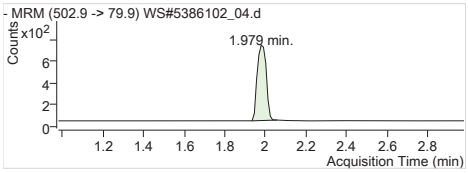



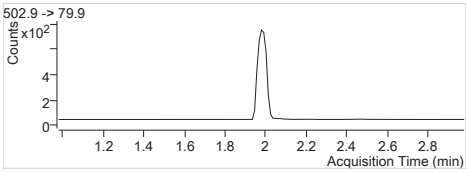

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 106.15 µg/L
Area ratio: 0.27012
Sample type: Calibration



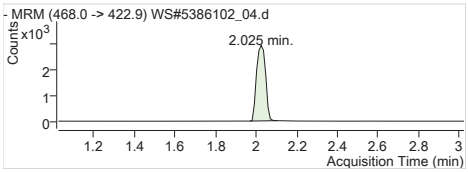



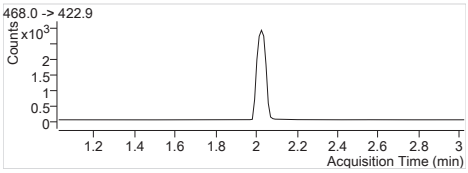

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 103.94 µg/L
Area ratio: 0.27905
Sample type: Calibration



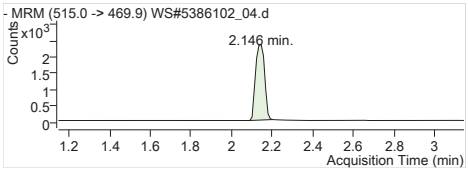



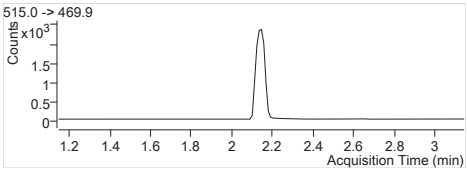

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 112.00 µg/L
Area ratio: 0.06781
Sample type: Calibration



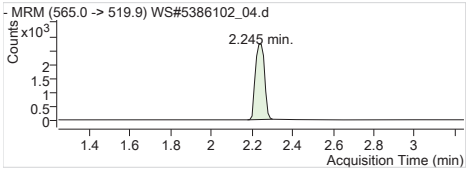



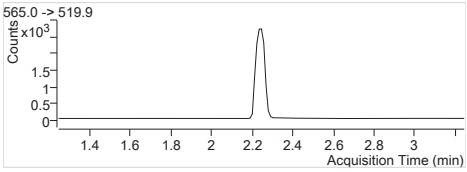

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 104.10 µg/L
Area ratio: 0.27893
Sample type: Calibration



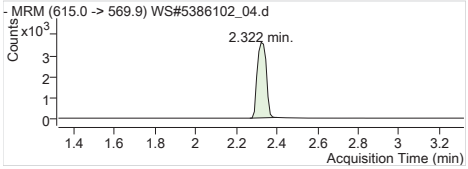



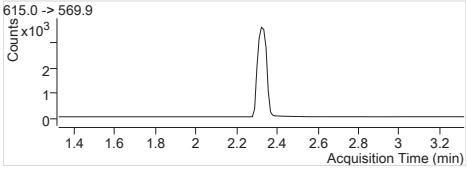

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 104.22 µg/L
Area ratio: 0.17740
Sample type: Calibration



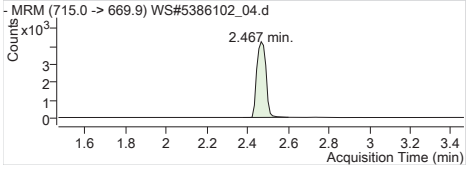



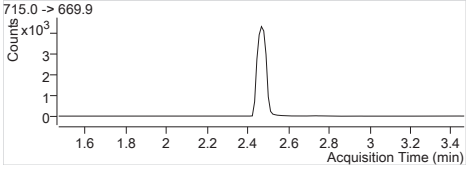

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 102.32 µg/L
Area ratio: 0.20652
Sample type: Calibration



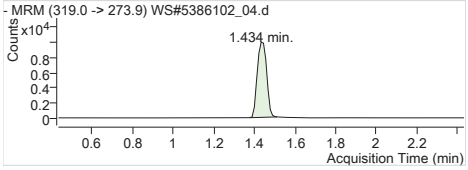



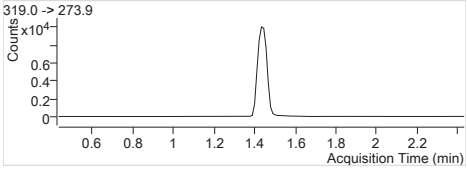

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 96.65 µg/L
Area ratio: 0.27083
Sample type: Calibration



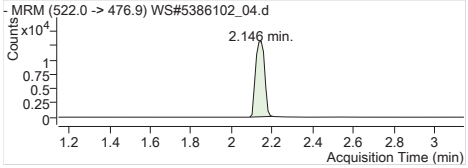



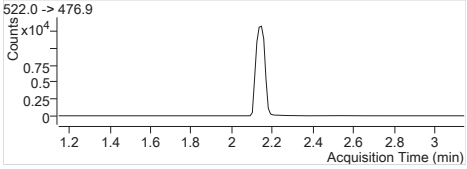

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 101.91 µg/L
Area ratio: 0.32575
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 100.64 µg/L
Area ratio: 0
Sample type: Calibration



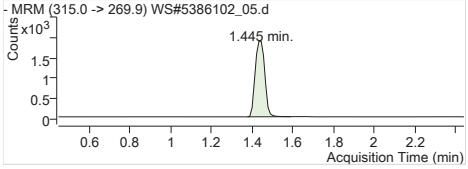

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 100.52 µg/L
Area ratio: 0
Sample type: Calibration

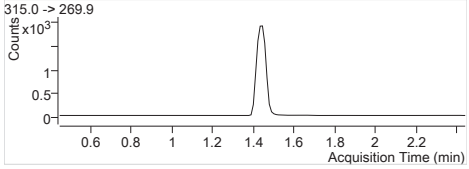
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 4** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_05.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D2 |
| **Acq. Date** | 2018/02/08 3:26:36 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

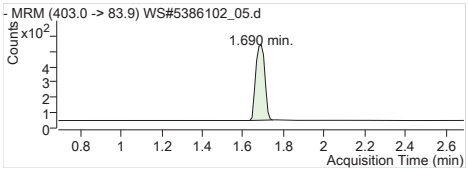
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6125 | 1.44 | 1 µg/L | | |
| MPFHxS | 1536 | 1.69 | 1 µg/L | | |
| MPFHpA | 8106 | 1.70 | 1 µg/L | | |
| MPFOA | 8318 | 1.88 | 1 µg/L | | |
| MPFOS | 1739 | 1.98 | 1 µg/L | | |
| MPFNA | 8270 | 2.02 | 1 µg/L | | |
| MPFDA | 7140 | 2.15 | 1 µg/L | | |
| MPFUnA | 8118 | 2.25 | 1 µg/L | | |
| MPFDoA | 11989 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13266 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 32806 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 41938 | 2.15 | 1 µg/L | | |

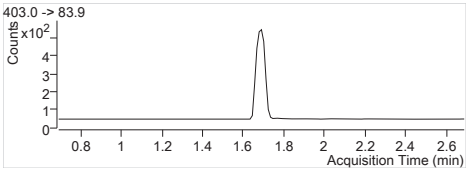
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 8497 | 1.10 | 12.50 | 13.07 µg/L | 104.53 |
| PFHxA 1 | 29662 | 1.43 | 12.50 | 11.97 µg/L | 95.79 |
| PFHxS 1 | 8086 | 1.69 | 12.50 | 12.68 µg/L | 101.48 |
| PFHpA 1 | 39741 | 1.70 | 12.50 | 12.40 µg/L | 99.21 |
| PFOA 1 | 42181 | 1.88 | 12.50 | 12.21 µg/L | 97.67 |
| PFOS 1 | 8472 | 1.98 | 12.50 | 13.29 µg/L | 106.33 |
| PFNA 1 | 37275 | 2.03 | 12.50 | 12.36 µg/L | 98.91 |
| PFDA 1 | 42674 | 2.14 | 12.50 | 12.35 µg/L | 98.78 |
| PFUnA 1 | 44484 | 2.25 | 12.50 | 11.74 µg/L | 93.95 |
| PFDoA 1 | 57101 | 2.32 | 12.50 | 11.48 µg/L | 91.87 |
| PFTrDA 1 | 62931 | 2.40 | 12.50 | 11.53 µg/L | 92.21 |
| PFTeDA 1 | 55599 | 2.47 | 12.50 | 12.04 µg/L | 96.28 |
| 13C2-PFHxA | 6125 | 1.44 | 100.00 | 96.08 µg/L | 96.08 |
| 18O2-PFHxS | 1536 | 1.69 | 100.00 | 94.17 µg/L | 94.17 |
| 13C4-PFHpA | 8106 | 1.70 | 100.00 | 97.10 µg/L | 97.10 |
| 13C4-PFOA | 8318 | 1.88 | 100.00 | 94.44 µg/L | 94.44 |
| 13C4-PFOS | 1739 | 1.98 | 100.00 | 87.55 µg/L | 87.55 |
| 13C5-PFNA | 8269 | 2.02 | 100.00 | 94.07 µg/L | 94.07 |
| 13C2-PFDA | 7017 | 2.15 | 100.00 | 98.30 µg/L | 98.30 |
| 13C2-PFUnA | 8118 | 2.25 | 100.00 | 95.90 µg/L | 95.90 |
| 13C2-PFDoA | 11989 | 2.32 | 100.00 | 102.02 µg/L | 102.02 |
| 13C2-PFTeDA | 13490 | 2.47 | 100.00 | 100.63 µg/L | 100.63 |
| 13C6-PFHxA | 32806 | 1.43 | 100.00 | 103.42 µg/L | 103.42 |
| 13C9-PFDA | 41938 | 2.15 | 100.00 | 103.41 µg/L | 103.41 |



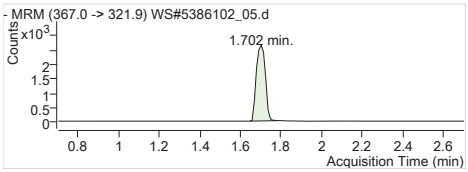



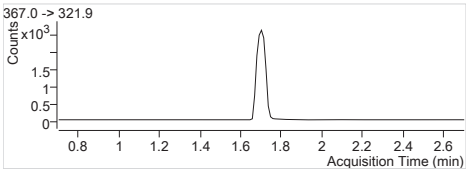

**MPFHxA** Internal Standard
RT (Exp. RT): 1.445 (1.445)
Concentration: 1 µg/L
Sample type: Calibration



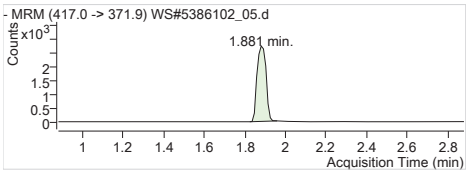



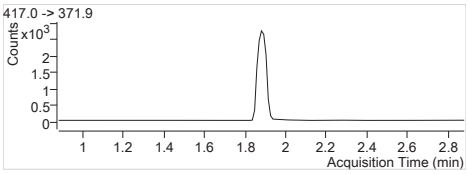

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Calibration



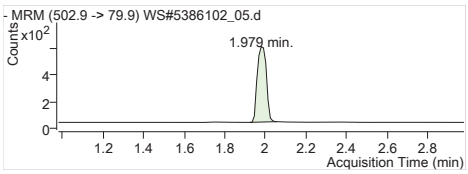



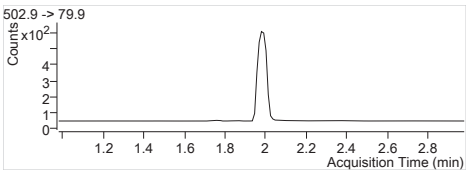

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: Calibration



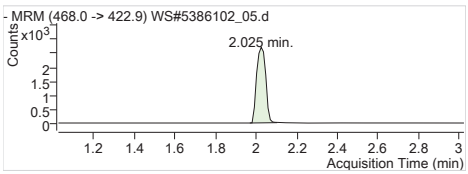



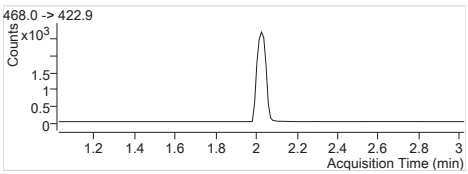

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



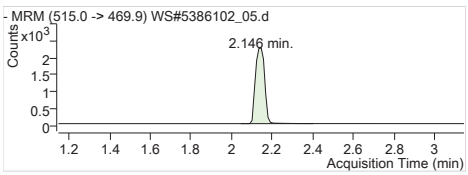



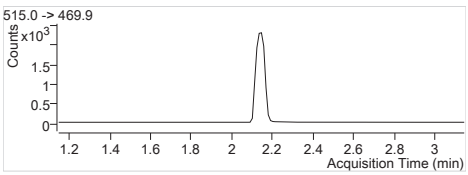

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



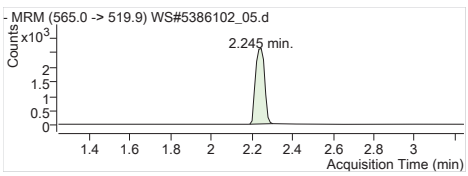



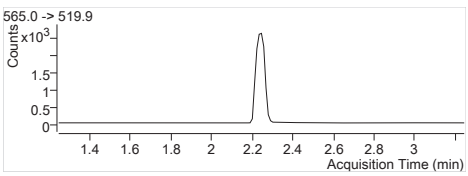

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: Calibration



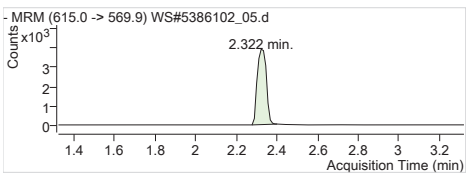



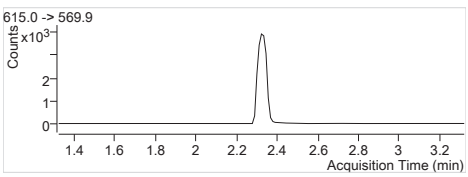

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



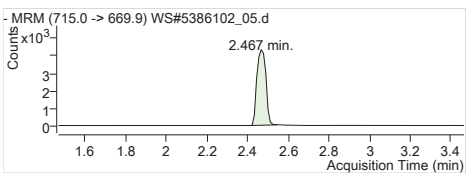



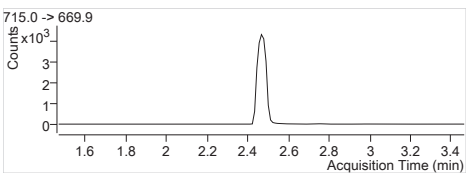

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Calibration



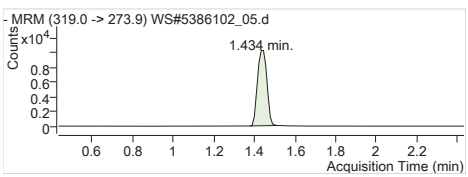



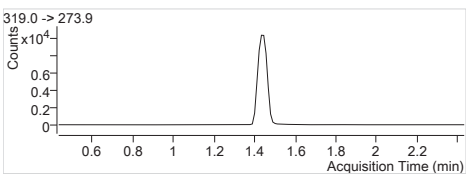

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



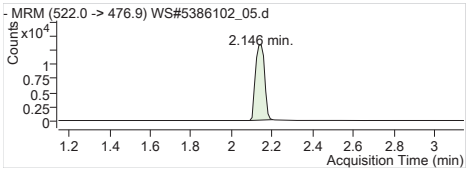



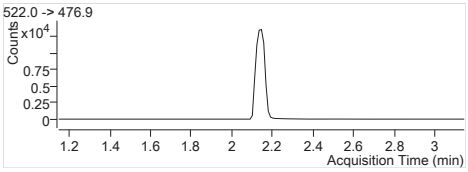

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



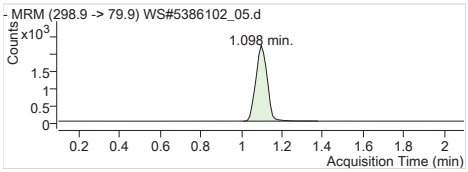



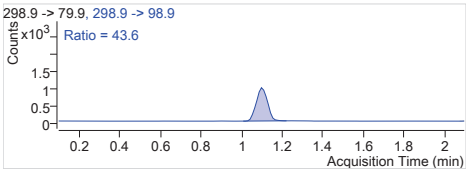

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



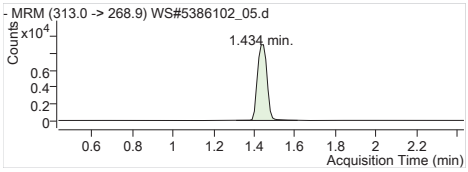



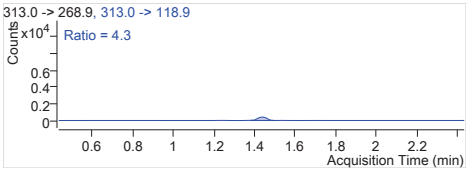

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



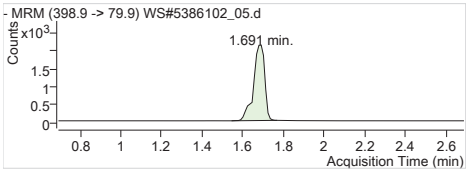



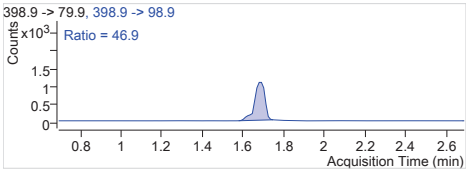

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.098 (1.098)
Calc. conc. 13.07 µg/L
Area ratio: 5.53190
Sample type: Calibration



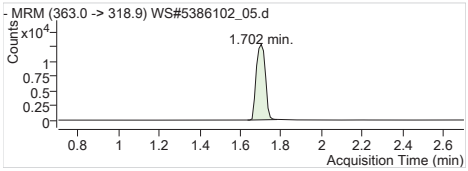



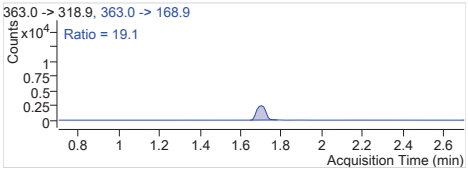

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 11.97 µg/L
Area ratio: 4.84278
Sample type: Calibration



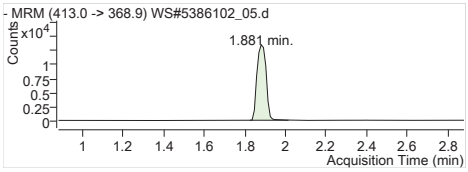



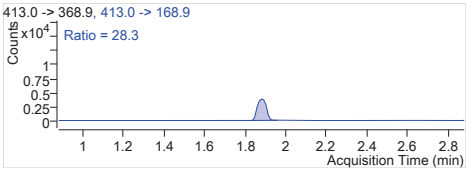

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.68 µg/L
Area ratio: 5.26432
Sample type: Calibration



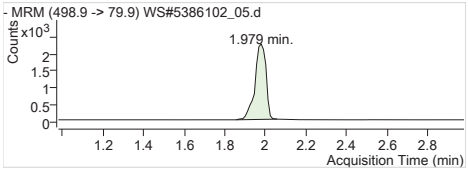



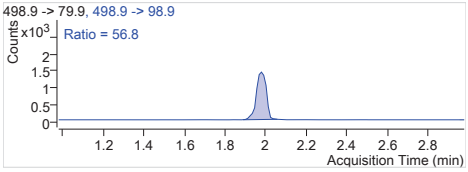

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 12.40 µg/L
Area ratio: 4.90266
Sample type: Calibration



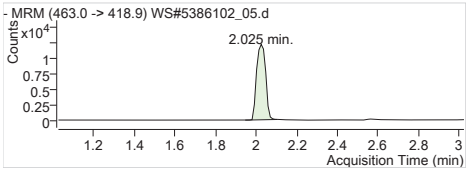



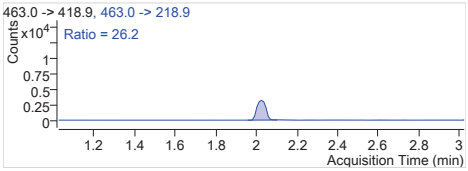

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 12.21 µg/L
Area ratio: 5.07105
Sample type: Calibration



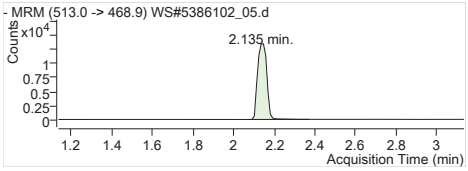



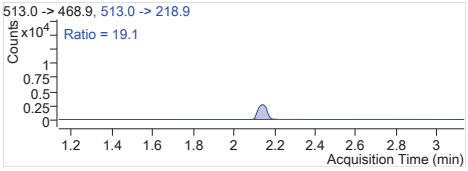

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 13.29 µg/L
Area ratio: 4.87177
Sample type: Calibration



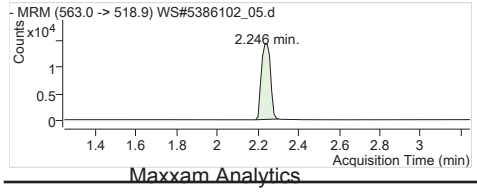



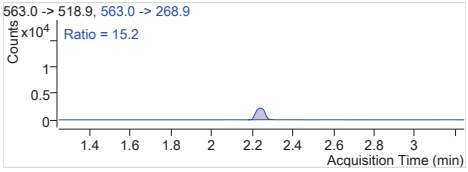

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 12.36 µg/L
Area ratio: 4.50726
Sample type: Calibration



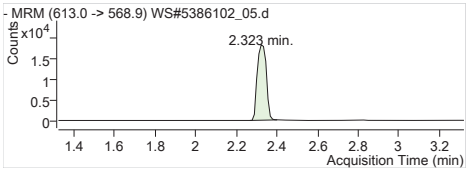



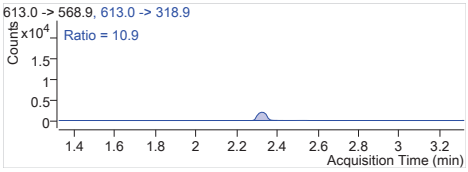

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 12.35 µg/L
Area ratio: 5.97675
Sample type: Calibration



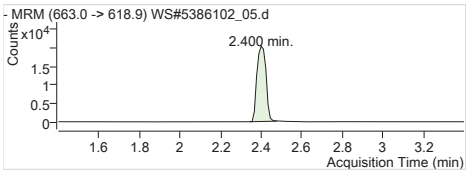



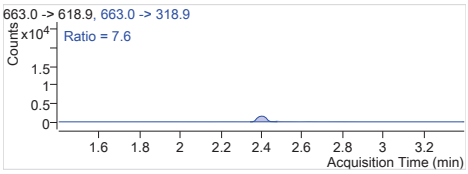

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 11.74 µg/L
Area ratio: 5.47967
Sample type: Calibration



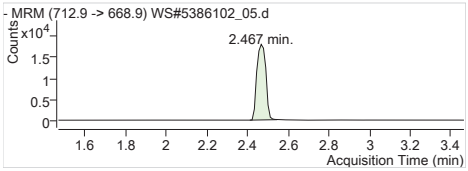



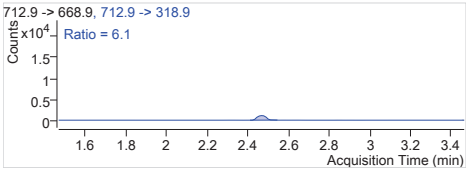

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 11.48 µg/L
Area ratio: 4.76278
Sample type: Calibration



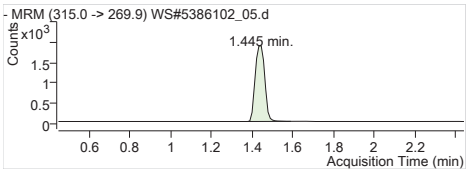



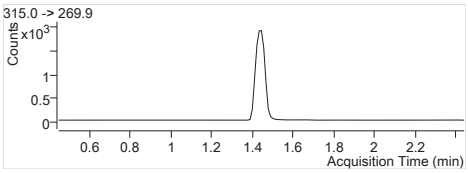

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 11.53 µg/L
Area ratio: 4.74378
Sample type: Calibration



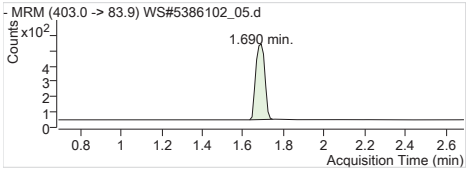



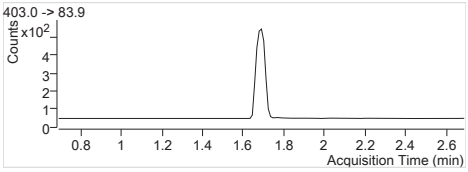

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 12.04 µg/L
Area ratio: 4.19109
Sample type: Calibration



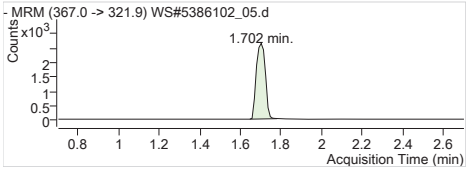



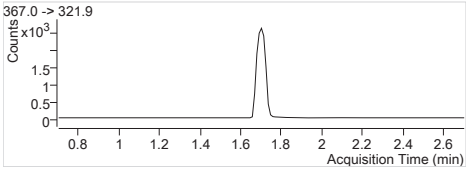

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.445 (1.445)
Calc. conc. 96.08 µg/L
Area ratio: 0.18670
Sample type: Calibration



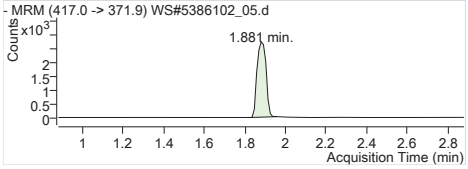



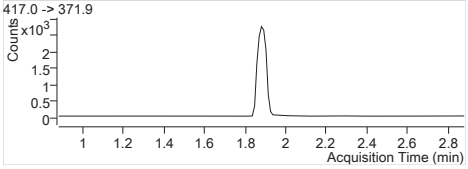

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 94.17 µg/L
Area ratio: 0.04682
Sample type: Calibration



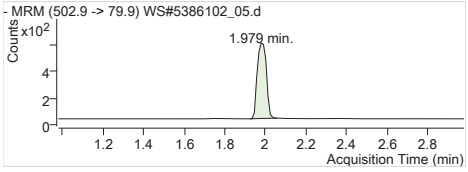



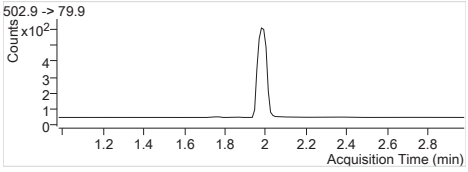

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 97.10 µg/L
Area ratio: 0.24709
Sample type: Calibration



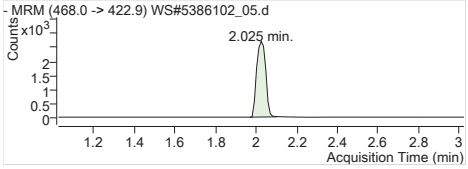



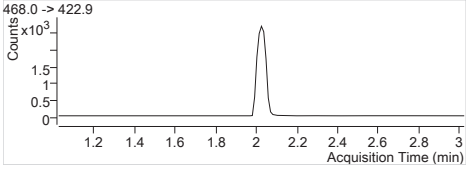

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 94.44 µg/L
Area ratio: 0.25355
Sample type: Calibration



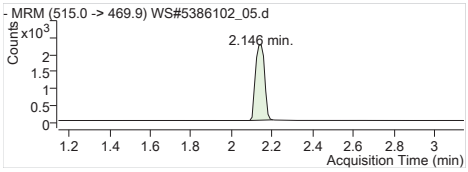



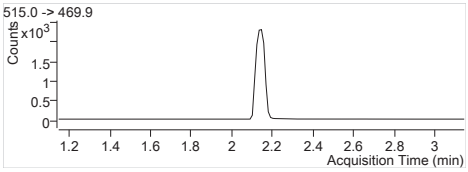

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 87.55 µg/L
Area ratio: 0.05301
Sample type: Calibration



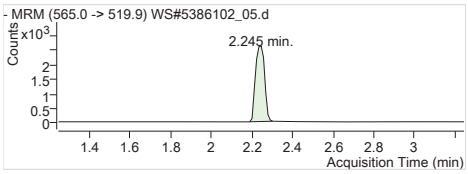



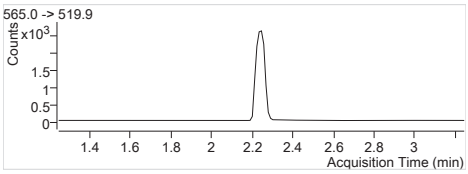

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 94.07 µg/L
Area ratio: 0.25206
Sample type: Calibration



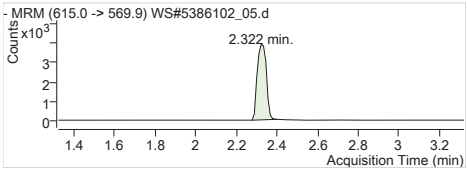



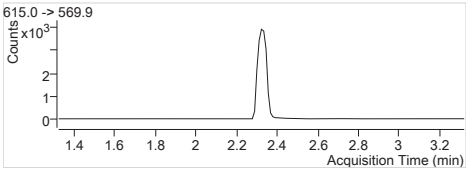

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 98.30 µg/L
Area ratio: 0.16732
Sample type: Calibration



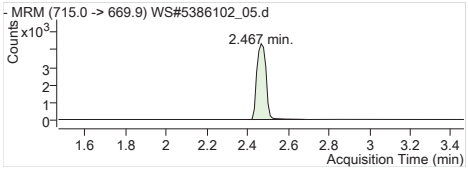



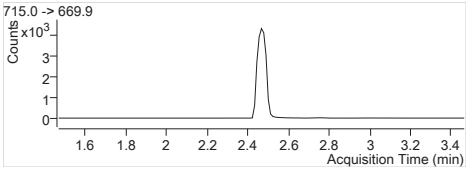

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 95.90 µg/L
Area ratio: 0.19357
Sample type: Calibration



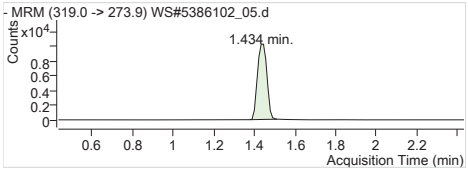



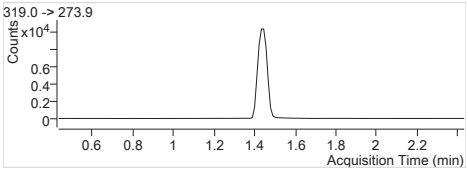

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 102.02 µg/L
Area ratio: 0.28587
Sample type: Calibration



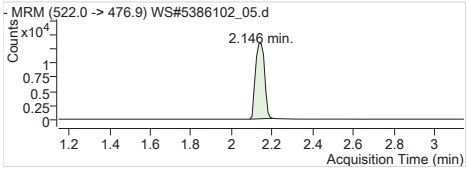



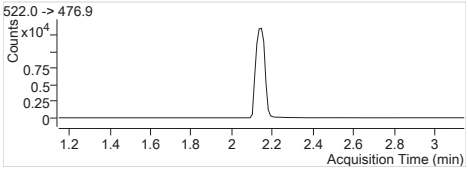

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 100.63 µg/L
Area ratio: 0.32167
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 103.42 µg/L
Area ratio: 0
Sample type: Calibration



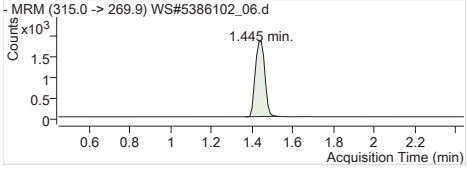

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 103.41 µg/L
Area ratio: 0
Sample type: Calibration

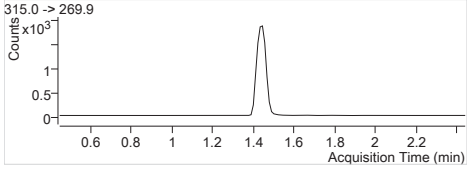
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 5** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_06.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D3 |
| **Acq. Date** | 2018/02/08 3:31:32 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

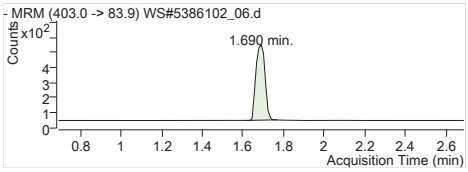
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5939 | 1.44 | 1 µg/L | | |
| MPFHxS | 1560 | 1.69 | 1 µg/L | | |
| MPFHpA | 7782 | 1.70 | 1 µg/L | | |
| MPFOA | 8479 | 1.88 | 1 µg/L | | |
| MPFOS | 1893 | 1.98 | 1 µg/L | | |
| MPFNA | 8438 | 2.02 | 1 µg/L | | |
| MPFDA | 6929 | 2.15 | 1 µg/L | | |
| MPFUnA | 7581 | 2.25 | 1 µg/L | | |
| MPFDoA | 11015 | 2.32 | 1 µg/L | | |
| MPFTeDA | 11987 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 31504 | 1.44 | 1 µg/L | | |
| 13C9-PFDA IS | 39393 | 2.15 | 1 µg/L | | |

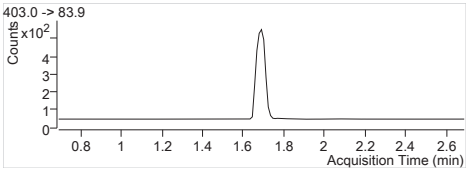
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 16101 | 1.10 | 25.00 | 24.32 µg/L | 97.30 |
| PFHxA 1 | 59203 | 1.45 | 25.00 | 24.55 µg/L | 98.20 |
| PFHxS 1 | 15866 | 1.69 | 25.00 | 24.55 µg/L | 98.22 |
| PFHpA 1 | 75218 | 1.70 | 25.00 | 24.38 µg/L | 97.53 |
| PFOA 1 | 85357 | 1.88 | 25.00 | 24.12 µg/L | 96.46 |
| PFOS 1 | 16897 | 1.98 | 25.00 | 24.26 µg/L | 97.05 |
| PFNA 1 | 74127 | 2.03 | 25.00 | 24.05 µg/L | 96.20 |
| PFDA 1 | 82723 | 2.15 | 25.00 | 24.68 µg/L | 98.70 |
| PFUnA 1 | 87330 | 2.25 | 25.00 | 24.56 µg/L | 98.25 |
| PFDoA 1 | 108804 | 2.32 | 25.00 | 23.73 µg/L | 94.94 |
| PFTrDA 1 | 124952 | 2.40 | 25.00 | 25.22 µg/L | 100.86 |
| PFTeDA 1 | 102650 | 2.47 | 25.00 | 24.54 µg/L | 98.16 |
| 13C2-PFHxA | 5939 | 1.44 | 100.00 | 97.01 µg/L | 97.01 |
| 18O2-PFHxS | 1560 | 1.69 | 100.00 | 99.60 µg/L | 99.60 |
| 13C4-PFHpA | 7782 | 1.70 | 100.00 | 97.07 µg/L | 97.07 |
| 13C4-PFOA | 8479 | 1.88 | 100.00 | 100.25 µg/L | 100.25 |
| 13C4-PFOS | 1893 | 1.98 | 100.00 | 99.24 µg/L | 99.24 |
| 13C5-PFNA | 8439 | 2.02 | 100.00 | 99.97 µg/L | 99.97 |
| 13C2-PFDA | 6749 | 2.15 | 100.00 | 100.66 µg/L | 100.66 |
| 13C2-PFUnA | 7581 | 2.25 | 100.00 | 95.35 µg/L | 95.35 |
| 13C2-PFDoA | 11015 | 2.32 | 100.00 | 99.79 µg/L | 99.79 |
| 13C2-PFTeDA | 12212 | 2.47 | 100.00 | 96.98 µg/L | 96.98 |
| 13C6-PFHxA | 31504 | 1.44 | 100.00 | 99.31 µg/L | 99.31 |
| 13C9-PFDA | 39393 | 2.15 | 100.00 | 97.14 µg/L | 97.14 |



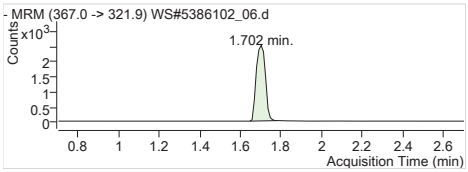



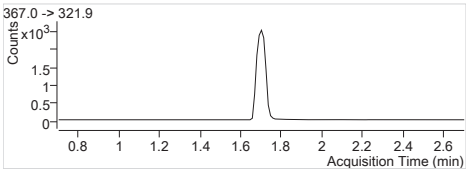

**MPFHxA** Internal Standard
RT (Exp. RT): 1.445 (1.445)
Concentration: 1 µg/L
Sample type: Calibration



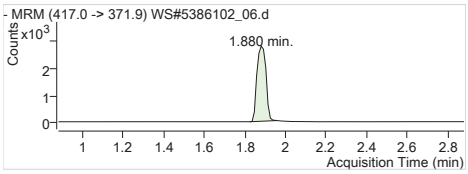



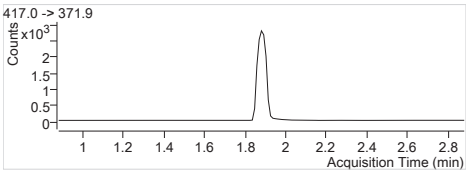

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Calibration



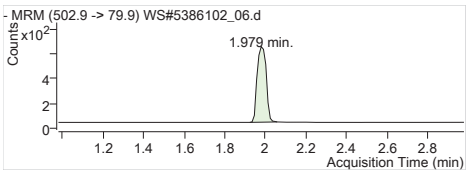



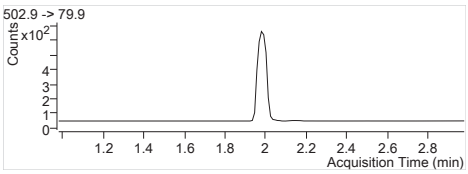

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: Calibration



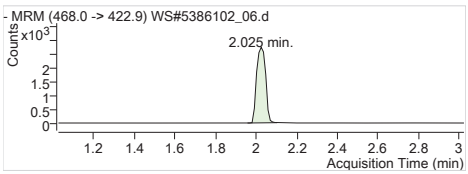



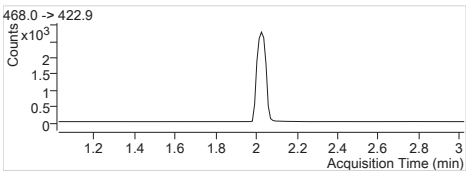

**MPFOA** Internal Standard
RT (Exp. RT): 1.880 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



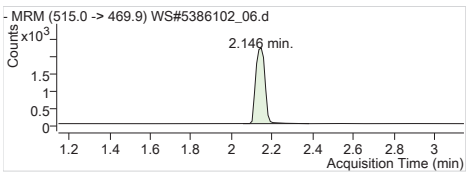



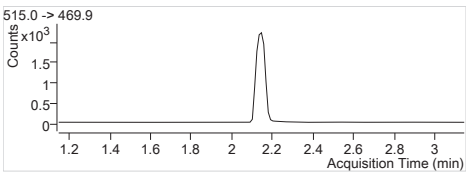

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



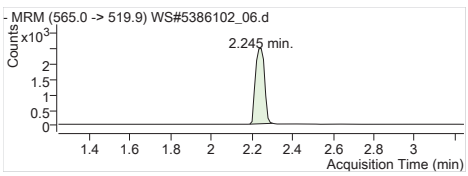



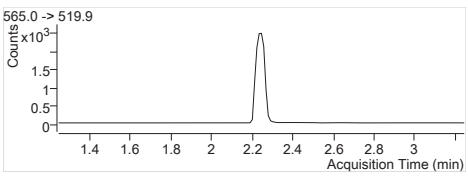

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: Calibration



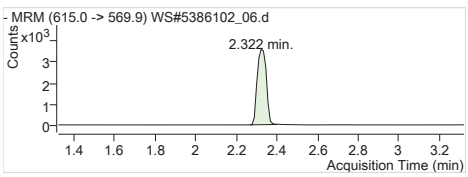



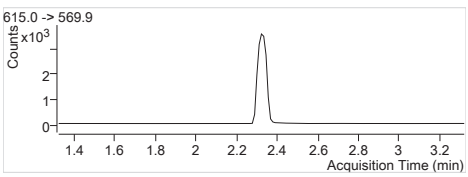

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



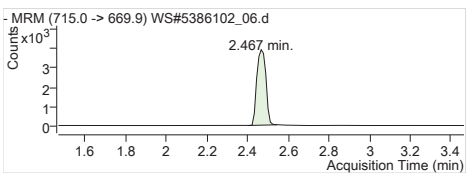



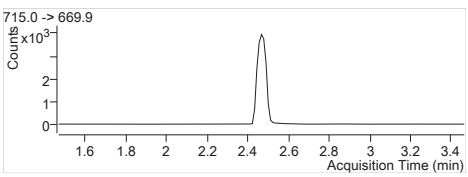

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Calibration



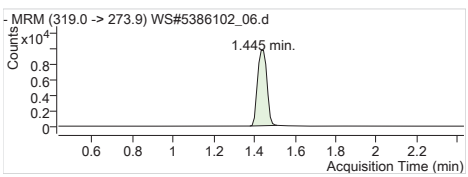



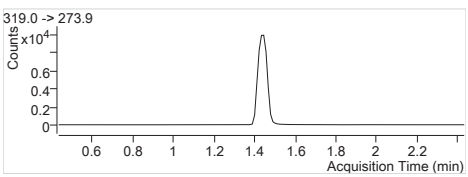

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



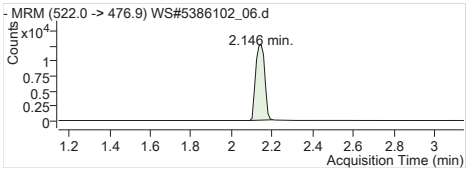



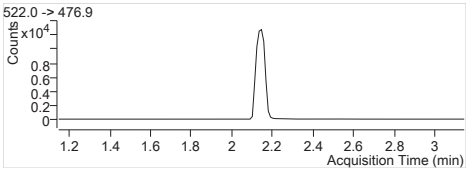

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



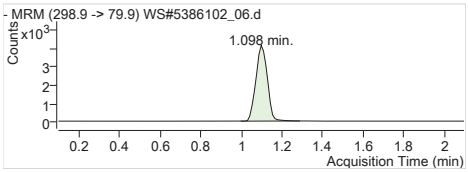



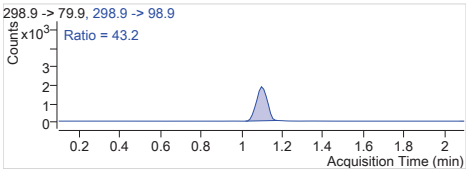

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.445 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



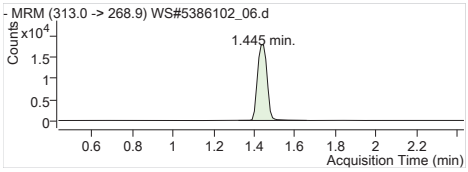



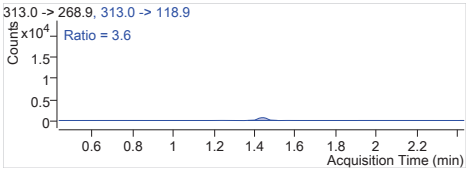

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



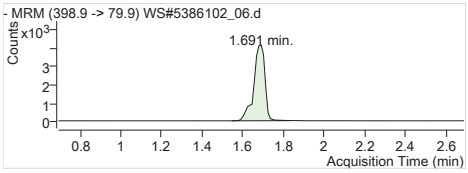



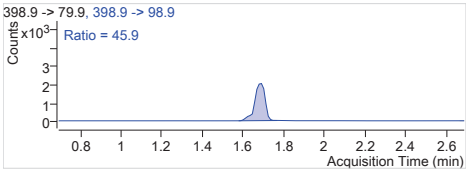

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.098 (1.098)
Calc. conc. 24.32 µg/L
Area ratio: 10.32115
Sample type: Calibration



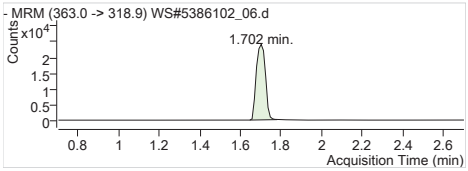



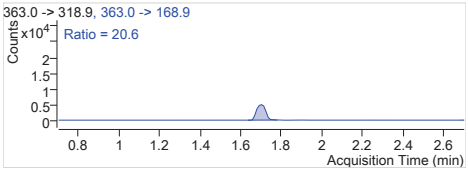

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.445 (1.434)
Calc. conc. 24.55 µg/L
Area ratio: 9.96851
Sample type: Calibration



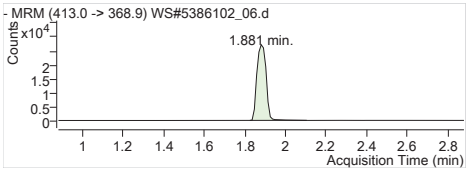



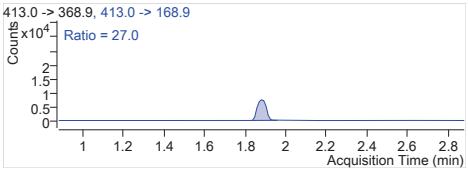

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 24.55 µg/L
Area ratio: 10.17051
Sample type: Calibration



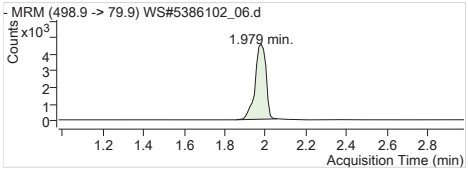



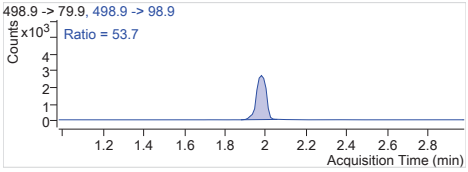

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 24.38 µg/L
Area ratio: 9.66564
Sample type: Calibration



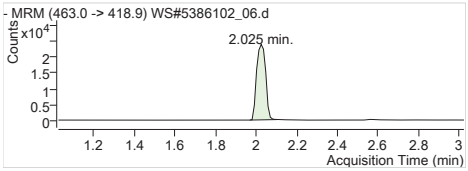



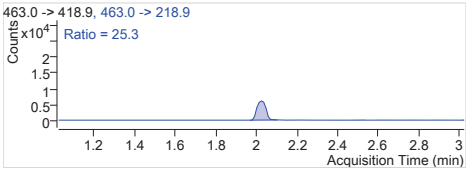

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 24.12 µg/L
Area ratio: 10.06687
Sample type: Calibration



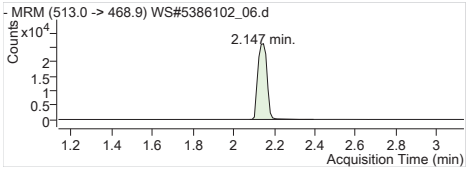



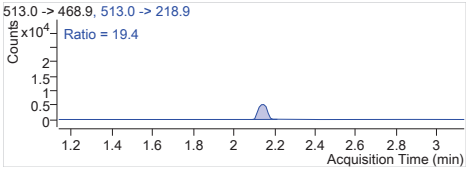

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 24.26 µg/L
Area ratio: 8.92604
Sample type: Calibration



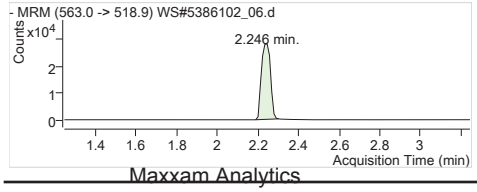



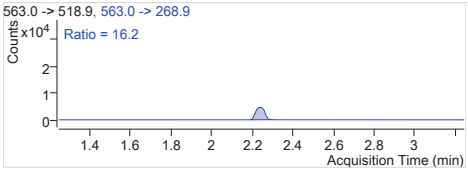

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 24.05 µg/L
Area ratio: 8.78490
Sample type: Calibration



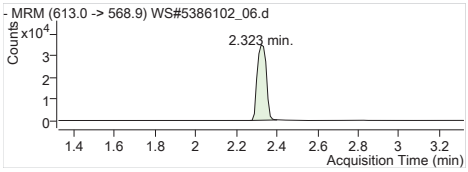



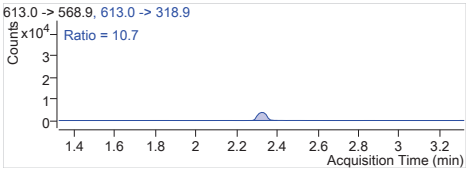

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.135)
Calc. conc. 24.68 µg/L
Area ratio: 11.93866
Sample type: Calibration



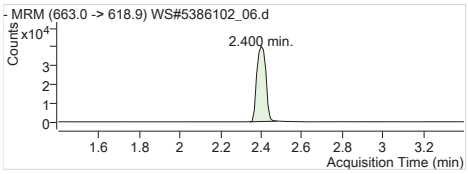



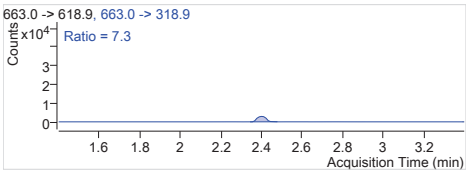

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 24.56 µg/L
Area ratio: 11.51959
Sample type: Calibration



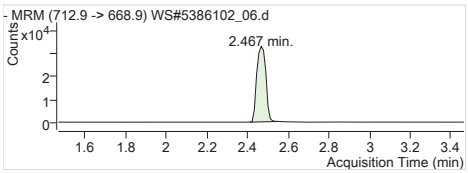



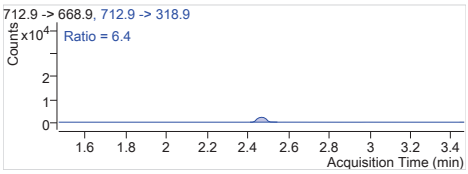

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.323 (2.323) |
| Calc. conc. | 23.73 µg/L |
| Area ratio: | 9.87780 |
| Sample type: | Calibration |



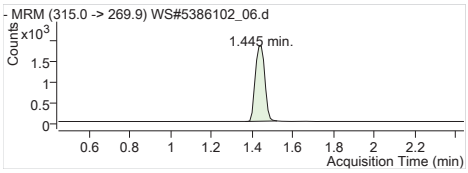



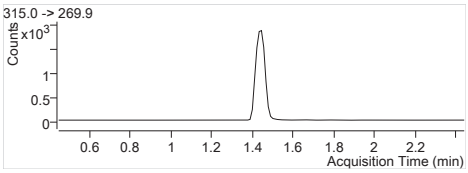

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.400 (2.400) |
| Calc. conc. | 25.22 µg/L |
| Area ratio: | 10.42396 |
| Sample type: | Calibration |



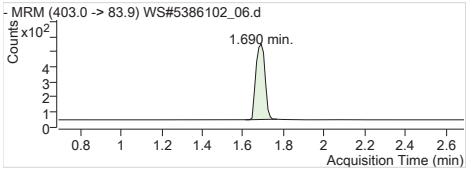



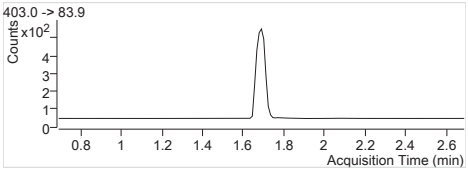

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.467 (2.467) |
| Calc. conc. | 24.54 µg/L |
| Area ratio: | 8.56344 |
| Sample type: | Calibration |



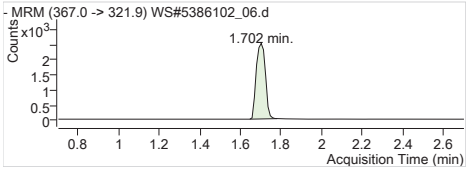



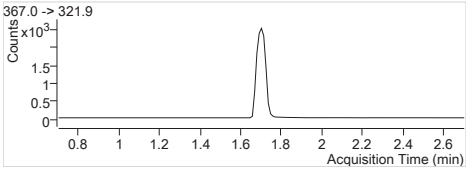

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.445 (1.445) |
| Calc. conc. | 97.01 µg/L |
| Area ratio: | 0.18852 |
| Sample type: | Calibration |



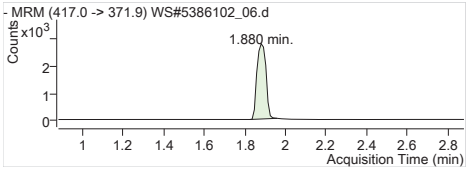



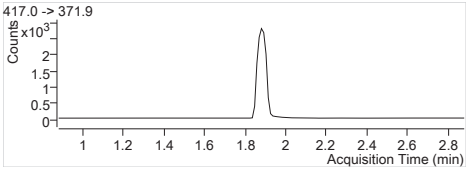

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 99.60 µg/L |
| Area ratio: | 0.04952 |
| Sample type: | Calibration |



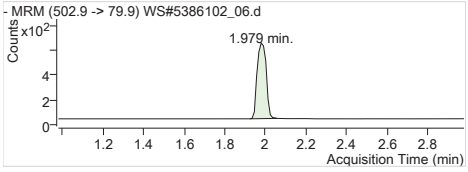



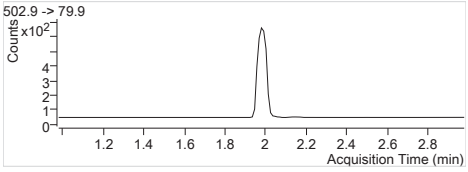

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.702 (1.702) |
| Calc. conc. | 97.07 µg/L |
| Area ratio: | 0.24702 |
| Sample type: | Calibration |



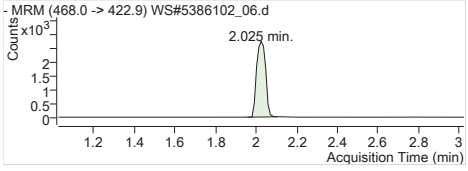



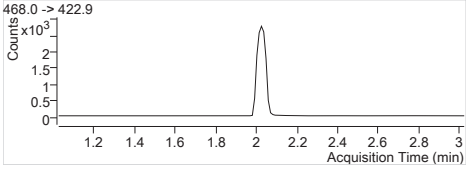

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.880 (1.881) |
| Calc. conc. | 100.25 µg/L |
| Area ratio: | 0.26914 |
| Sample type: | Calibration |



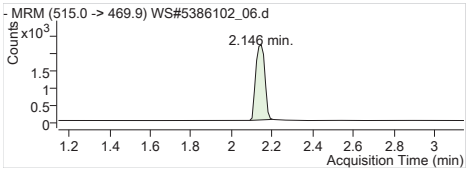



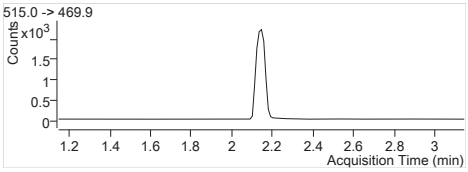

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.979 (1.979) |
| Calc. conc. | 99.24 µg/L |
| Area ratio: | 0.06009 |
| Sample type: | Calibration |



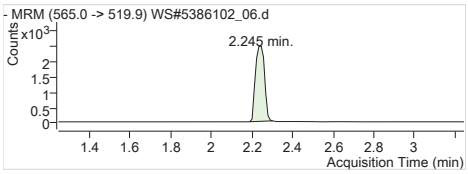



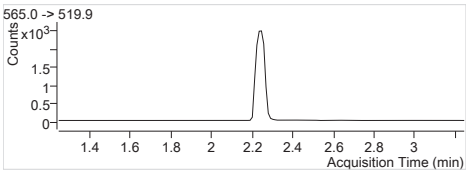

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.025 (2.025) |
| Calc. conc. | 99.97 µg/L |
| Area ratio: | 0.26787 |
| Sample type: | Calibration |



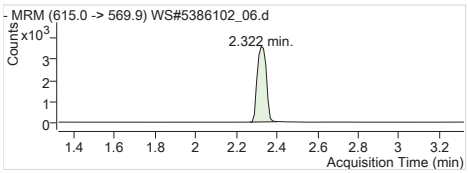



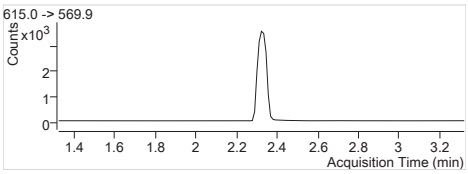

| | |
|---|---|
| **13C2-PFDA** | 515.0 -> 469.9 |
| RT (Exp. RT): | 2.146 (2.146) |
| Calc. conc. | 100.66 µg/L |
| Area ratio: | 0.17132 |
| Sample type: | Calibration |



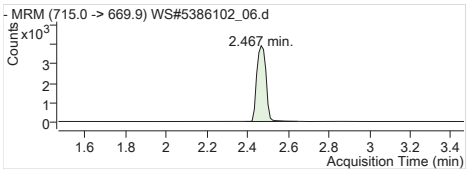



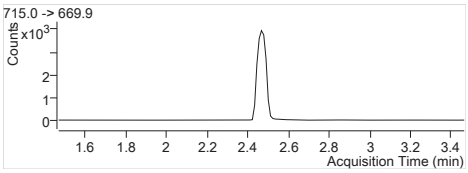

| | |
|---|---|
| **13C2-PFUnA** | 565.0 -> 519.9 |
| RT (Exp. RT): | 2.245 (2.245) |
| Calc. conc. | 95.35 µg/L |
| Area ratio: | 0.19245 |
| Sample type: | Calibration |



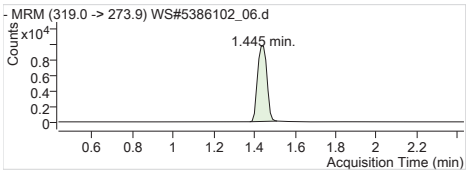



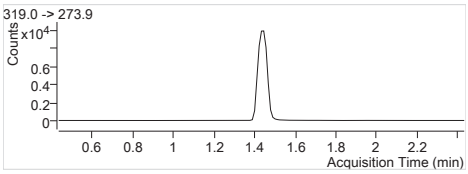

| | |
|---|---|
| **13C2-PFDoA** | 615.0 -> 569.9 |
| RT (Exp. RT): | 2.322 (2.322) |
| Calc. conc. | 99.79 µg/L |
| Area ratio: | 0.27962 |
| Sample type: | Calibration |



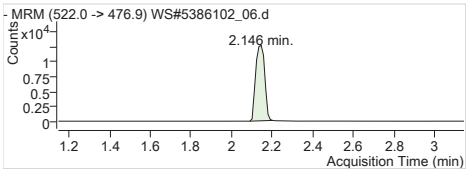



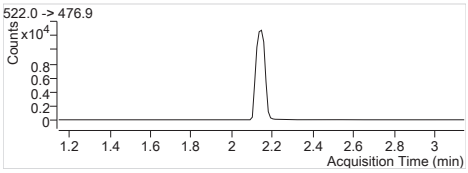

| | |
|---|---|
| **13C2-PFTeDA** | 715.0 -> 669.9 |
| RT (Exp. RT): | 2.467 (2.467) |
| Calc. conc. | 96.98 µg/L |
| Area ratio: | 0.31000 |
| Sample type: | Calibration |




| | |
|---|---|
| **13C6-PFHxA** | 319.0 -> 273.9 |
| RT (Exp. RT): | 1.445 (1.434) |
| Calc. conc. | 99.31 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |



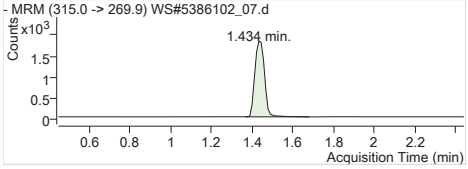

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 2.146 (2.146) |
| Calc. conc. | 97.14 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

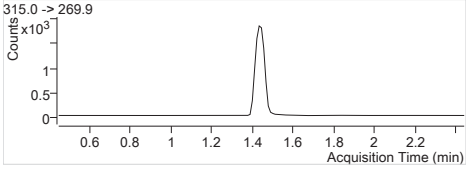
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 6** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_07.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D4 |
| **Acq. Date** | 2018/02/08 3:36:28 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

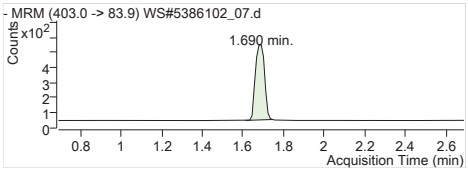
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5939 | 1.43 | 1 µg/L | | |
| MPFHxS | 1579 | 1.69 | 1 µg/L | | |
| MPFHpA | 7788 | 1.70 | 1 µg/L | | |
| MPFOA | 8175 | 1.88 | 1 µg/L | | |
| MPFOS | 1856 | 1.98 | 1 µg/L | | |
| MPFNA | 8278 | 2.02 | 1 µg/L | | |
| MPFDA | 6390 | 2.15 | 1 µg/L | | |
| MPFUnA | 7714 | 2.25 | 1 µg/L | | |
| MPFDoA | 10472 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12420 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 31071 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 38348 | 2.15 | 1 µg/L | | |

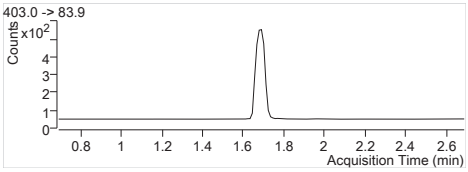
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 28114 | 1.10 | 41.70 | 41.92 µg/L | 100.52 |
| PFHxA 1 | 103000 | 1.43 | 41.70 | 42.64 µg/L | 102.26 |
| PFHxS 1 | 27387 | 1.68 | 41.70 | 41.91 µg/L | 100.51 |
| PFHpA 1 | 131039 | 1.70 | 41.70 | 42.39 µg/L | 101.66 |
| PFOA 1 | 146836 | 1.88 | 41.70 | 42.93 µg/L | 102.95 |
| PFOS 1 | 28723 | 1.98 | 41.70 | 41.99 µg/L | 100.68 |
| PFNA 1 | 128982 | 2.03 | 41.70 | 42.62 µg/L | 102.20 |
| PFDA 1 | 138781 | 2.15 | 41.70 | 44.90 µg/L | 107.67 |
| PFUnA 1 | 155746 | 2.25 | 41.70 | 42.96 µg/L | 103.03 |
| PFDoA 1 | 189906 | 2.32 | 41.70 | 43.51 µg/L | 104.34 |
| PFTrDA 1 | 216546 | 2.40 | 41.70 | 42.11 µg/L | 100.99 |
| PFTeDA 1 | 184279 | 2.47 | 41.70 | 42.48 µg/L | 101.87 |
| 13C2-PFHxA | 5939 | 1.43 | 100.00 | 98.36 µg/L | 98.36 |
| 18O2-PFHxS | 1579 | 1.69 | 100.00 | 102.21 µg/L | 102.21 |
| 13C4-PFHpA | 7788 | 1.70 | 100.00 | 98.50 µg/L | 98.50 |
| 13C4-PFOA | 8175 | 1.88 | 100.00 | 98.00 µg/L | 98.00 |
| 13C4-PFOS | 1856 | 1.98 | 100.00 | 98.66 µg/L | 98.66 |
| 13C5-PFNA | 8278 | 2.02 | 100.00 | 99.43 µg/L | 99.43 |
| 13C2-PFDA | 6297 | 2.15 | 100.00 | 96.47 µg/L | 96.47 |
| 13C2-PFUnA | 7714 | 2.25 | 100.00 | 99.66 µg/L | 99.66 |
| 13C2-PFDoA | 10472 | 2.32 | 100.00 | 97.45 µg/L | 97.45 |
| 13C2-PFTeDA | 12610 | 2.47 | 100.00 | 102.87 µg/L | 102.87 |
| 13C6-PFHxA | 31071 | 1.43 | 100.00 | 97.95 µg/L | 97.95 |
| 13C9-PFDA | 38348 | 2.15 | 100.00 | 94.56 µg/L | 94.56 |



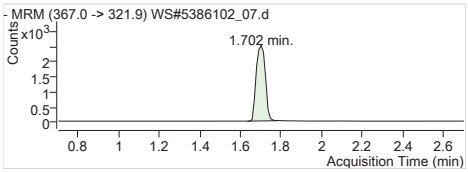



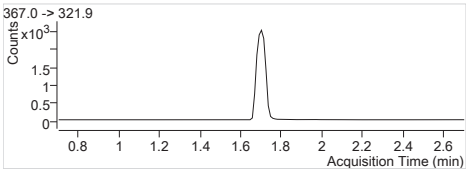

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.445)
Concentration: 1 µg/L
Sample type: Calibration



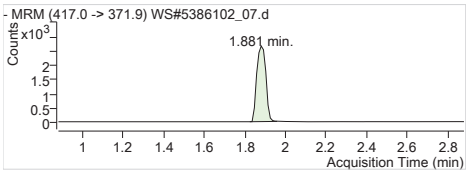



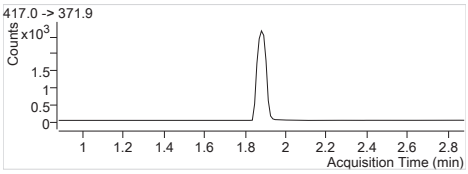

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: Calibration



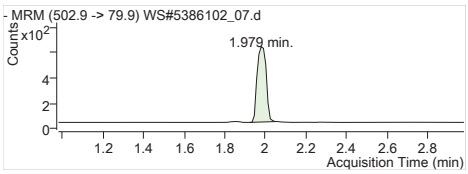



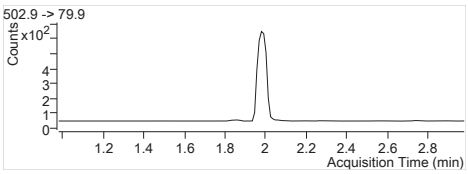

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: Calibration



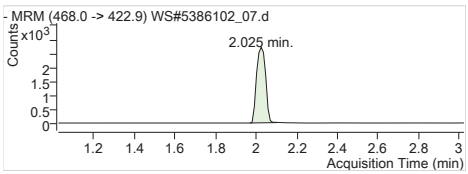



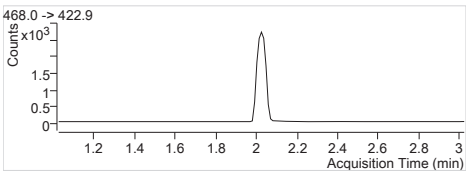

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



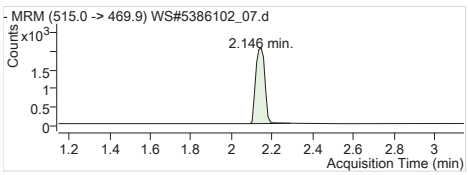



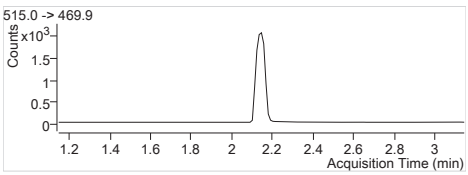

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



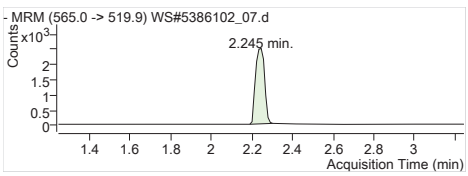



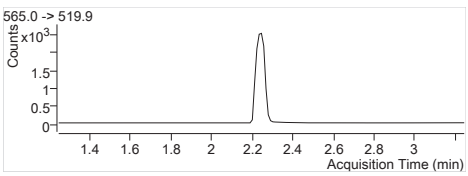

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: Calibration



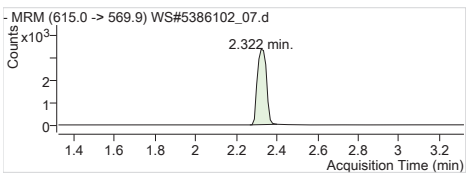



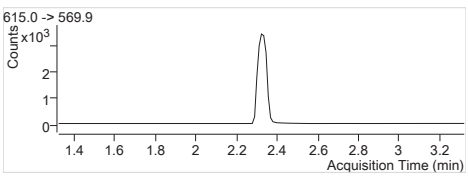

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



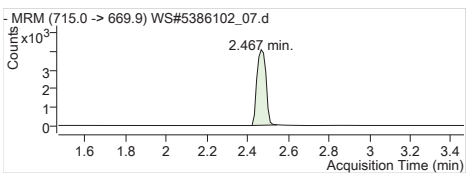



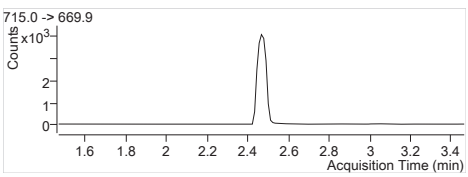

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: Calibration



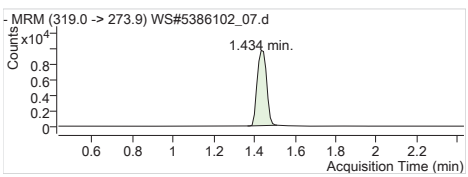



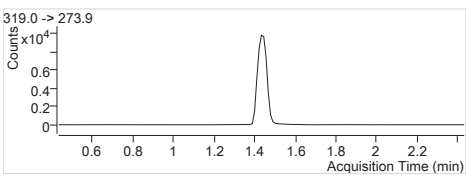

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



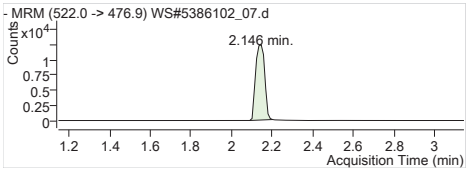



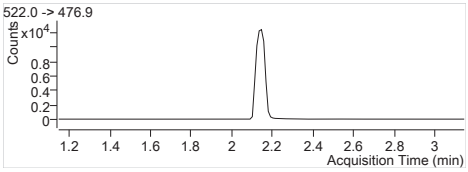

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



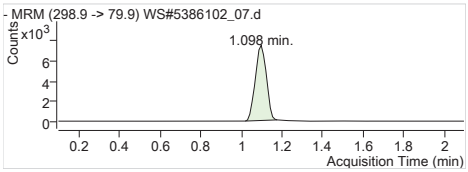



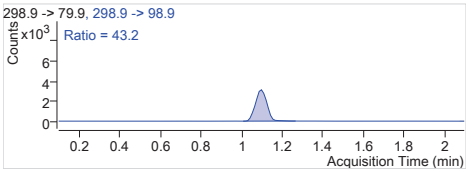

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



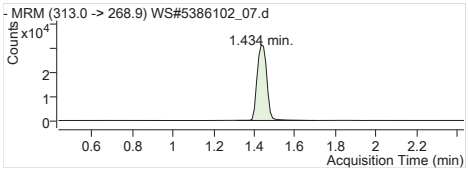



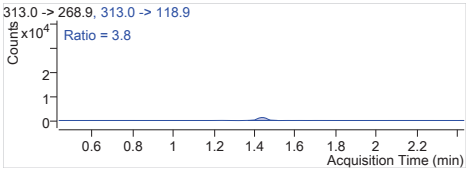

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: Calibration



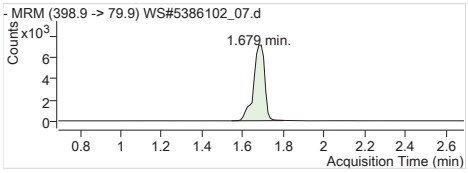



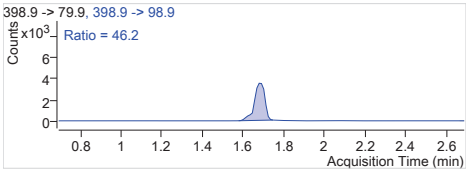

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.098 (1.098)
Calc. conc. 41.92 µg/L
Area ratio: 17.80494
Sample type: Calibration



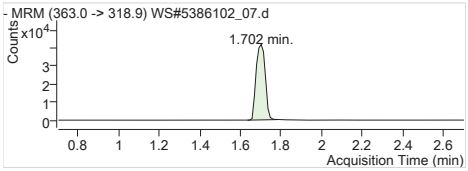



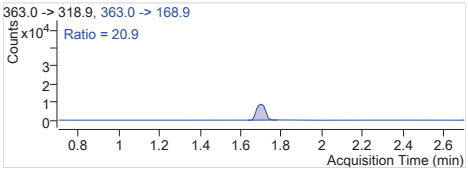

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 42.64 µg/L
Area ratio: 17.34299
Sample type: Calibration



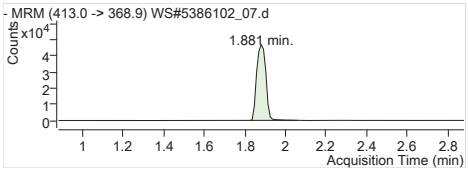



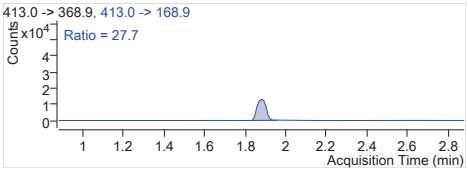

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.691)
Calc. conc. 41.91 µg/L
Area ratio: 17.34452
Sample type: Calibration



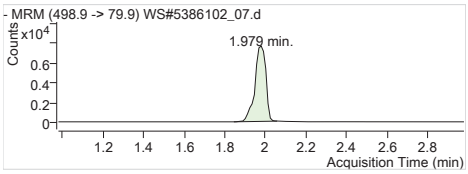



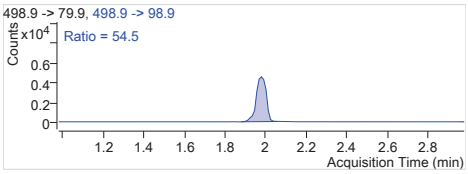

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 42.39 µg/L
Area ratio: 16.82576
Sample type: Calibration



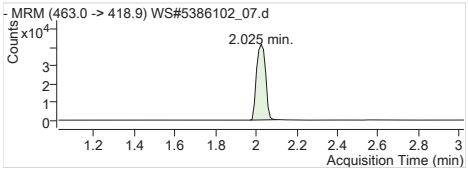



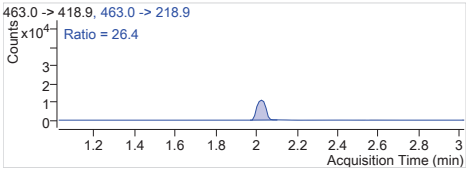

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 42.93 µg/L
Area ratio: 17.96159
Sample type: Calibration



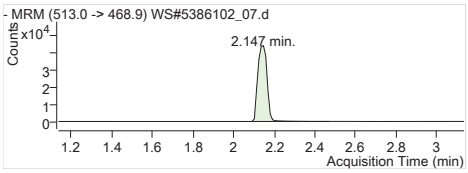



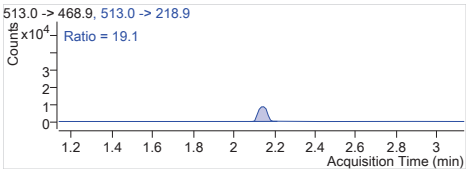

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 41.99 µg/L
Area ratio: 15.47575
Sample type: Calibration



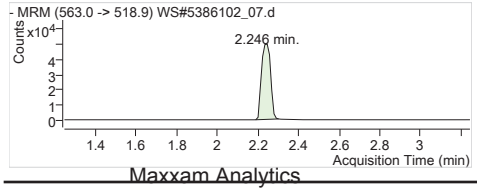



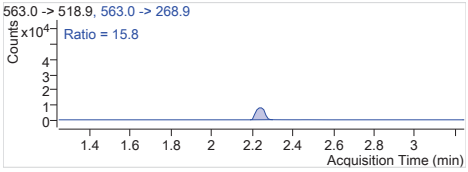

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 42.62 µg/L
Area ratio: 15.58130
Sample type: Calibration



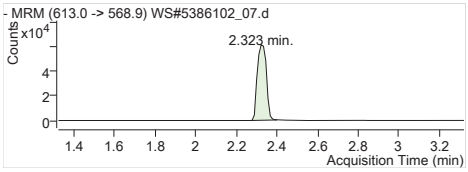



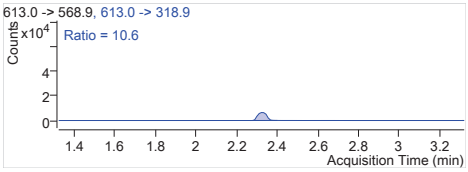

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.135)
Calc. conc. 44.90 µg/L
Area ratio: 21.71847
Sample type: Calibration



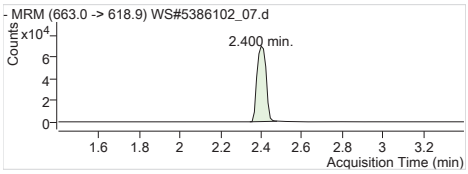



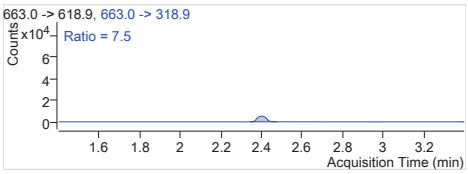

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 42.96 µg/L
Area ratio: 20.19004
Sample type: Calibration



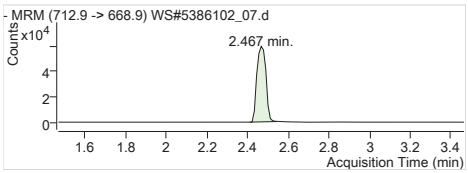



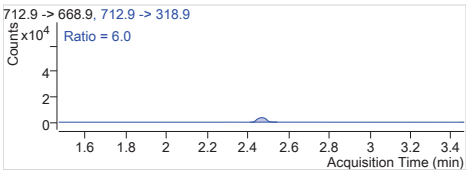

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 43.51 µg/L
Area ratio: 18.13464
Sample type: Calibration



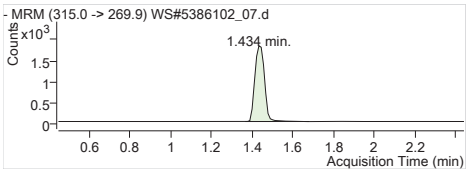



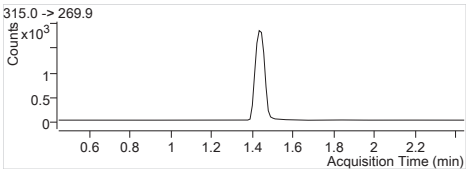

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 42.11 µg/L
Area ratio: 17.43527
Sample type: Calibration



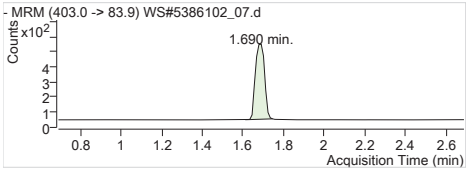



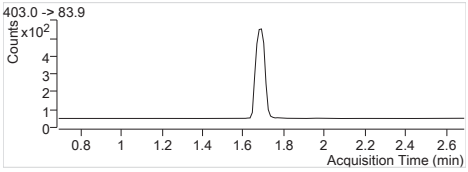

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 42.48 µg/L
Area ratio: 14.83728
Sample type: Calibration



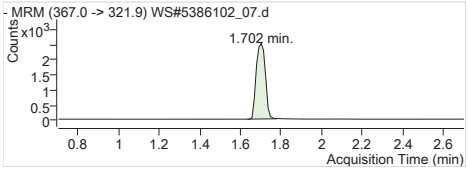



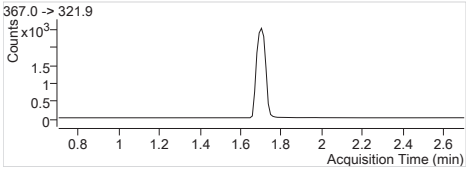

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 98.36 µg/L
Area ratio: 0.19114
Sample type: Calibration



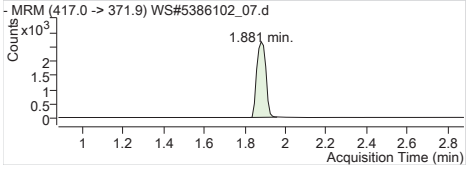



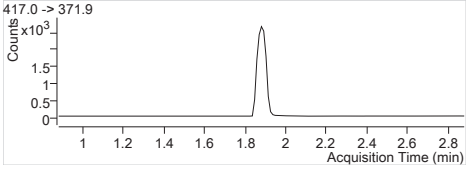

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 102.21 µg/L
Area ratio: 0.05082
Sample type: Calibration



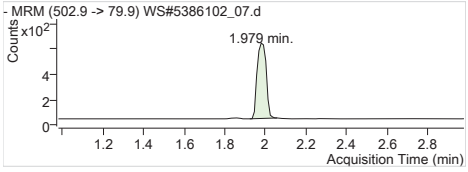



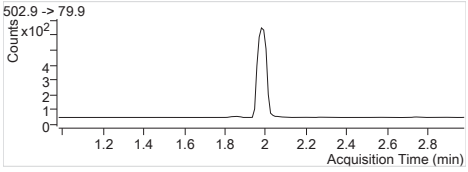

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 98.50 µg/L
Area ratio: 0.25065
Sample type: Calibration



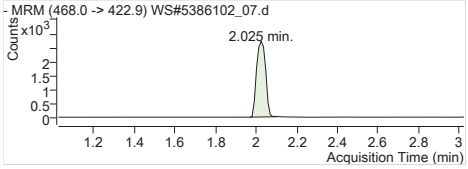



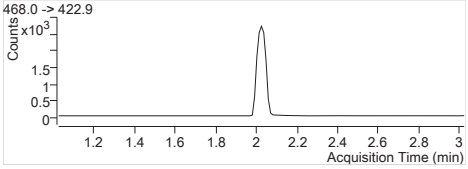

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 98.00 µg/L
Area ratio: 0.26311
Sample type: Calibration



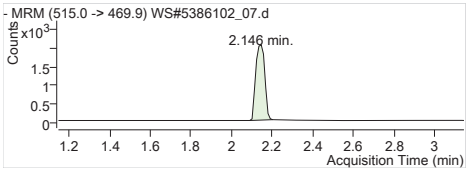



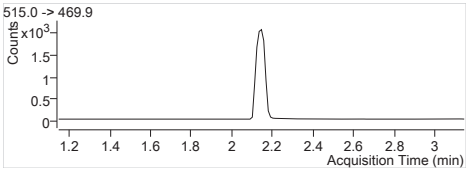

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 98.66 µg/L
Area ratio: 0.05973
Sample type: Calibration



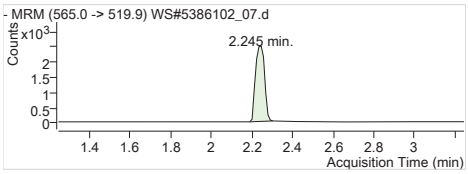



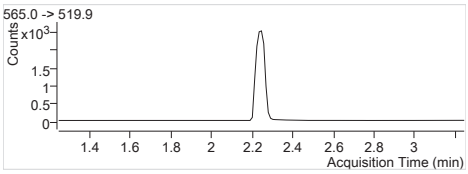

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 99.43 µg/L
Area ratio: 0.26642
Sample type: Calibration



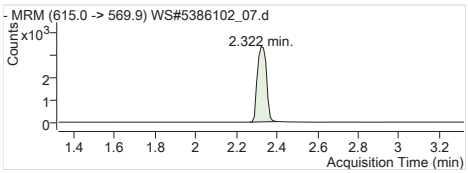



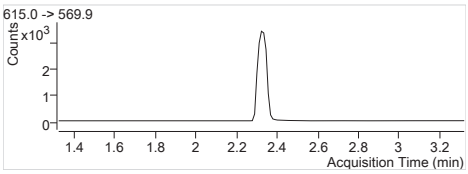

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 96.47 µg/L
Area ratio: 0.16421
Sample type: Calibration



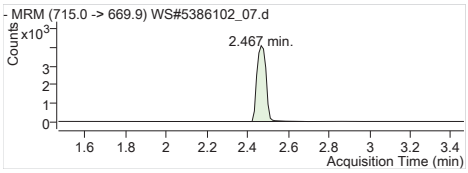



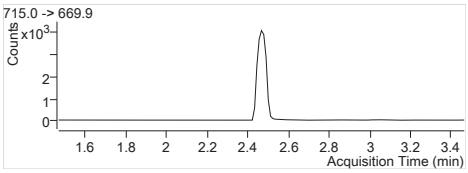

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 99.66 µg/L
Area ratio: 0.20116
Sample type: Calibration



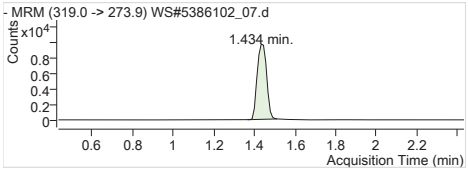



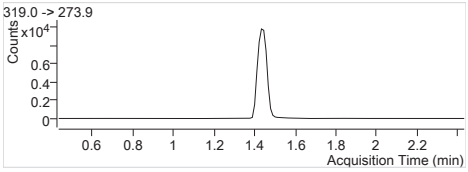

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 97.45 µg/L
Area ratio: 0.27308
Sample type: Calibration



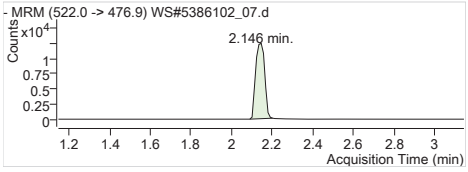



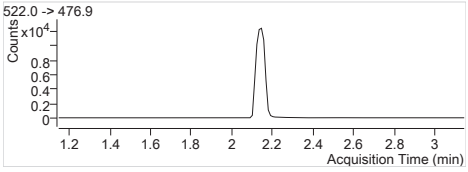

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 102.87 µg/L
Area ratio: 0.32883
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 97.95 µg/L
Area ratio: 0
Sample type: Calibration




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 94.56 µg/L
Area ratio: 0
Sample type: Calibration

# Quantitation Results

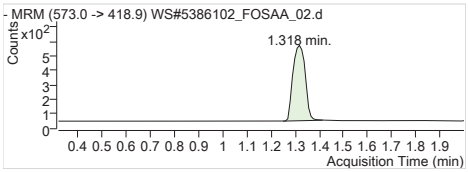
Agilent Technologies

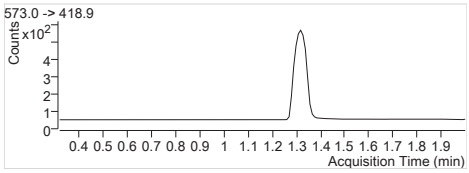
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 1** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_02.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-C8 |
| **Acq. Date** | 2018/02/08 9:36:26 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

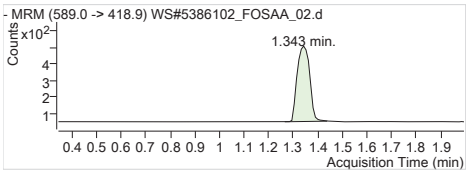
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1843 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1621 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 34372 | 0.92 | 1 µg/L | | |

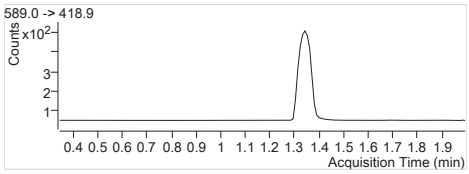
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 533 | 1.31 | 0.83 | 0.82 µg/L | 98.22 |
| EtFOSAA 1 | 524 | 1.34 | 0.83 | 0.83 µg/L | 99.82 |
| D3-MeFOSAA | 1860 | 1.32 | 100.00 | 101.70 µg/L | 101.70 |
| D5-EtFOSAA | 1637 | 1.34 | 100.00 | 103.15 µg/L | 103.15 |
| 13C9-PFDA | 33632 | 0.92 | 100.00 | 100.67 µg/L | 100.67 |



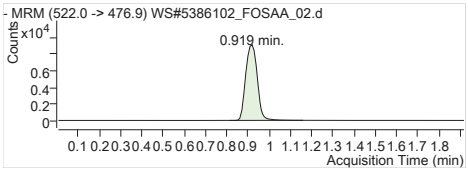



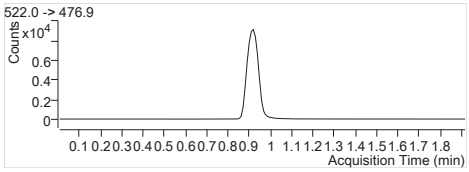

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Calibration



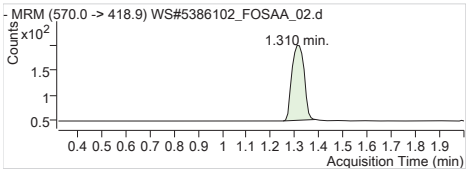



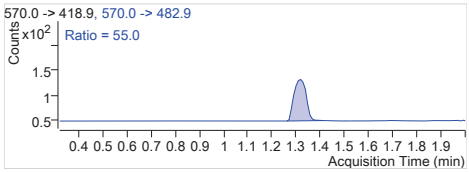

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Calibration



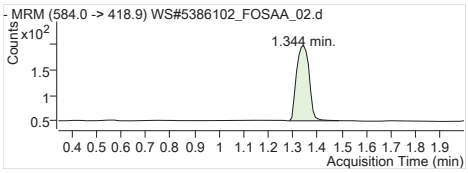



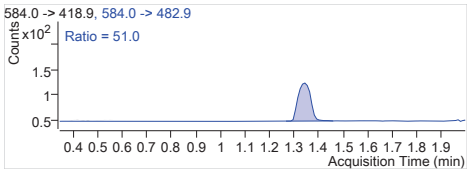

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.919 (0.919)
Concentration: 1 µg/L
Sample type: Calibration



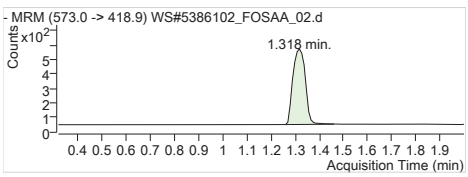



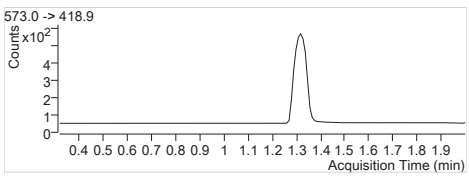

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.319)
Calc. conc. 0.82 µg/L
Area ratio: 0.28920
Sample type: Calibration



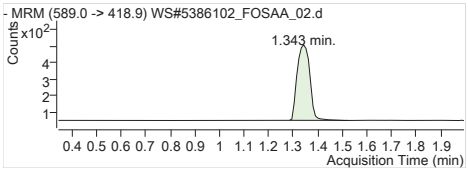



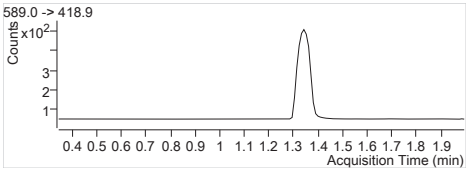

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 0.83 µg/L
Area ratio: 0.32326
Sample type: Calibration



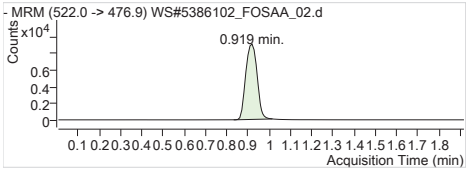



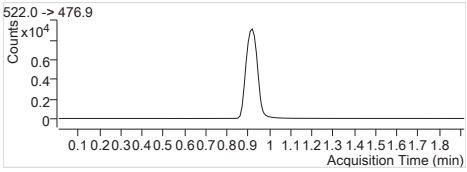

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 101.70 µg/L
Area ratio: 0.05411
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 103.15 µg/L |
| Area ratio: | 0.04763 |
| Sample type: | Calibration |



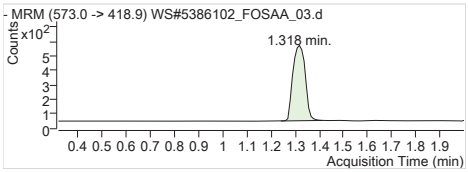

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.919 (0.919) |
| Calc. conc. | 100.67 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

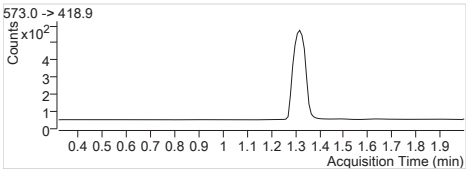
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 2** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_03.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-C9 |
| **Acq. Date** | 2018/02/08 9:38:51 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

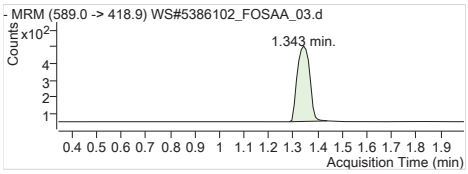
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1858 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1605 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 35042 | 0.92 | 1 µg/L | | |

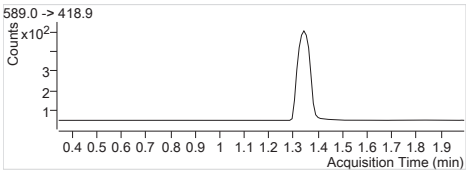
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 1154 | 1.32 | 1.70 | 1.75 µg/L | 102.98 |
| EtFOSAA 1 | 1119 | 1.34 | 1.70 | 1.71 µg/L | 100.74 |
| D3-MeFOSAA | 1854 | 1.32 | 100.00 | 99.43 µg/L | 99.43 |
| D5-EtFOSAA | 1625 | 1.34 | 100.00 | 100.44 µg/L | 100.44 |
| 13C9-PFDA | 34091 | 0.92 | 100.00 | 102.05 µg/L | 102.05 |



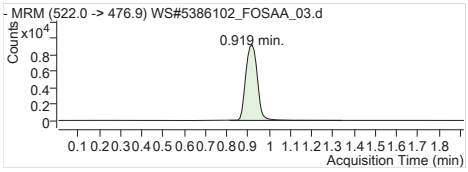



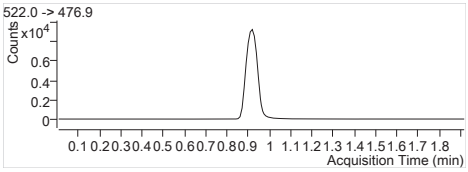

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Calibration



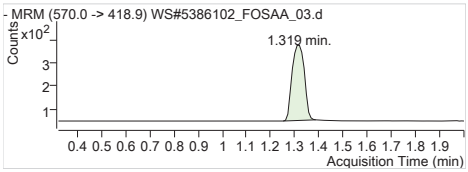



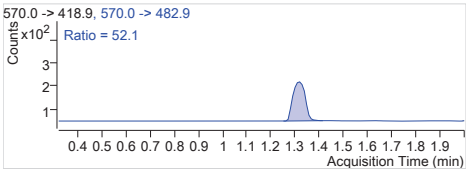

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Calibration



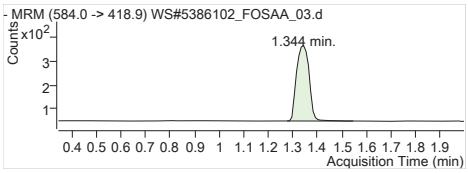



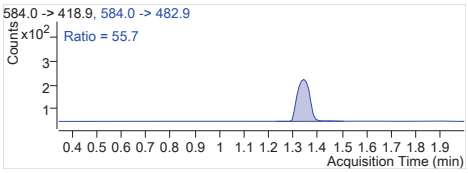

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.919 (0.919)
Concentration: 1 µg/L
Sample type: Calibration



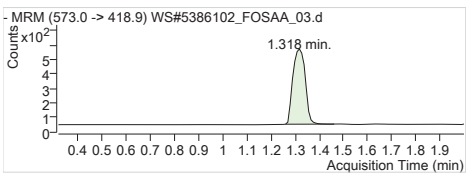



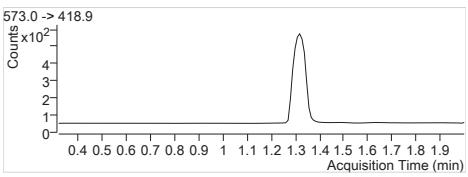

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.319 (1.319)
Calc. conc. 1.75 µg/L
Area ratio: 0.62110
Sample type: Calibration



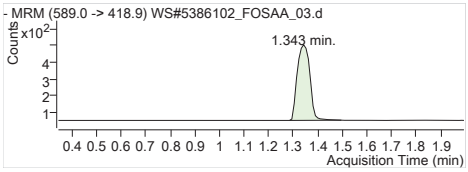



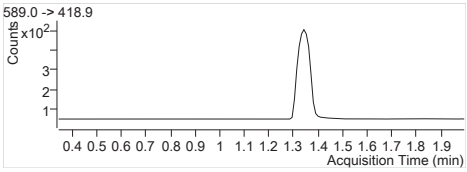

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 1.71 µg/L
Area ratio: 0.69720
Sample type: Calibration



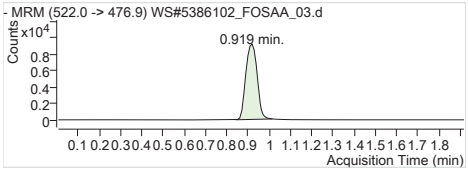



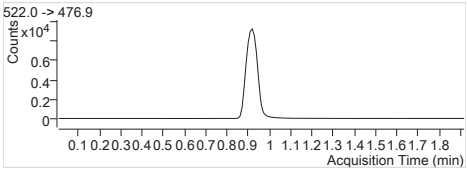

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 99.43 µg/L
Area ratio: 0.05291
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 100.44 µg/L |
| Area ratio: | 0.04637 |
| Sample type: | Calibration |



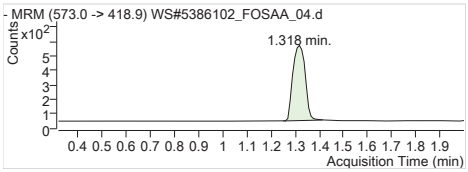

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.919 (0.919) |
| Calc. conc. | 102.05 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

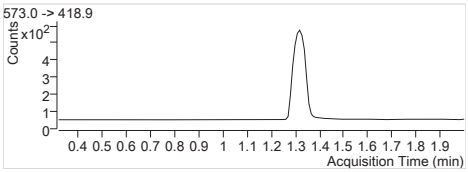
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 3** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_04.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-D1 |
| **Acq. Date** | 2018/02/08 9:41:15 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

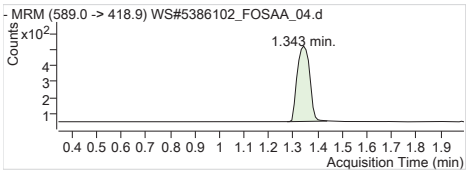
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1853 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1661 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 34265 | 0.92 | 1 µg/L | | |

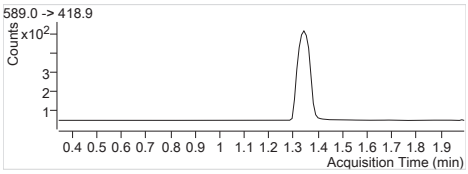
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 3426 | 1.32 | 5.00 | 5.21 µg/L | 104.22 |
| EtFOSAA 1 | 3469 | 1.34 | 5.00 | 5.00 µg/L | 100.04 |
| D3-MeFOSAA | 1876 | 1.32 | 100.00 | 102.89 µg/L | 102.89 |
| D5-EtFOSAA | 1672 | 1.34 | 100.00 | 105.68 µg/L | 105.68 |
| 13C9-PFDA | 33520 | 0.92 | 100.00 | 100.34 µg/L | 100.34 |



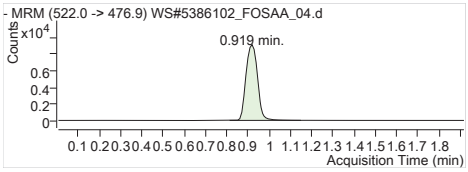



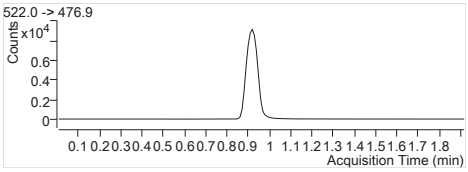

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Calibration



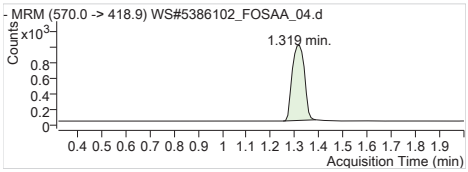



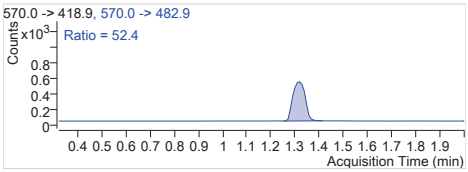

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Calibration



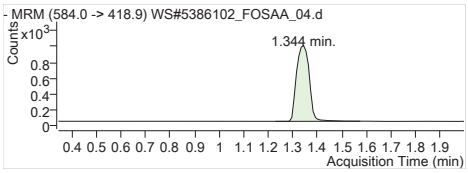



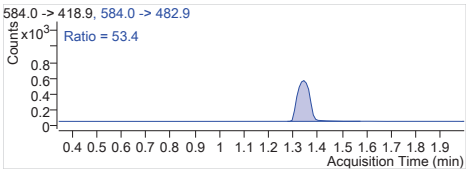

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.919 (0.919)
Concentration: 1 µg/L
Sample type: Calibration



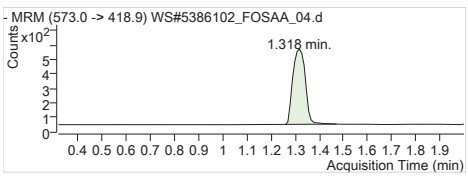



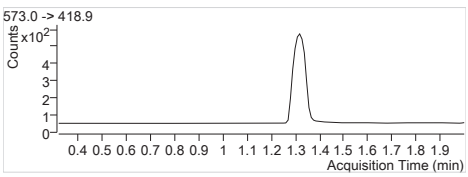

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.319 (1.319)
Calc. conc. 5.21 µg/L
Area ratio: 1.84889
Sample type: Calibration



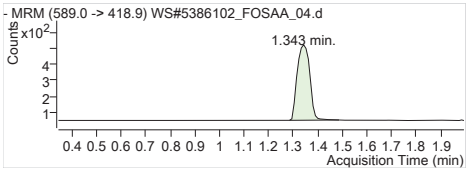



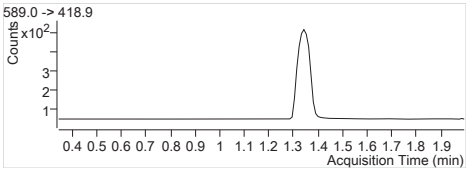

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 5.00 µg/L
Area ratio: 2.08850
Sample type: Calibration



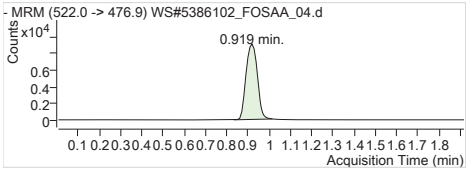



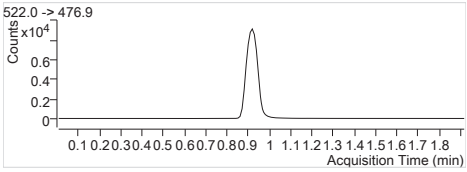

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 102.89 µg/L
Area ratio: 0.05475
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 105.68 µg/L |
| Area ratio: | 0.04880 |
| Sample type: | Calibration |



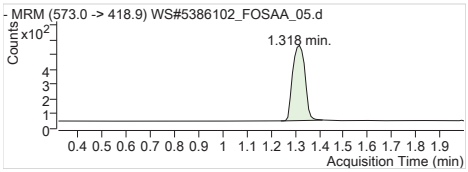

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.919 (0.919) |
| Calc. conc. | 100.34 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

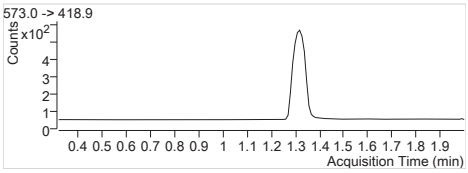
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 4** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_05.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-D2 |
| **Acq. Date** | 2018/02/08 9:43:38 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

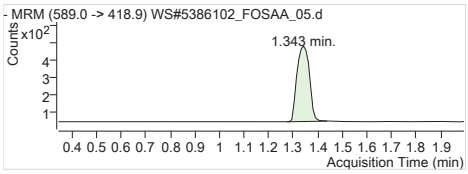
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1826 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1512 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 35317 | 0.92 | 1 µg/L | | |

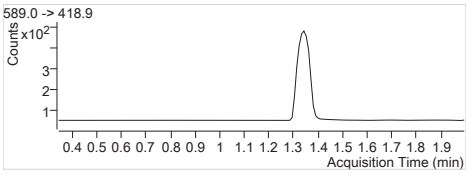
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 7653 | 1.32 | 12.50 | 11.81 µg/L | 94.50 |
| EtFOSAA 1 | 7698 | 1.34 | 12.50 | 12.10 µg/L | 96.81 |
| D3-MeFOSAA | 1843 | 1.32 | 100.00 | 98.07 µg/L | 98.07 |
| D5-EtFOSAA | 1516 | 1.34 | 100.00 | 92.97 µg/L | 92.97 |
| 13C9-PFDA | 34558 | 0.92 | 100.00 | 103.44 µg/L | 103.44 |



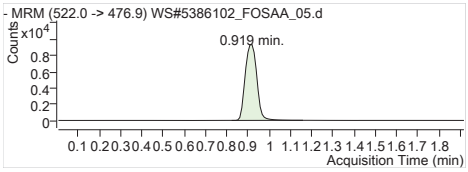



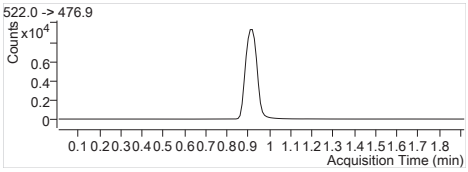

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Calibration



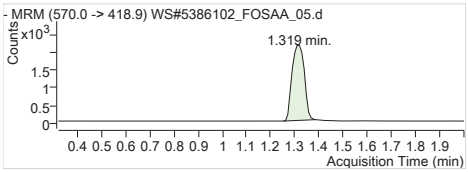



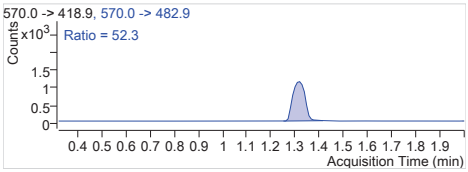

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Calibration



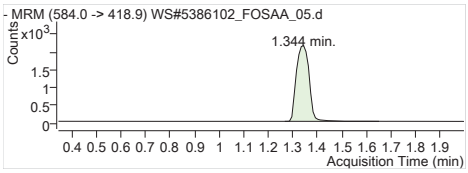



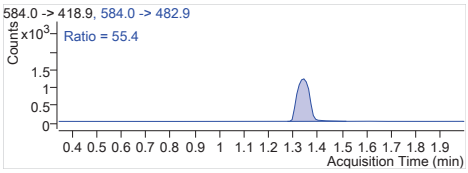

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.919 (0.919)
Concentration: 1 µg/L
Sample type: Calibration



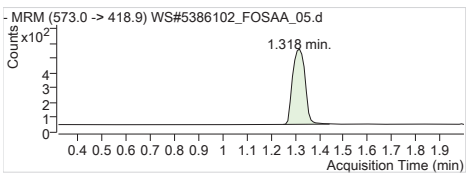



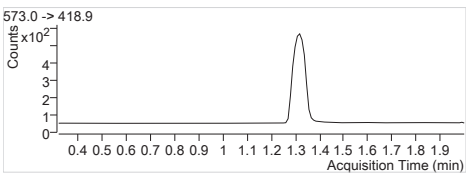

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.319 (1.319)
Calc. conc. 11.81 µg/L
Area ratio: 4.19113
Sample type: Calibration



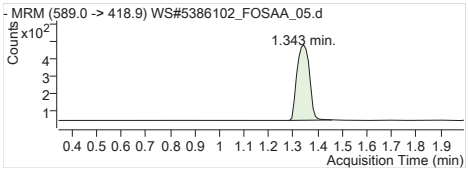



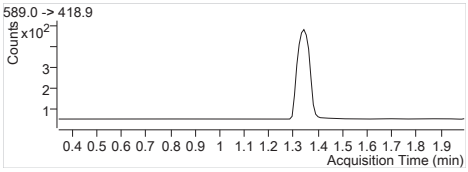

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 12.10 µg/L
Area ratio: 5.09127
Sample type: Calibration



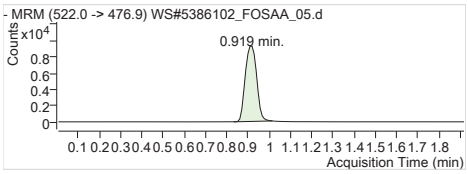



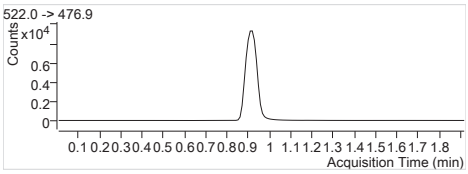

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 98.07 µg/L
Area ratio: 0.05218
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 92.97 µg/L |
| Area ratio: | 0.04293 |
| Sample type: | Calibration |



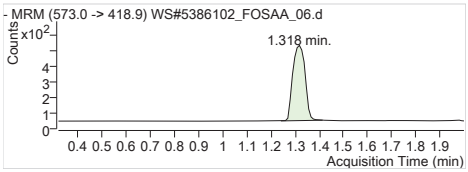

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.919 (0.919) |
| Calc. conc. | 103.44 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

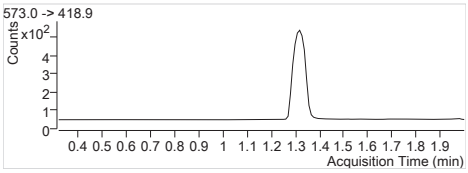
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 5** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_06.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-D3 |
| **Acq. Date** | 2018/02/08 9:46:01 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

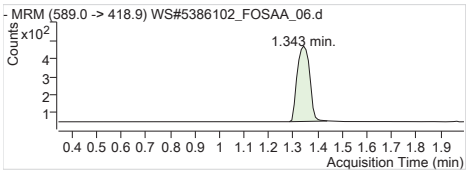
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1712 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1482 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 32411 | 0.91 | 1 µg/L | | |

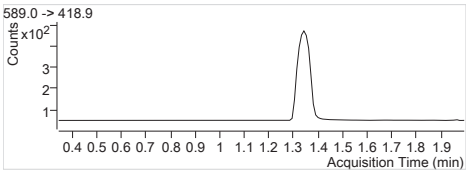
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 14992 | 1.32 | 25.00 | 24.68 µg/L | 98.73 |
| EtFOSAA 1 | 15337 | 1.34 | 25.00 | 24.53 µg/L | 98.12 |
| D3-MeFOSAA | 1720 | 1.32 | 100.00 | 99.73 µg/L | 99.73 |
| D5-EtFOSAA | 1504 | 1.34 | 100.00 | 100.50 µg/L | 100.50 |
| 13C9-PFDA | 32642 | 0.91 | 100.00 | 97.71 µg/L | 97.71 |



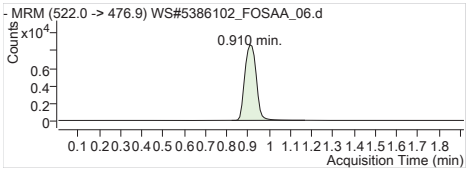



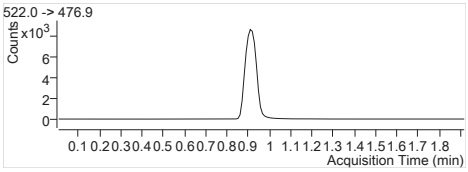

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Calibration



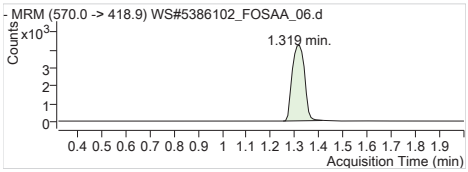



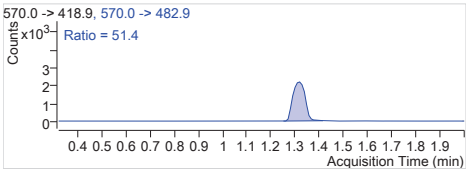

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Calibration



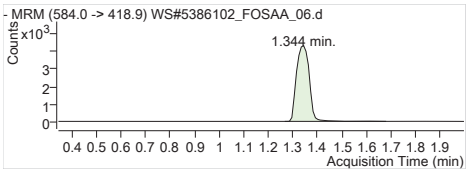



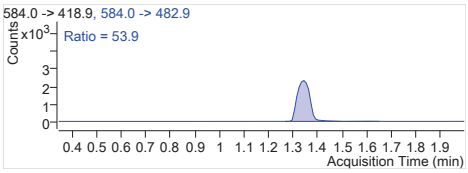

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.919)
Concentration: 1 µg/L
Sample type: Calibration



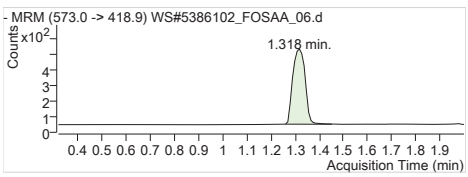



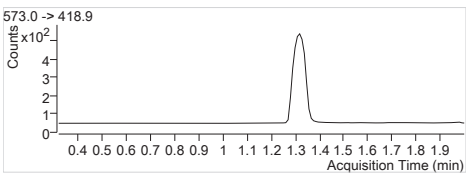

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.319 (1.319)
Calc. conc. 24.68 µg/L
Area ratio: 8.75701
Sample type: Calibration



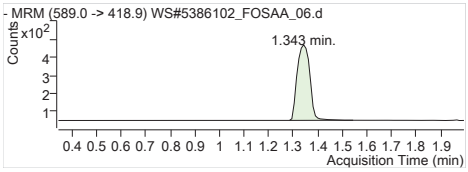



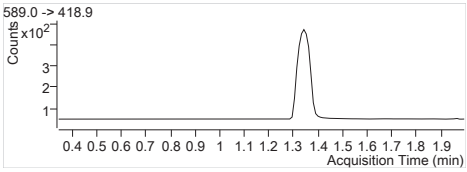

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 24.53 µg/L
Area ratio: 10.34885
Sample type: Calibration



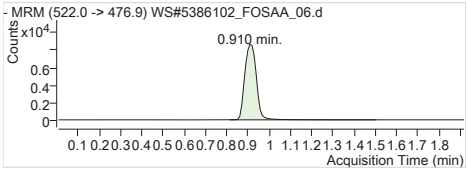



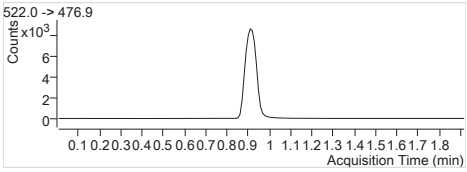

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 99.73 µg/L
Area ratio: 0.05307
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 100.50 µg/L |
| Area ratio: | 0.04640 |
| Sample type: | Calibration |



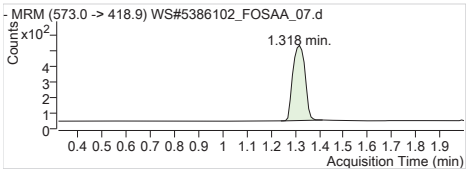

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.919) |
| Calc. conc. | 97.71 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

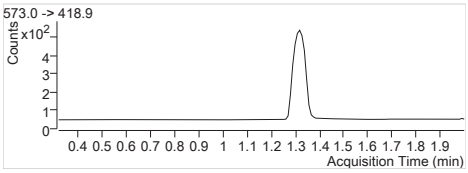
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 6** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_07.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-D4 |
| **Acq. Date** | 2018/02/08 9:48:24 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

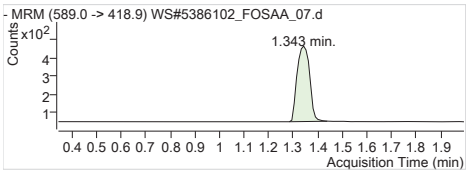
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1707 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1464 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 32713 | 0.92 | 1 µg/L | | |

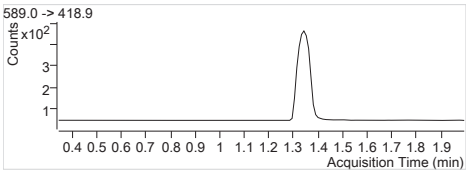
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 25594 | 1.32 | 41.70 | 42.26 µg/L | 101.34 |
| EtFOSAA 1 | 26939 | 1.34 | 41.70 | 43.57 µg/L | 104.48 |
| D3-MeFOSAA | 1709 | 1.32 | 100.00 | 98.18 µg/L | 98.18 |
| D5-EtFOSAA | 1469 | 1.34 | 100.00 | 97.26 µg/L | 97.26 |
| 13C9-PFDA | 32000 | 0.92 | 100.00 | 95.79 µg/L | 95.79 |



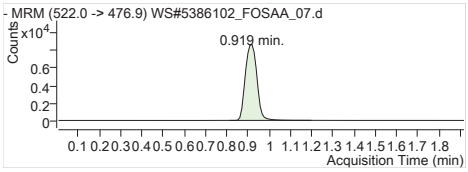



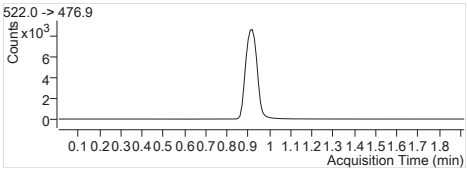

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Calibration



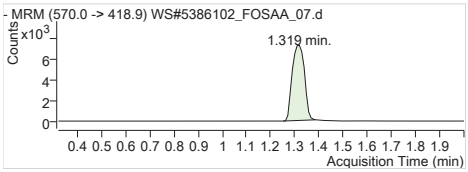



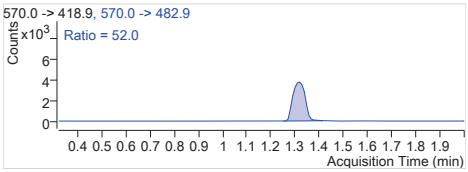

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Calibration



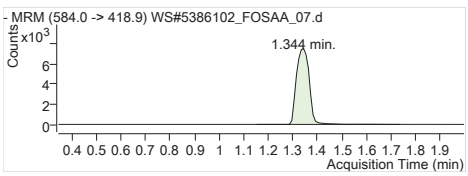



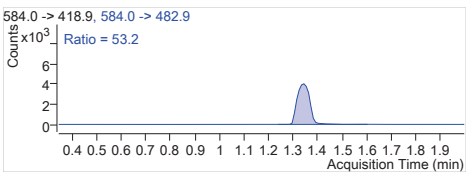

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.919 (0.919)
Concentration: 1 µg/L
Sample type: Calibration



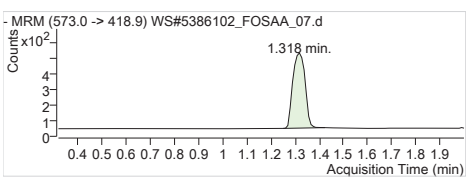



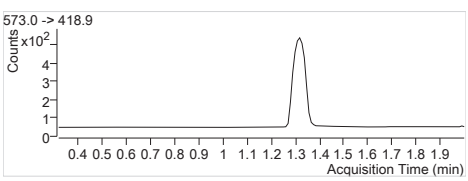

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.319 (1.319)
Calc. conc. 42.26 µg/L
Area ratio: 14.99356
Sample type: Calibration



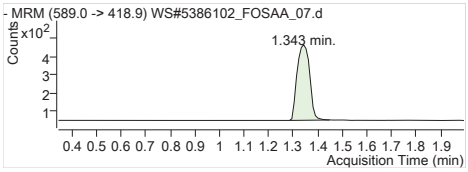



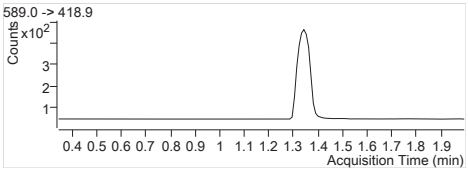

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 43.57 µg/L
Area ratio: 18.40096
Sample type: Calibration



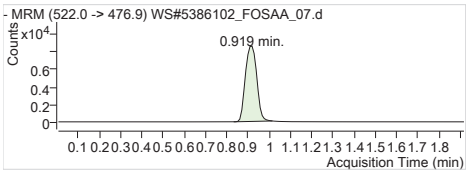



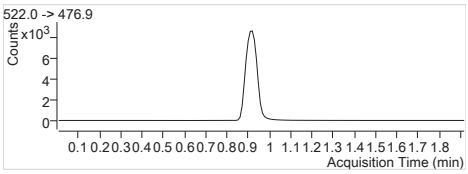

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 98.18 µg/L
Area ratio: 0.05224
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 97.26 µg/L |
| Area ratio: | 0.04491 |
| Sample type: | Calibration |



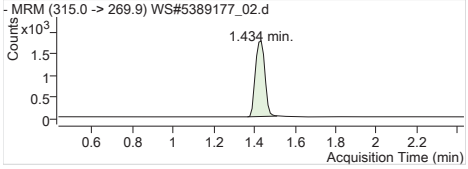

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.919 (0.919) |
| Calc. conc. | 95.79 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

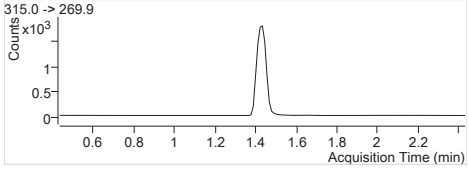
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 1** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_02.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A2 |
| **Acq. Date** | 2018/02/09 12:02:22 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

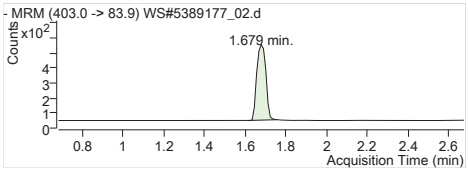
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5649 | 1.43 | 1 µg/L | | |
| MPFHxS | 1572 | 1.68 | 1 µg/L | | |
| MPFHpA | 8169 | 1.69 | 1 µg/L | | |
| MPFOA | 8766 | 1.88 | 1 µg/L | | |
| MPFOS | 1804 | 1.98 | 1 µg/L | | |
| MPFNA | 8961 | 2.01 | 1 µg/L | | |
| MPFDA | 6984 | 2.14 | 1 µg/L | | |
| MPFUnA | 8534 | 2.23 | 1 µg/L | | |
| MPFDoA | 11444 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13008 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 21986 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 30410 | 2.13 | 1 µg/L | | |

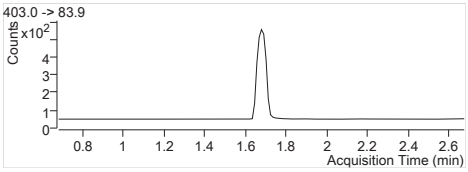
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 671 | 1.09 | 0.83 | 0.92 µg/L | 111.31 |
| PFHxA 1 | 2012 | 1.43 | 0.83 | 0.97 µg/L | 116.84 |
| PFHxS 1 | 549 | 1.68 | 0.83 | 0.90 µg/L | 108.66 |
| PFHpA 1 | 2767 | 1.69 | 0.83 | 0.91 µg/L | 109.72 |
| PFOA 1 | 3259 | 1.88 | 0.83 | 0.88 µg/L | 106.25 |
| PFOS 1 | 595 | 1.97 | 0.83 | 1.00 µg/L | 120.37 |
| PFNA 1 | 2670 | 2.01 | 0.83 | 0.86 µg/L | 103.07 |
| PFDA 1 | 2811 | 2.14 | 0.83 | 0.94 µg/L | 113.13 |
| PFUnA 1 | 3172 | 2.23 | 0.83 | 0.93 µg/L | 111.47 |
| PFDoA 1 | 4275 | 2.32 | 0.83 | 0.95 µg/L | 114.56 |
| PFTrDA 1 | 5032 | 2.40 | 0.83 | 0.93 µg/L | 111.51 |
| PFTeDA 1 | 3842 | 2.47 | 0.83 | 0.91 µg/L | 109.64 |
| 13C2-PFHxA | 5649 | 1.43 | 100.00 | 91.64 µg/L | 91.64 |
| 18O2-PFHxS | 1572 | 1.68 | 100.00 | 98.98 µg/L | 98.98 |
| 13C4-PFHpA | 8169 | 1.69 | 100.00 | 99.64 µg/L | 99.64 |
| 13C4-PFOA | 8766 | 1.88 | 100.00 | 99.93 µg/L | 99.93 |
| 13C4-PFOS | 1804 | 1.98 | 100.00 | 92.64 µg/L | 92.64 |
| 13C5-PFNA | 8961 | 2.01 | 100.00 | 101.32 µg/L | 101.32 |
| 13C2-PFDA | 6916 | 2.14 | 100.00 | 90.29 µg/L | 90.29 |
| 13C2-PFUnA | 8534 | 2.23 | 100.00 | 93.42 µg/L | 93.42 |
| 13C2-PFDoA | 11444 | 2.32 | 100.00 | 94.96 µg/L | 94.96 |
| 13C2-PFTeDA | 13430 | 2.47 | 100.00 | 93.11 µg/L | 93.11 |
| 13C6-PFHxA | 21986 | 1.43 | 100.00 | 102.70 µg/L | 102.70 |
| 13C9-PFDA | 30410 | 2.13 | 100.00 | 106.41 µg/L | 106.41 |



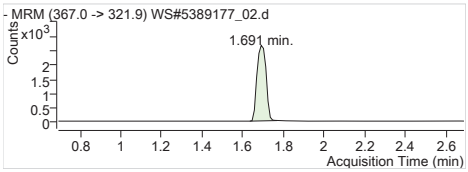



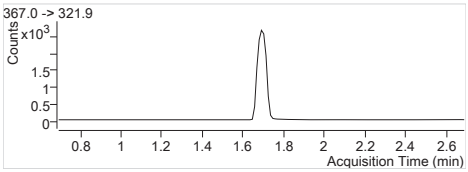

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



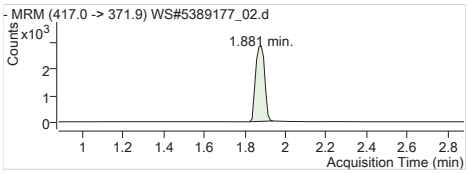



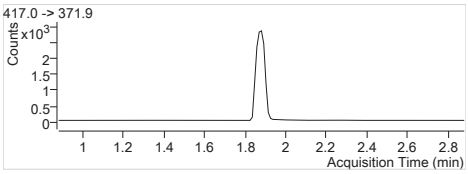

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Calibration



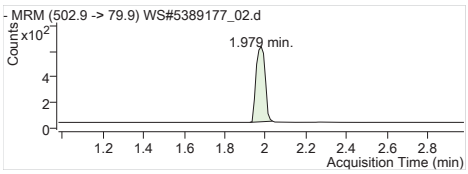



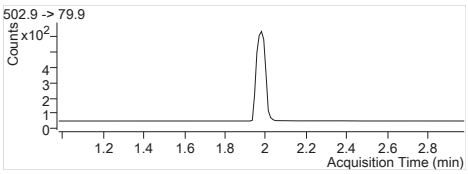

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Calibration



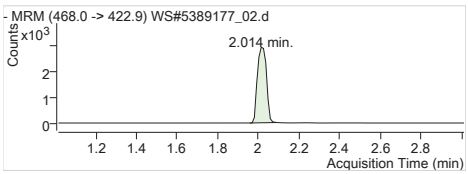



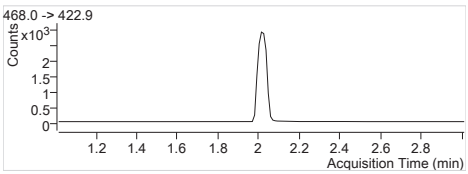

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



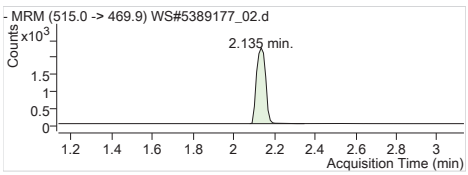



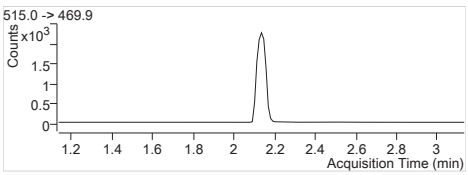

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



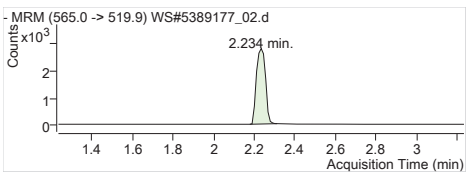



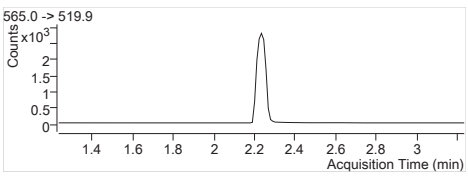

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Calibration



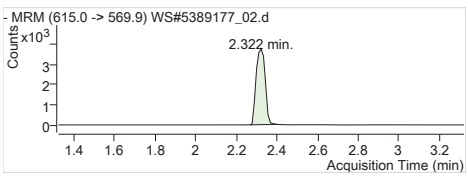



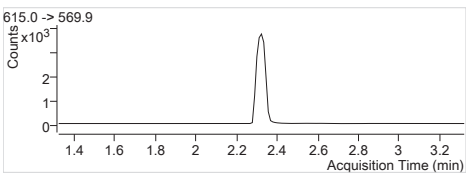

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



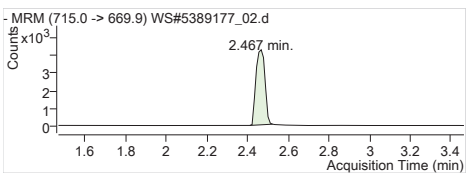



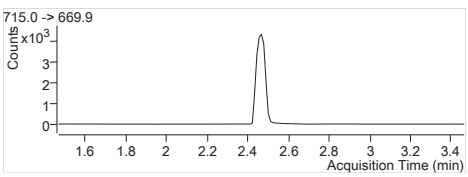

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Calibration



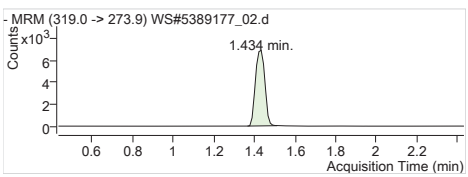



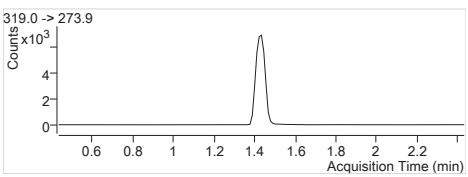

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



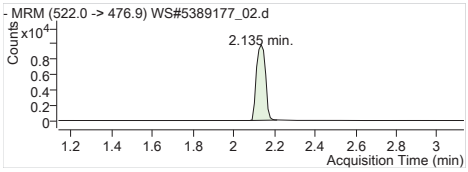



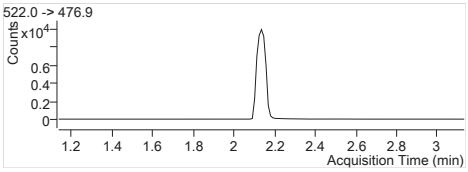

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



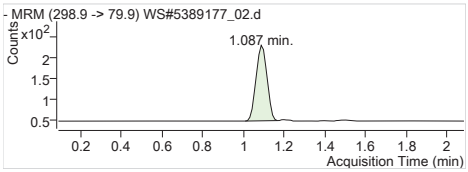



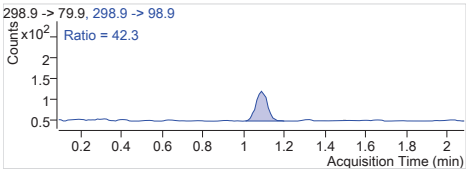

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



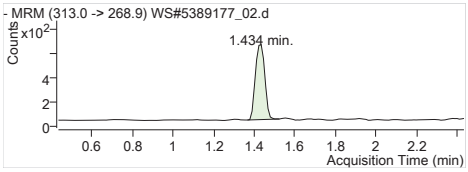



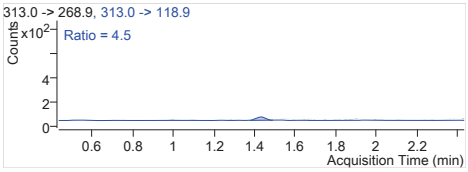

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



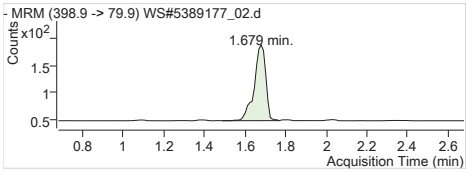



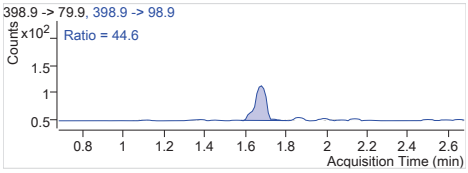

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 0.92 µg/L
Area ratio: 0.42684
Sample type: Calibration



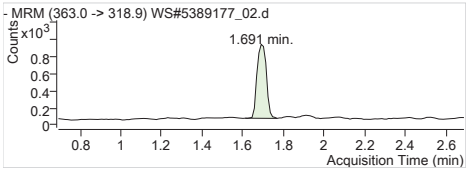



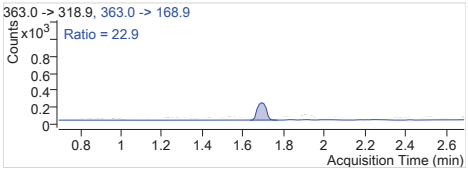

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 0.97 µg/L
Area ratio: 0.35617
Sample type: Calibration



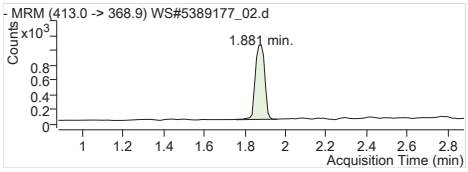



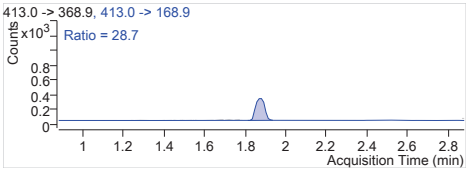

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 0.90 µg/L
Area ratio: 0.34924
Sample type: Calibration



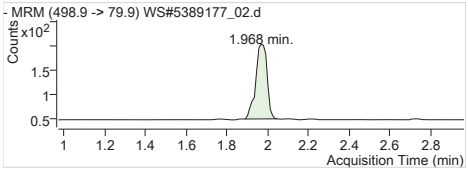



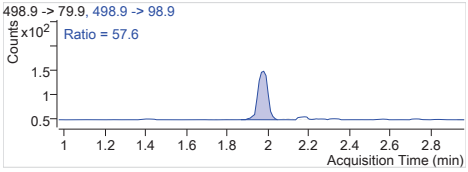

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.91 µg/L
Area ratio: 0.33872
Sample type: Calibration



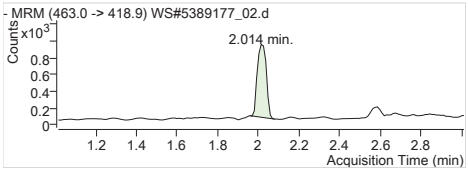



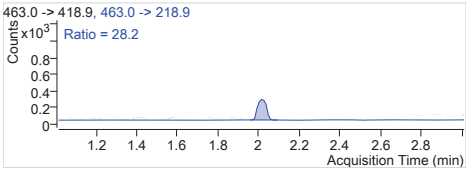

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 0.88 µg/L
Area ratio: 0.37178
Sample type: Calibration



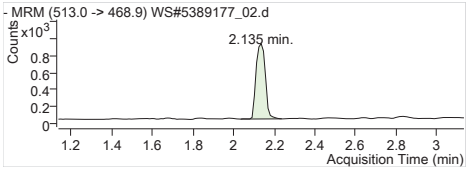



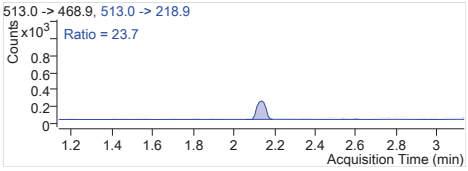

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 1.00 µg/L
Area ratio: 0.32982
Sample type: Calibration



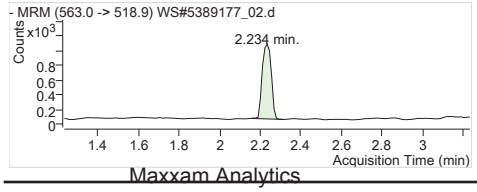



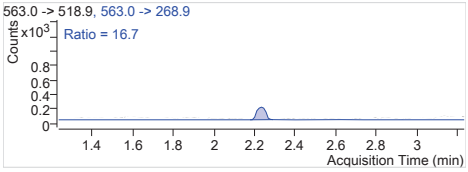

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 0.86 µg/L
Area ratio: 0.29796
Sample type: Calibration



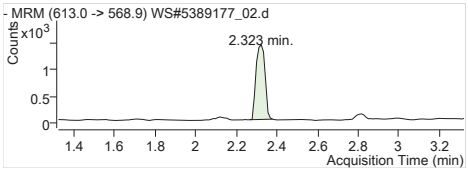



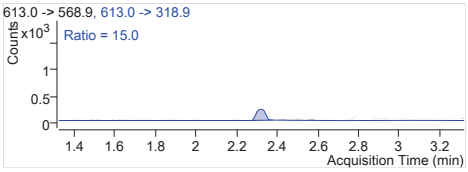

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 0.94 µg/L
Area ratio: 0.40249
Sample type: Calibration



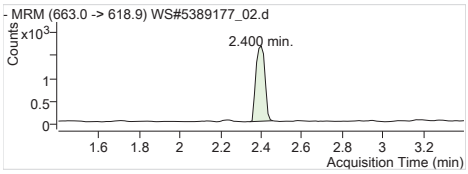



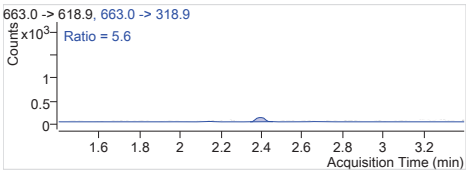

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 0.93 µg/L
Area ratio: 0.37169
Sample type: Calibration



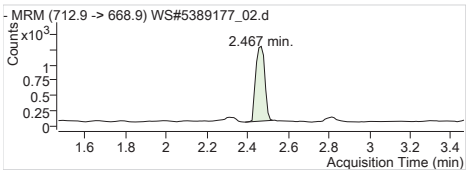



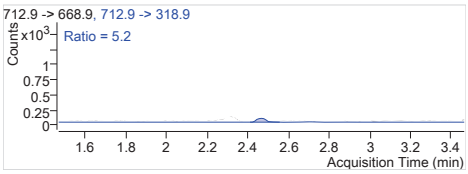

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.95 µg/L
Area ratio: 0.37356
Sample type: Calibration



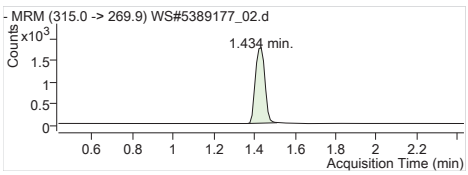



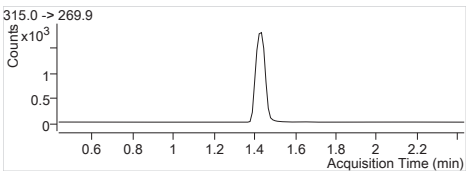

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.93 µg/L
Area ratio: 0.38684
Sample type: Calibration



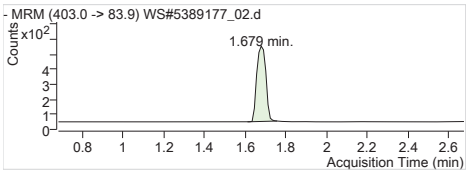



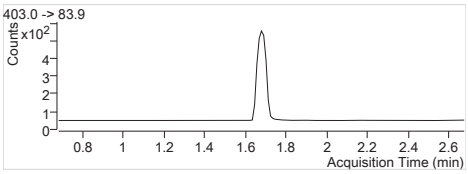

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 0.91 µg/L
Area ratio: 0.29536
Sample type: Calibration



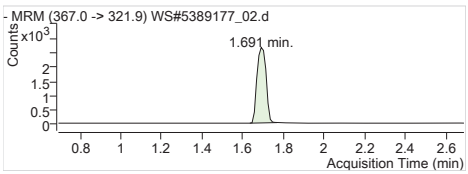



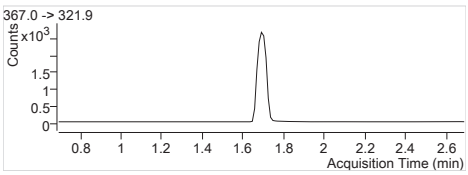

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 91.64 µg/L
Area ratio: 0.25694
Sample type: Calibration



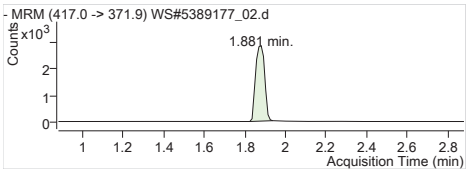



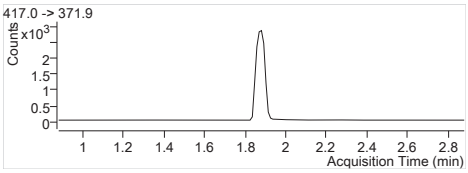

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 98.98 µg/L
Area ratio: 0.07150
Sample type: Calibration



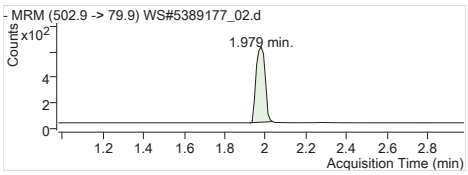



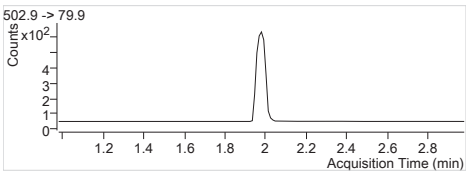

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 99.64 µg/L
Area ratio: 0.37155
Sample type: Calibration



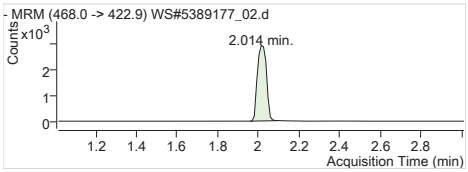



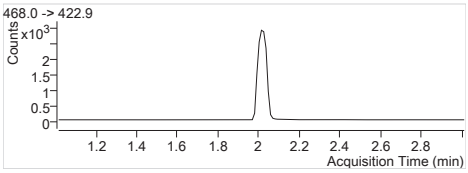

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 99.93 µg/L
Area ratio: 0.39871
Sample type: Calibration



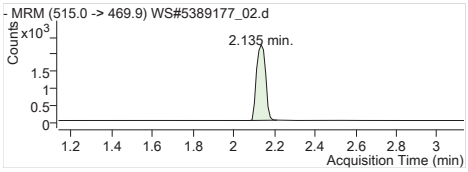



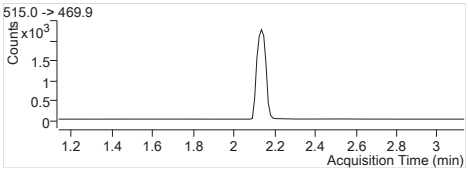

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 92.64 µg/L
Area ratio: 0.08205
Sample type: Calibration



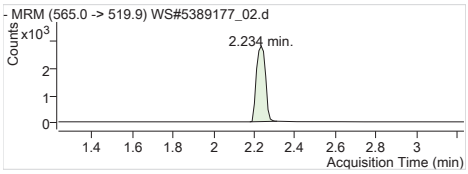



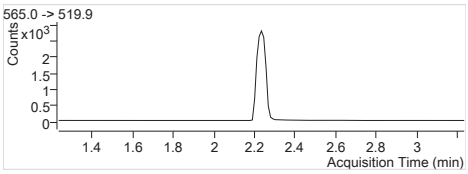

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 101.32 µg/L
Area ratio: 0.40758
Sample type: Calibration



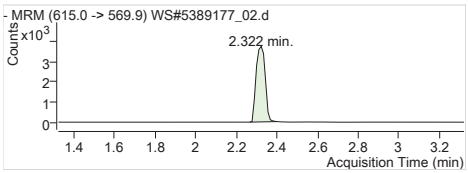



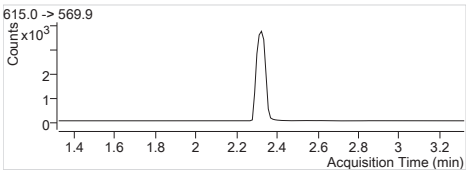

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 90.29 µg/L
Area ratio: 0.22743
Sample type: Calibration



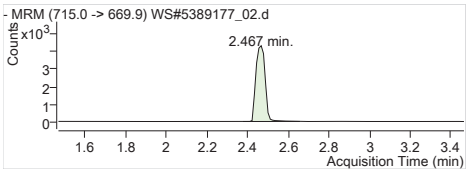



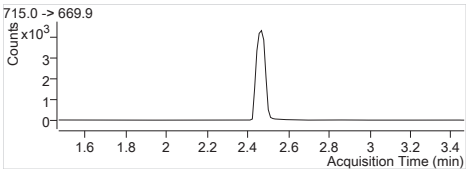

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 93.42 µg/L
Area ratio: 0.28063
Sample type: Calibration



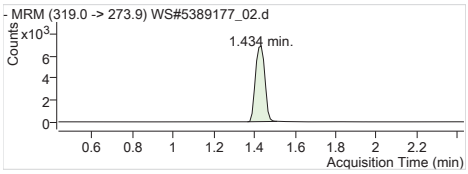



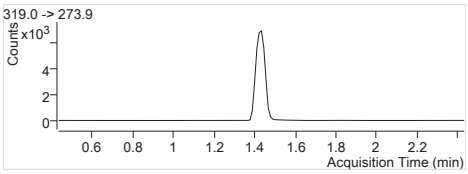

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 94.96 µg/L
Area ratio: 0.37632
Sample type: Calibration



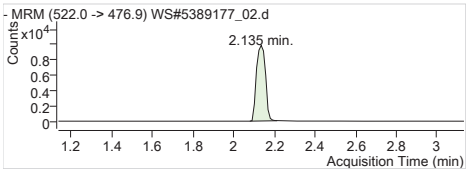



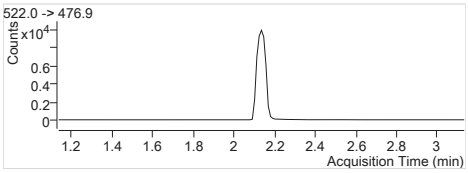

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 93.11 µg/L
Area ratio: 0.44163
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 102.70 µg/L
Area ratio: 0
Sample type: Calibration



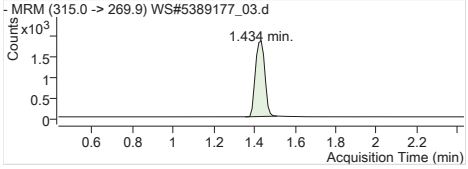

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 106.41 µg/L
Area ratio: 0
Sample type: Calibration

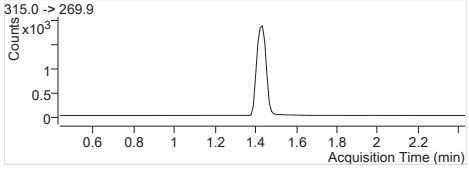
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 2** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_03.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A3 |
| **Acq. Date** | 2018/02/09 12:07:17 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

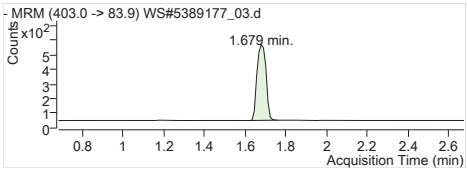
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5951 | 1.43 | 1 µg/L | | |
| MPFHxS | 1613 | 1.68 | 1 µg/L | | |
| MPFHpA | 7618 | 1.69 | 1 µg/L | | |
| MPFOA | 8393 | 1.88 | 1 µg/L | | |
| MPFOS | 1953 | 1.98 | 1 µg/L | | |
| MPFNA | 8592 | 2.01 | 1 µg/L | | |
| MPFDA | 7403 | 2.14 | 1 µg/L | | |
| MPFUnA | 8354 | 2.23 | 1 µg/L | | |
| MPFDoA | 11214 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13452 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 20032 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 26332 | 2.13 | 1 µg/L | | |

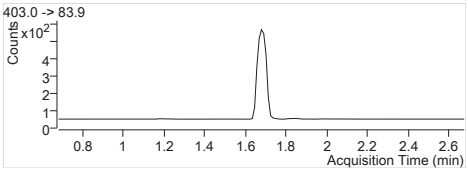
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 1069 | 1.09 | 1.70 | 1.44 µg/L | 84.50 |
| PFHxA 1 | 3269 | 1.43 | 1.70 | 1.43 µg/L | 84.28 |
| PFHxS 1 | 918 | 1.68 | 1.70 | 1.39 µg/L | 81.70 |
| PFHpA 1 | 4633 | 1.69 | 1.70 | 1.56 µg/L | 91.73 |
| PFOA 1 | 5039 | 1.88 | 1.70 | 1.42 µg/L | 83.46 |
| PFOS 1 | 1026 | 1.97 | 1.70 | 1.51 µg/L | 88.88 |
| PFNA 1 | 5021 | 2.01 | 1.70 | 1.61 µg/L | 94.68 |
| PFDA 1 | 4944 | 2.14 | 1.70 | 1.49 µg/L | 87.49 |
| PFUnA 1 | 5409 | 2.23 | 1.70 | 1.54 µg/L | 90.86 |
| PFDoA 1 | 6898 | 2.32 | 1.70 | 1.50 µg/L | 88.30 |
| PFTrDA 1 | 7954 | 2.40 | 1.70 | 1.43 µg/L | 84.18 |
| PFTeDA 1 | 6692 | 2.47 | 1.70 | 1.48 µg/L | 87.01 |
| 13C2-PFHxA | 5951 | 1.43 | 100.00 | 105.96 µg/L | 105.96 |
| 18O2-PFHxS | 1613 | 1.68 | 100.00 | 111.47 µg/L | 111.47 |
| 13C4-PFHpA | 7618 | 1.69 | 100.00 | 101.98 µg/L | 101.98 |
| 13C4-PFOA | 8393 | 1.88 | 100.00 | 105.01 µg/L | 105.01 |
| 13C4-PFOS | 1953 | 1.98 | 100.00 | 110.07 µg/L | 110.07 |
| 13C5-PFNA | 8592 | 2.01 | 100.00 | 106.63 µg/L | 106.63 |
| 13C2-PFDA | 7300 | 2.14 | 100.00 | 110.06 µg/L | 110.06 |
| 13C2-PFUnA | 8354 | 2.23 | 100.00 | 105.61 µg/L | 105.61 |
| 13C2-PFDoA | 11214 | 2.32 | 100.00 | 107.46 µg/L | 107.46 |
| 13C2-PFTeDA | 13789 | 2.47 | 100.00 | 110.41 µg/L | 110.41 |
| 13C6-PFHxA | 20032 | 1.43 | 100.00 | 93.57 µg/L | 93.57 |
| 13C9-PFDA | 26332 | 2.13 | 100.00 | 92.14 µg/L | 92.14 |



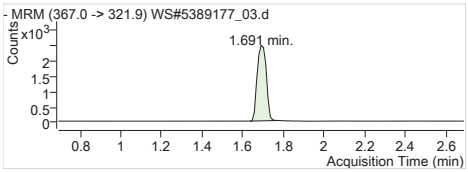



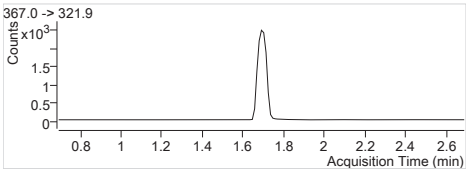

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



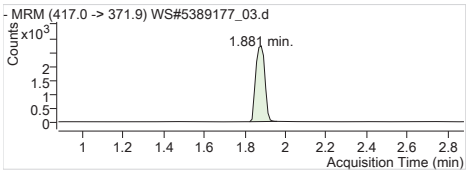



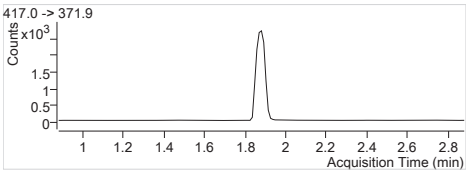

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Calibration



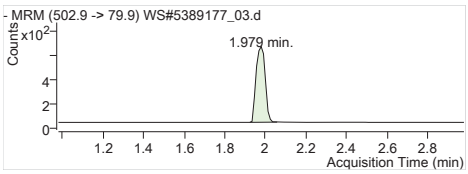



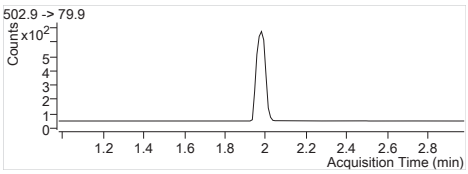

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Calibration



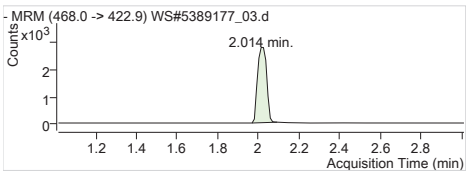



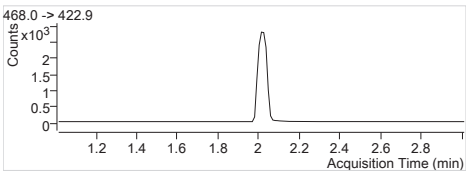

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



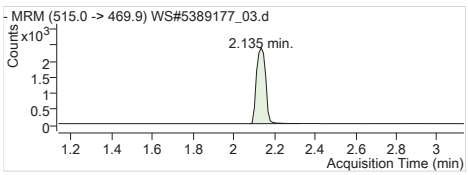



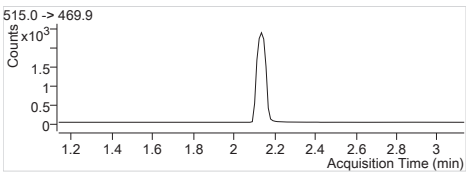

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



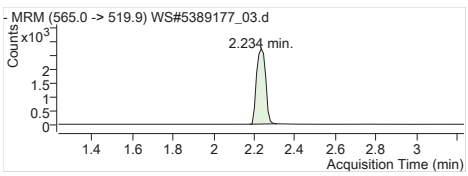



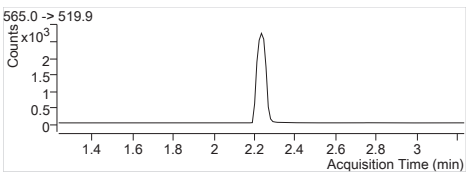

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Calibration



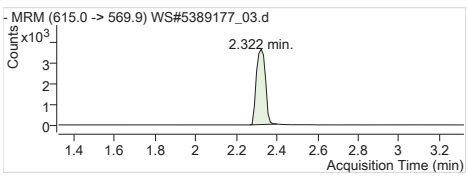



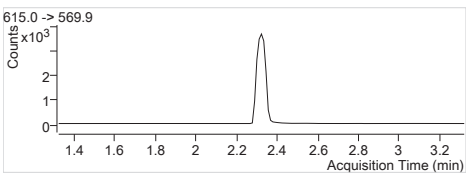

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



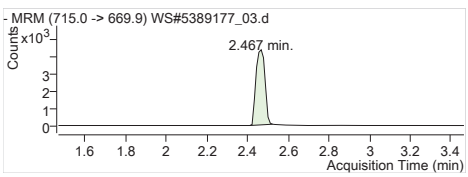



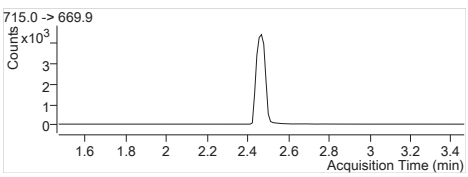

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Calibration



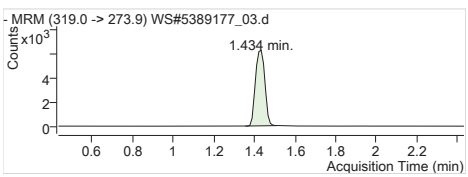



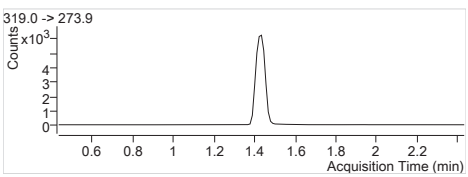

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



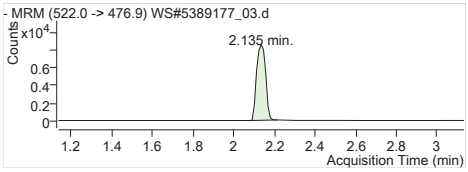



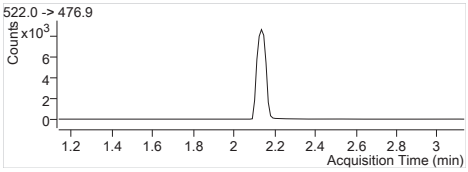

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



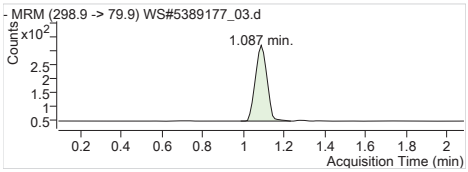



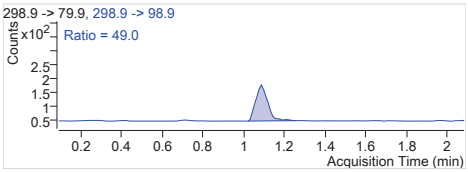

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



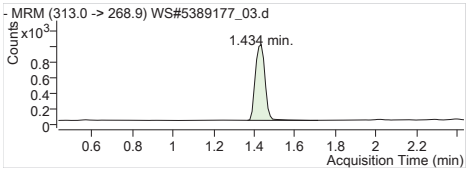



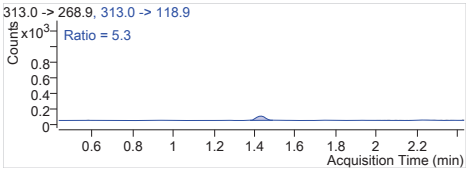

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



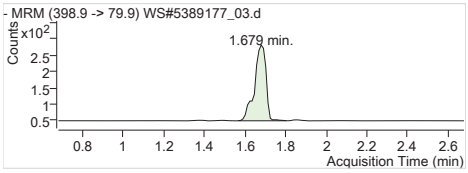



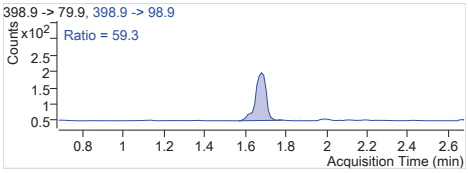

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 1.44 µg/L
Area ratio: 0.66274
Sample type: Calibration



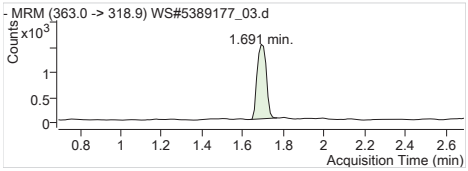



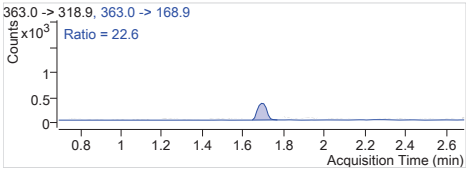

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 1.43 µg/L
Area ratio: 0.54932
Sample type: Calibration



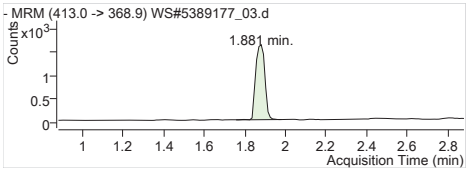



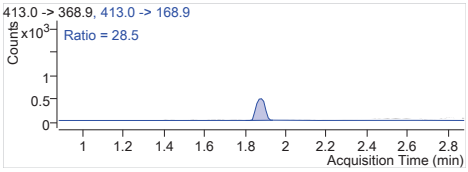

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 1.39 µg/L
Area ratio: 0.56913
Sample type: Calibration



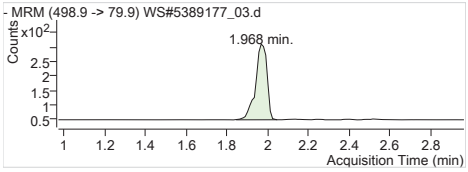



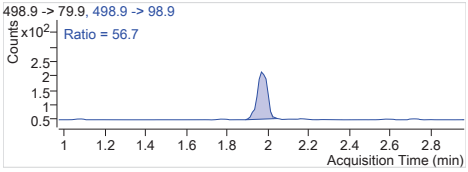

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 1.56 µg/L
Area ratio: 0.60816
Sample type: Calibration



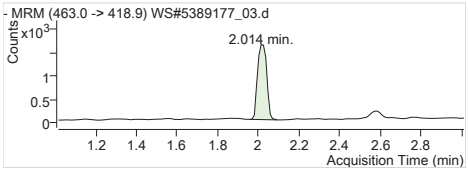



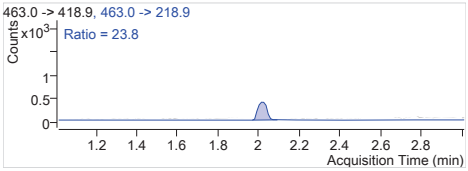

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 1.42 µg/L
Area ratio: 0.60038
Sample type: Calibration



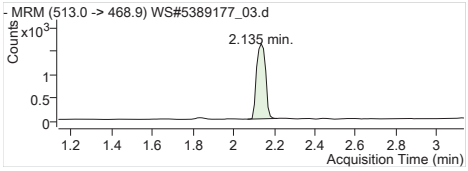



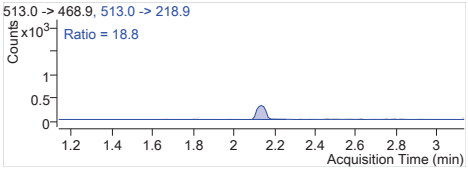

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 1.51 µg/L
Area ratio: 0.52535
Sample type: Calibration



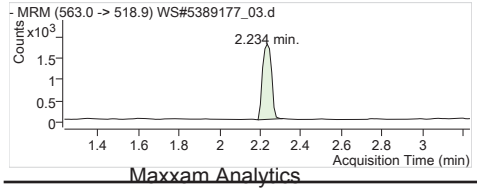



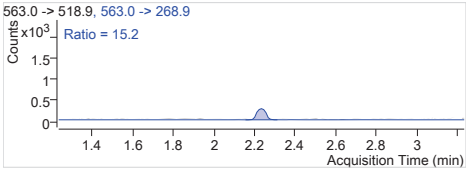

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 1.61 µg/L
Area ratio: 0.58438
Sample type: Calibration



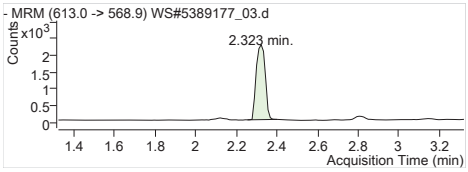



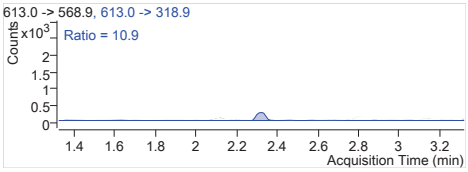

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 1.49 µg/L
Area ratio: 0.66784
Sample type: Calibration



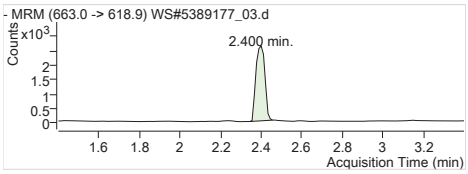



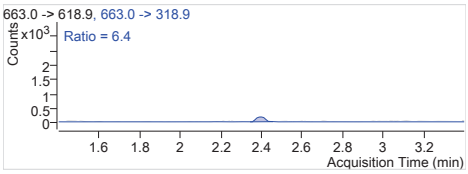

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 1.54 µg/L
Area ratio: 0.64747
Sample type: Calibration



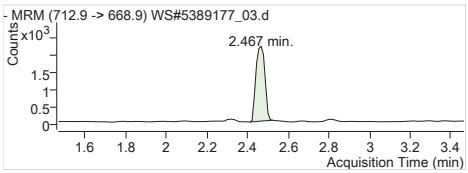



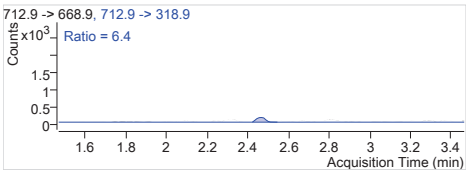

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 1.50 µg/L
Area ratio: 0.61512
Sample type: Calibration



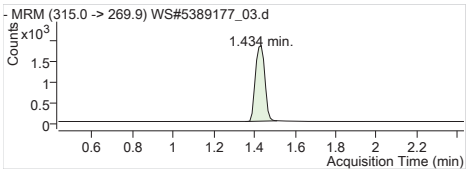



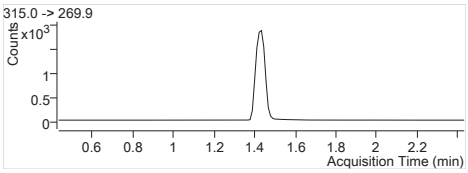

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 1.43 µg/L
Area ratio: 0.59129
Sample type: Calibration



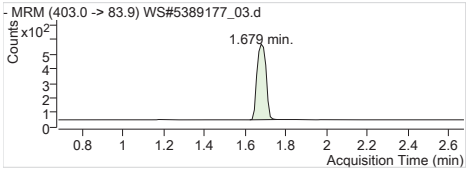



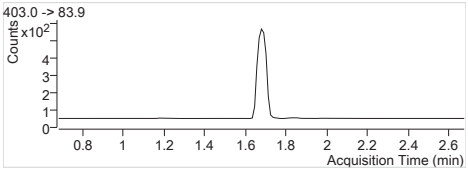

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 1.48 µg/L
Area ratio: 0.49747
Sample type: Calibration



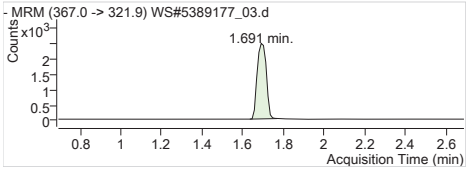



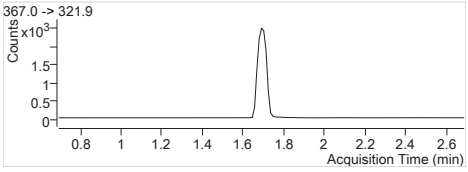

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 105.96 µg/L
Area ratio: 0.29707
Sample type: Calibration



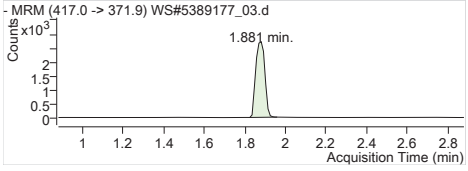



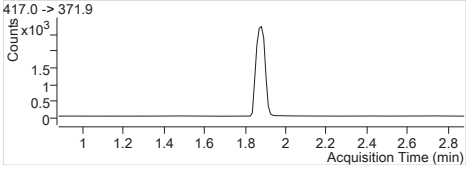

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 111.47 µg/L
Area ratio: 0.08052
Sample type: Calibration



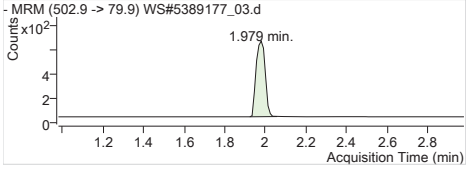



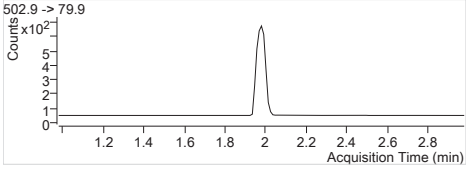

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 101.98 µg/L
Area ratio: 0.38029
Sample type: Calibration



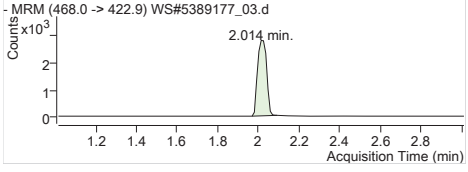



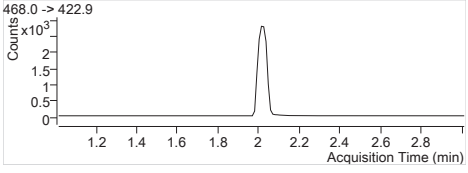

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 105.01 µg/L
Area ratio: 0.41898
Sample type: Calibration



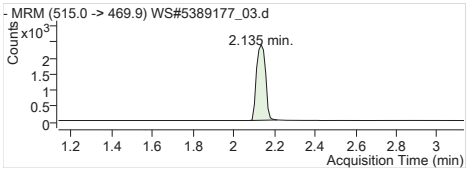



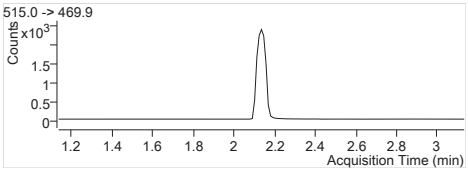

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 110.07 µg/L
Area ratio: 0.09749
Sample type: Calibration



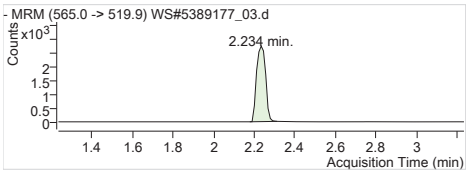



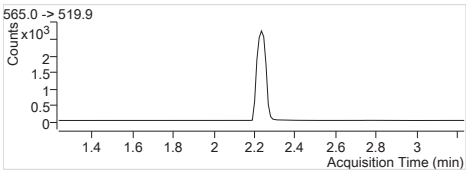

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 106.63 µg/L
Area ratio: 0.42891
Sample type: Calibration



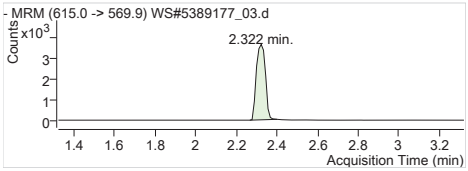



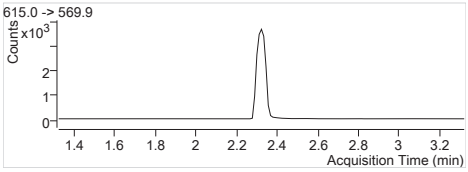

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 110.06 µg/L
Area ratio: 0.27723
Sample type: Calibration



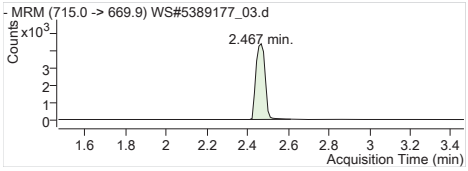



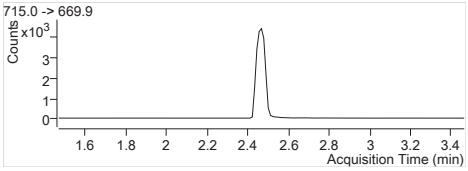

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 105.61 µg/L
Area ratio: 0.31726
Sample type: Calibration



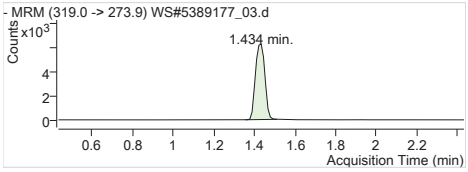



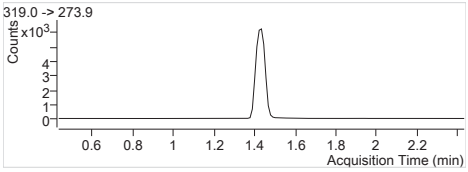

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 107.46 µg/L
Area ratio: 0.42587
Sample type: Calibration



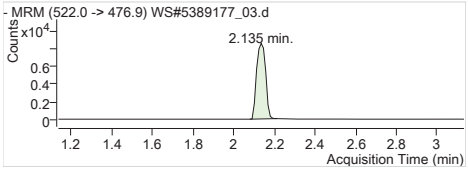



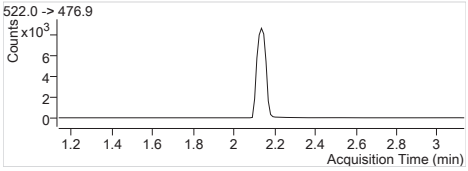

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 110.41 µg/L
Area ratio: 0.52366
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 93.57 µg/L
Area ratio: 0
Sample type: Calibration



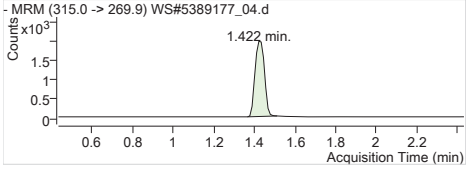

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 92.14 µg/L
Area ratio: 0
Sample type: Calibration

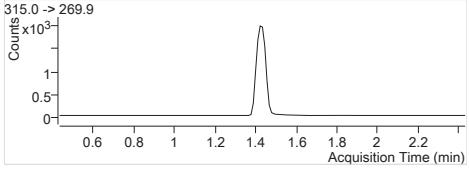
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 3** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_04.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A4 |
| **Acq. Date** | 2018/02/09 12:12:13 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

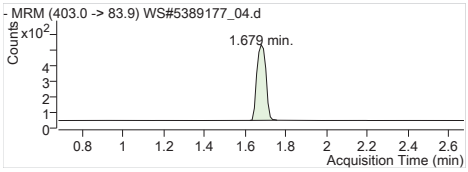
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6243 | 1.42 | 1 µg/L | | |
| MPFHxS | 1518 | 1.68 | 1 µg/L | | |
| MPFHpA | 8635 | 1.69 | 1 µg/L | | |
| MPFOA | 8733 | 1.88 | 1 µg/L | | |
| MPFOS | 2049 | 1.98 | 1 µg/L | | |
| MPFNA | 8904 | 2.02 | 1 µg/L | | |
| MPFDA | 7461 | 2.14 | 1 µg/L | | |
| MPFUnA | 8919 | 2.23 | 1 µg/L | | |
| MPFDoA | 11510 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13182 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 22277 | 1.42 | 1 µg/L | | |
| 13C9-PFDA IS | 30779 | 2.13 | 1 µg/L | | |

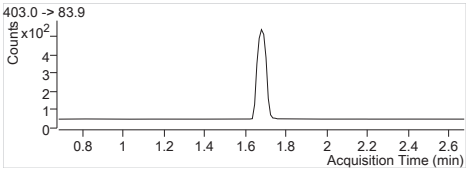
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 3685 | 1.09 | 5.00 | 5.27 µg/L | 105.42 |
| PFHxA 1 | 12687 | 1.42 | 5.00 | 4.99 µg/L | 99.75 |
| PFHxS 1 | 3558 | 1.68 | 5.00 | 5.32 µg/L | 106.38 |
| PFHpA 1 | 16651 | 1.69 | 5.00 | 4.74 µg/L | 94.76 |
| PFOA 1 | 19009 | 1.88 | 5.00 | 5.12 µg/L | 102.42 |
| PFOS 1 | 3653 | 1.97 | 5.00 | 4.80 µg/L | 96.06 |
| PFNA 1 | 16269 | 2.01 | 5.00 | 4.88 µg/L | 97.63 |
| PFDA 1 | 17521 | 2.14 | 5.00 | 4.96 µg/L | 99.21 |
| PFUnA 1 | 18843 | 2.23 | 5.00 | 4.84 µg/L | 96.71 |
| PFDoA 1 | 24541 | 2.32 | 5.00 | 4.96 µg/L | 99.14 |
| PFTrDA 1 | 27534 | 2.40 | 5.00 | 5.13 µg/L | 102.66 |
| PFTeDA 1 | 23878 | 2.47 | 5.00 | 5.18 µg/L | 103.59 |
| 13C2-PFHxA | 6243 | 1.42 | 100.00 | 99.96 µg/L | 99.96 |
| 18O2-PFHxS | 1518 | 1.68 | 100.00 | 94.33 µg/L | 94.33 |
| 13C4-PFHpA | 8635 | 1.69 | 100.00 | 103.94 µg/L | 103.94 |
| 13C4-PFOA | 8733 | 1.88 | 100.00 | 98.25 µg/L | 98.25 |
| 13C4-PFOS | 2049 | 1.98 | 100.00 | 103.85 µg/L | 103.85 |
| 13C5-PFNA | 8903 | 2.02 | 100.00 | 99.35 µg/L | 99.35 |
| 13C2-PFDA | 7332 | 2.14 | 100.00 | 94.57 µg/L | 94.57 |
| 13C2-PFUnA | 8919 | 2.23 | 100.00 | 96.46 µg/L | 96.46 |
| 13C2-PFDoA | 11510 | 2.32 | 100.00 | 94.36 µg/L | 94.36 |
| 13C2-PFTeDA | 13535 | 2.47 | 100.00 | 92.71 µg/L | 92.71 |
| 13C6-PFHxA | 22277 | 1.42 | 100.00 | 104.06 µg/L | 104.06 |
| 13C9-PFDA | 30779 | 2.13 | 100.00 | 107.70 µg/L | 107.70 |



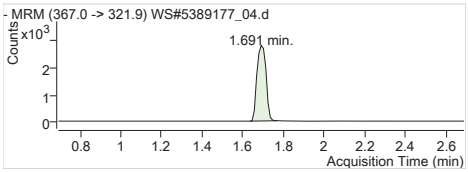



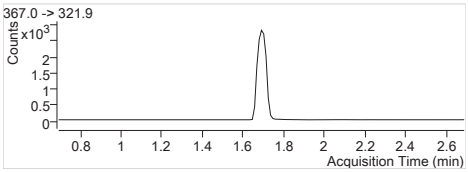

**MPFHxA** Internal Standard
RT (Exp. RT): 1.422 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



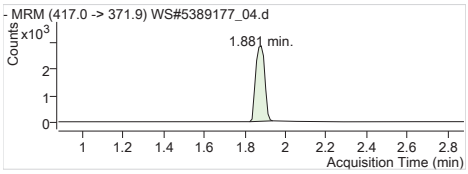



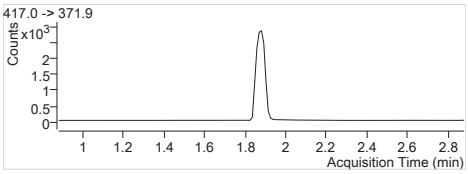

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Calibration



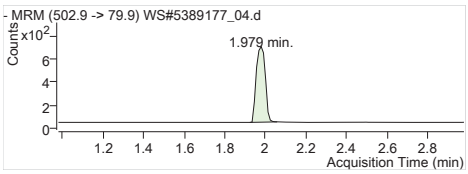



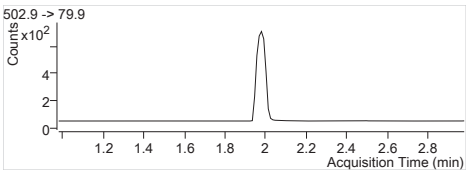

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Calibration



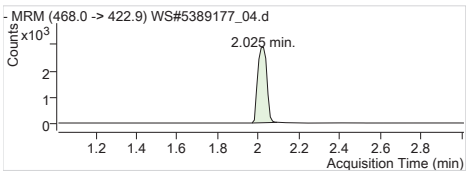



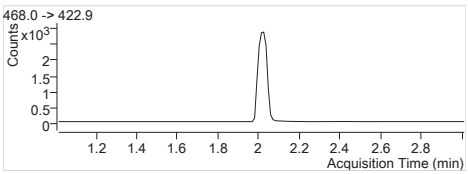

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



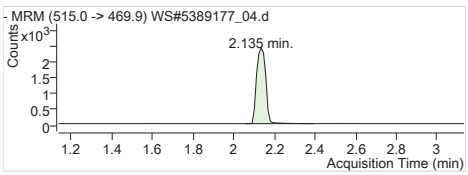



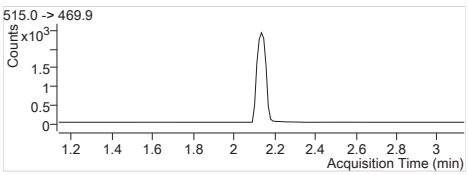

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



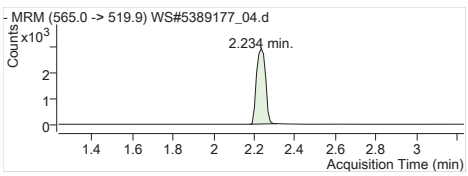



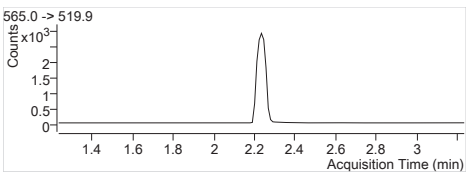

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.014)
Concentration: 1 µg/L
Sample type: Calibration



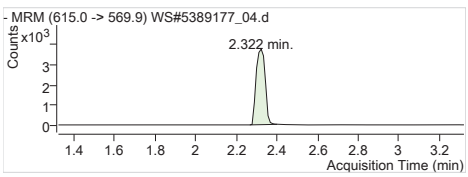



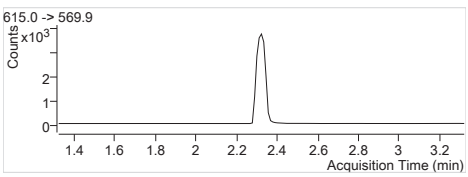

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



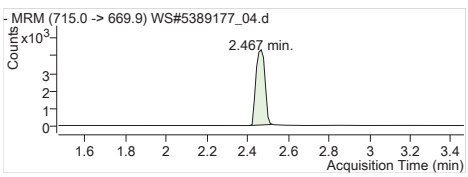



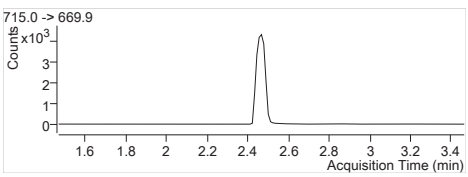

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Calibration



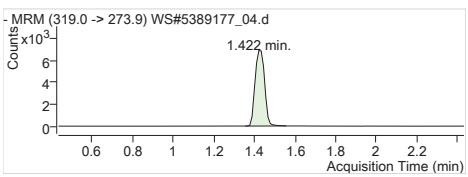



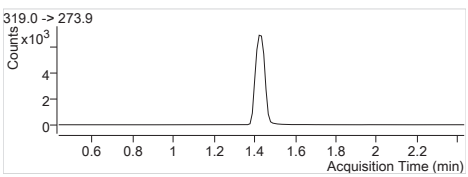

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



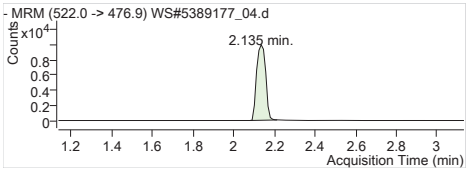



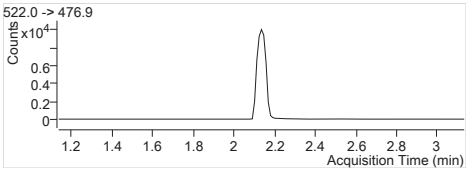

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



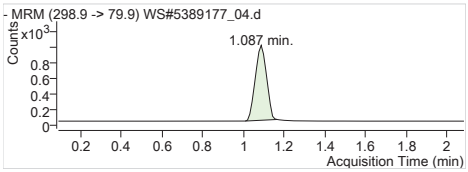



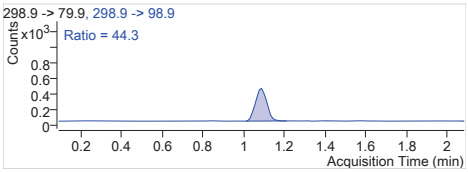

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.422 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



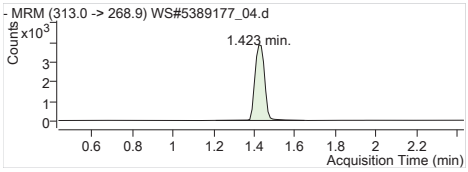



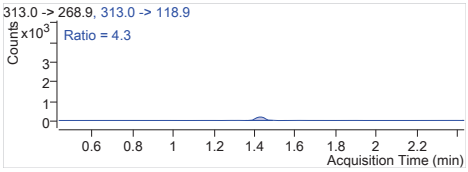

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



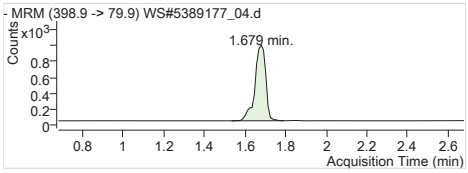



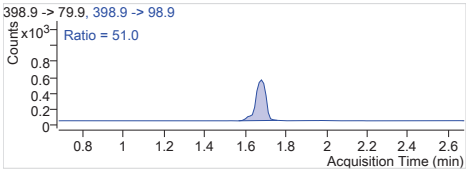

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 5.27 µg/L
Area ratio: 2.42754
Sample type: Calibration



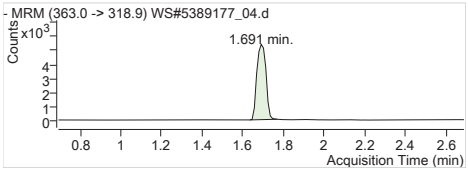



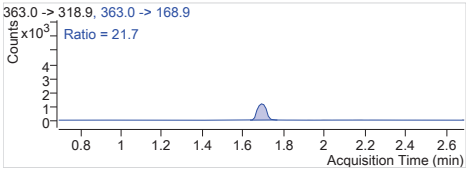

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.434)
Calc. conc. 4.99 µg/L
Area ratio: 2.03220
Sample type: Calibration



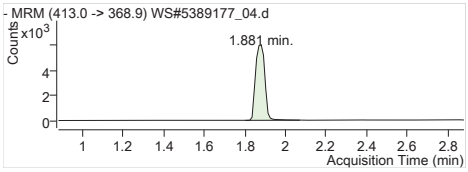



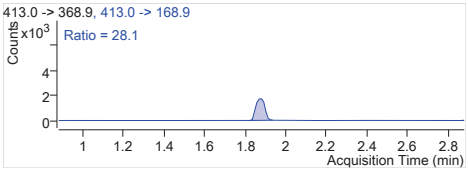

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 5.32 µg/L
Area ratio: 2.34387
Sample type: Calibration



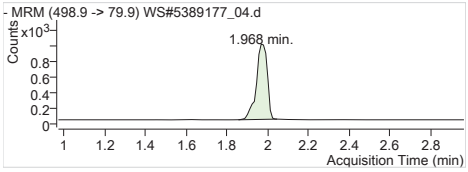



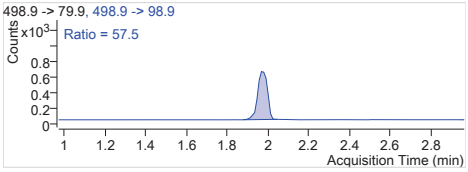

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 4.74 µg/L
Area ratio: 1.92831
Sample type: Calibration



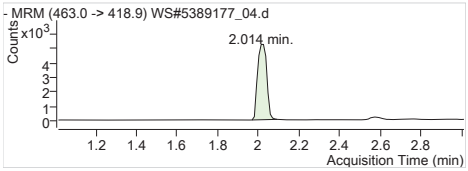



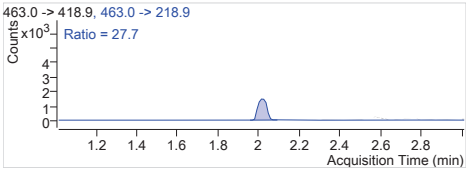

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 5.12 µg/L
Area ratio: 2.17669
Sample type: Calibration



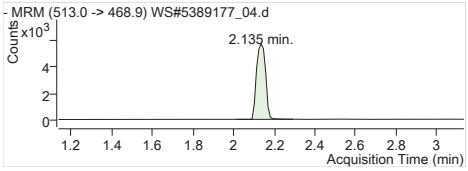



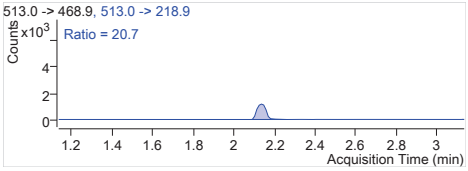

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 4.80 µg/L
Area ratio: 1.78282
Sample type: Calibration



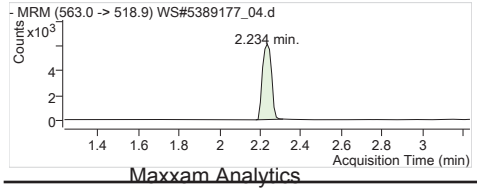



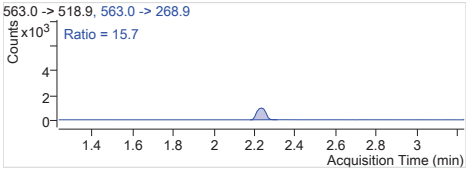

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 4.88 µg/L
Area ratio: 1.82716
Sample type: Calibration



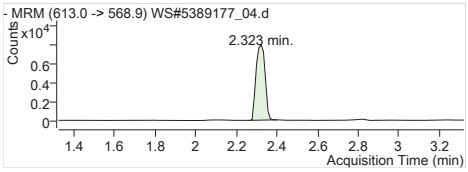



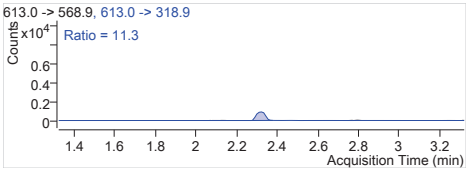

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 4.96 µg/L
Area ratio: 2.34834
Sample type: Calibration



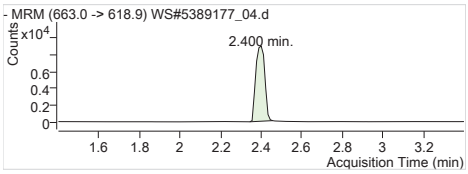



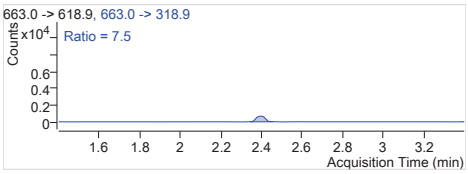

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 4.84 µg/L
Area ratio: 2.11268
Sample type: Calibration



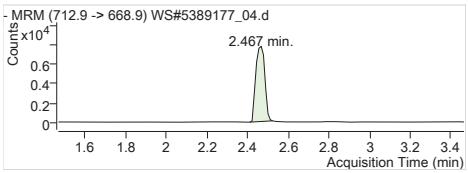



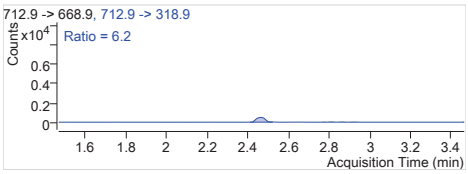

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 4.96 µg/L
Area ratio: 2.13215
Sample type: Calibration



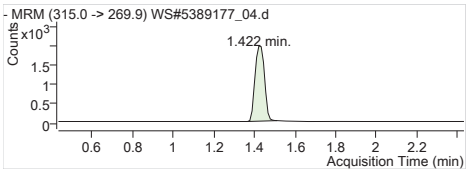



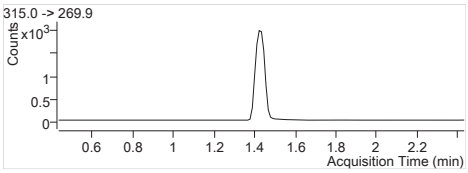

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 5.13 µg/L
Area ratio: 2.08876
Sample type: Calibration



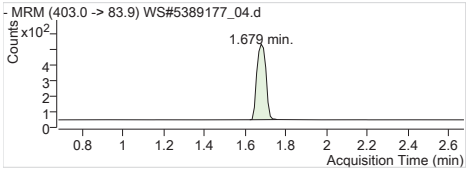



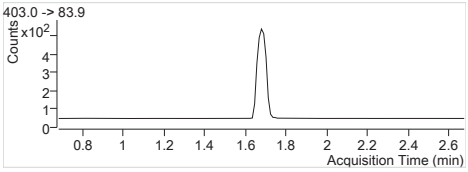

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 5.18 µg/L
Area ratio: 1.81141
Sample type: Calibration



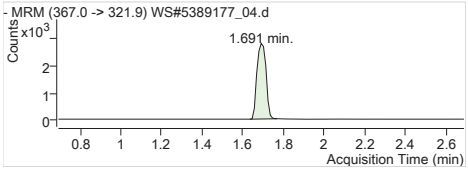



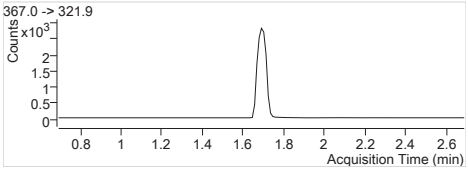

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.434)
Calc. conc. 99.96 µg/L
Area ratio: 0.28024
Sample type: Calibration



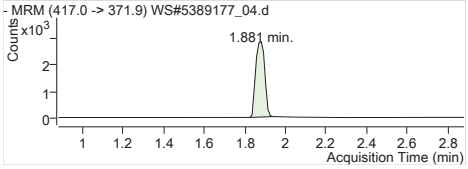



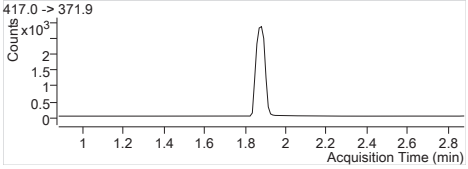

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 94.33 µg/L
Area ratio: 0.06814
Sample type: Calibration



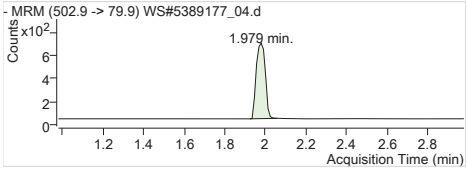



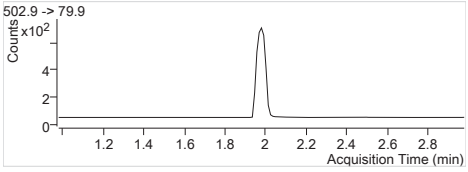

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 103.94 µg/L
Area ratio: 0.38762
Sample type: Calibration



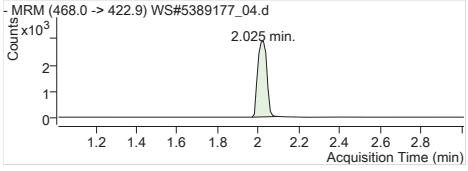



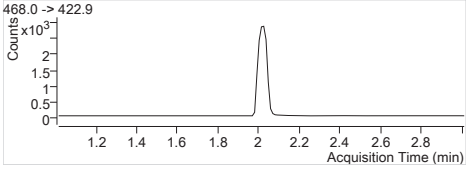

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 98.25 µg/L
Area ratio: 0.39202
Sample type: Calibration



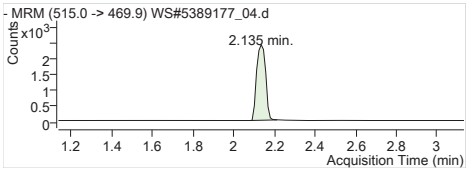



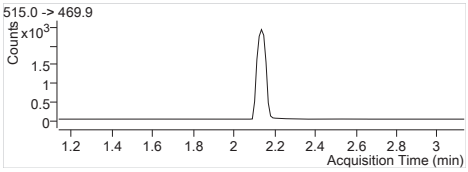

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 103.85 µg/L
Area ratio: 0.09198
Sample type: Calibration



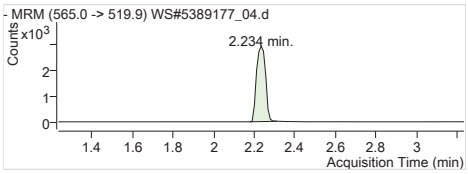



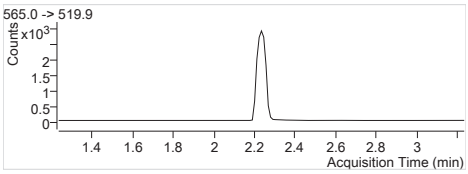

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.014)
Calc. conc. 99.35 µg/L
Area ratio: 0.39965
Sample type: Calibration



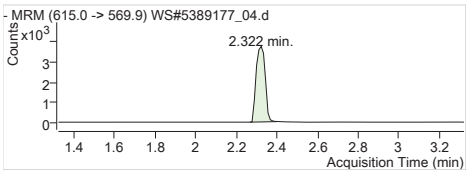



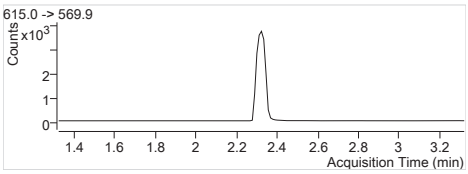

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 94.57 µg/L
Area ratio: 0.23821
Sample type: Calibration



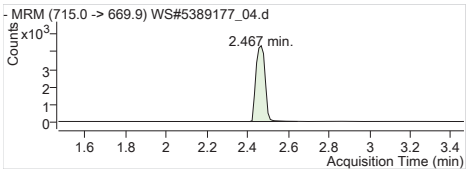



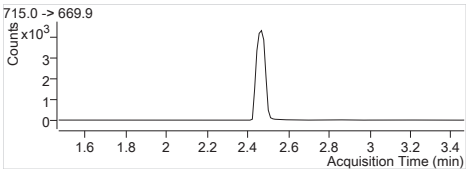

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 96.46 µg/L
Area ratio: 0.28978
Sample type: Calibration



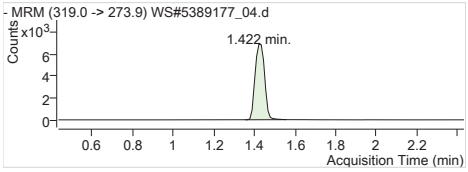



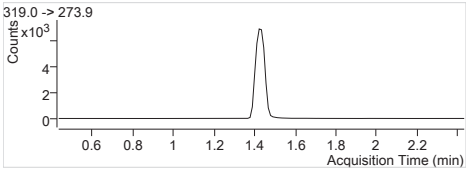

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 94.36 µg/L
Area ratio: 0.37396
Sample type: Calibration



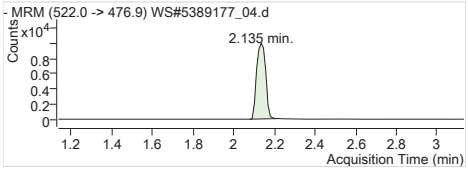



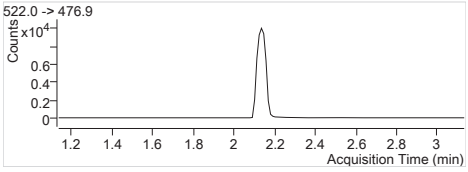

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 92.71 µg/L
Area ratio: 0.43975
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.422 (1.434)
Calc. conc. 104.06 µg/L
Area ratio: 0
Sample type: Calibration



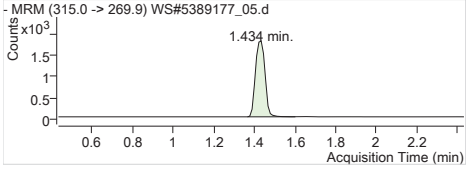

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 107.70 µg/L
Area ratio: 0
Sample type: Calibration

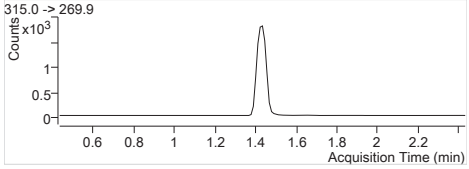
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 4** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_05.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A5 |
| **Acq. Date** | 2018/02/09 12:17:10 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

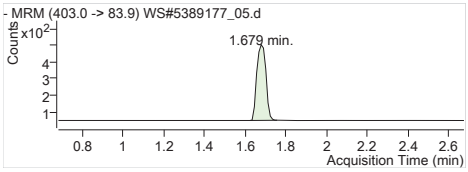
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5858 | 1.43 | 1 µg/L | | |
| MPFHxS | 1427 | 1.68 | 1 µg/L | | |
| MPFHpA | 7672 | 1.69 | 1 µg/L | | |
| MPFOA | 7823 | 1.88 | 1 µg/L | | |
| MPFOS | 1917 | 1.98 | 1 µg/L | | |
| MPFNA | 8068 | 2.01 | 1 µg/L | | |
| MPFDA | 7309 | 2.14 | 1 µg/L | | |
| MPFUnA | 8409 | 2.23 | 1 µg/L | | |
| MPFDoA | 11608 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12552 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 21649 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 28437 | 2.13 | 1 µg/L | | |

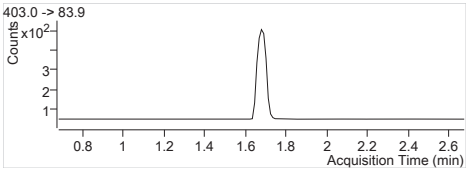
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 8679 | 1.09 | 12.50 | 13.21 µg/L | 105.69 |
| PFHxA 1 | 30119 | 1.43 | 12.50 | 12.44 µg/L | 99.53 |
| PFHxS 1 | 8749 | 1.68 | 12.50 | 13.71 µg/L | 109.65 |
| PFHpA 1 | 41071 | 1.69 | 12.50 | 12.98 µg/L | 103.87 |
| PFOA 1 | 46159 | 1.88 | 12.50 | 13.87 µg/L | 110.94 |
| PFOS 1 | 8207 | 1.97 | 12.50 | 11.34 µg/L | 90.75 |
| PFNA 1 | 40186 | 2.01 | 12.50 | 13.18 µg/L | 105.48 |
| PFDA 1 | 43587 | 2.14 | 12.50 | 12.43 µg/L | 99.45 |
| PFUnA 1 | 47185 | 2.23 | 12.50 | 12.69 µg/L | 101.55 |
| PFDoA 1 | 60873 | 2.32 | 12.50 | 12.05 µg/L | 96.36 |
| PFTrDA 1 | 66039 | 2.40 | 12.50 | 12.98 µg/L | 103.81 |
| PFTeDA 1 | 56621 | 2.47 | 12.50 | 12.78 µg/L | 102.25 |
| 13C2-PFHxA | 5858 | 1.43 | 100.00 | 96.51 µg/L | 96.51 |
| 18O2-PFHxS | 1427 | 1.68 | 100.00 | 91.25 µg/L | 91.25 |
| 13C4-PFHpA | 7672 | 1.69 | 100.00 | 95.03 µg/L | 95.03 |
| 13C4-PFOA | 7823 | 1.88 | 100.00 | 90.57 µg/L | 90.57 |
| 13C4-PFOS | 1917 | 1.98 | 100.00 | 99.97 µg/L | 99.97 |
| 13C5-PFNA | 8067 | 2.01 | 100.00 | 92.64 µg/L | 92.64 |
| 13C2-PFDA | 7177 | 2.14 | 100.00 | 100.20 µg/L | 100.20 |
| 13C2-PFUnA | 8409 | 2.23 | 100.00 | 98.44 µg/L | 98.44 |
| 13C2-PFDoA | 11608 | 2.32 | 100.00 | 103.00 µg/L | 103.00 |
| 13C2-PFTeDA | 12838 | 2.47 | 100.00 | 95.18 µg/L | 95.18 |
| 13C6-PFHxA | 21649 | 1.43 | 100.00 | 101.12 µg/L | 101.12 |
| 13C9-PFDA | 28437 | 2.13 | 100.00 | 99.51 µg/L | 99.51 |



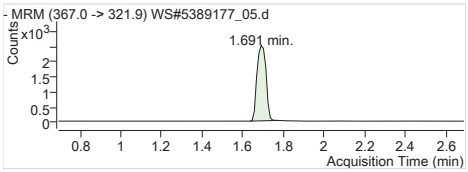



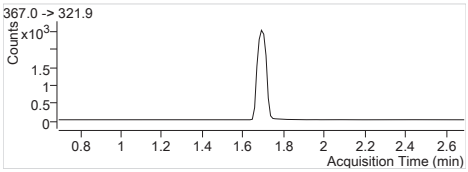

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



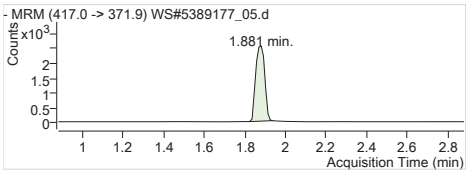



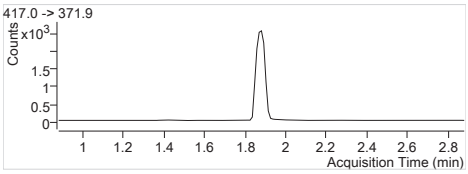

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Calibration



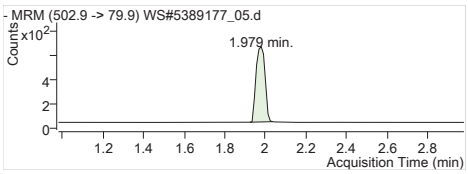



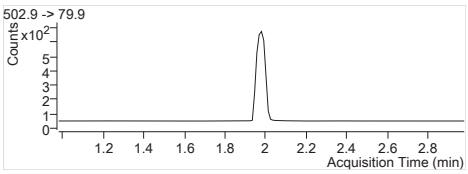

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Calibration



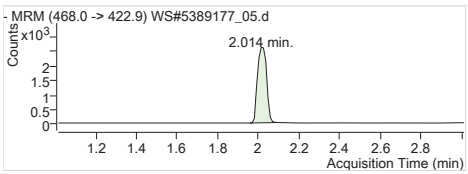



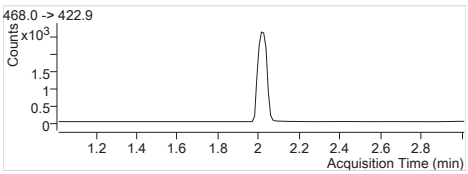

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



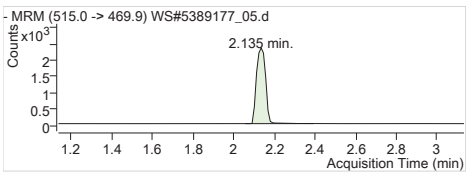



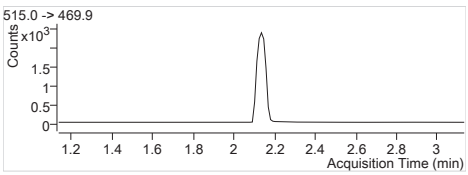

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



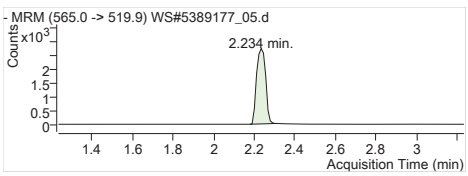



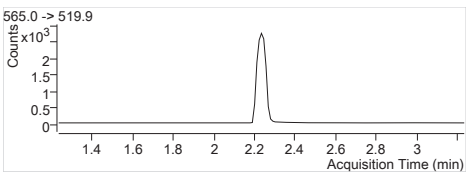

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Calibration



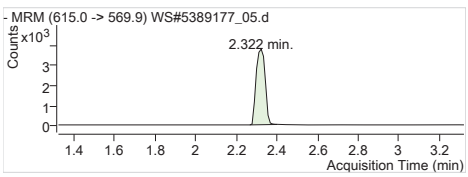



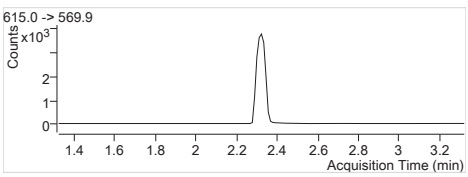

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



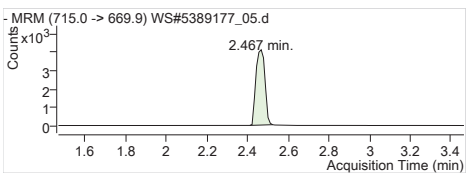



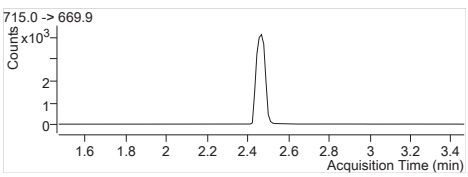

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Calibration



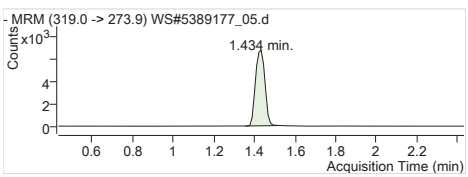



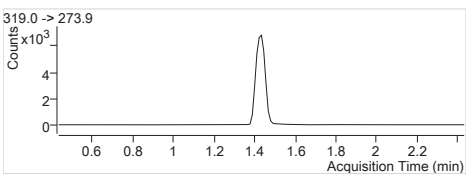

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



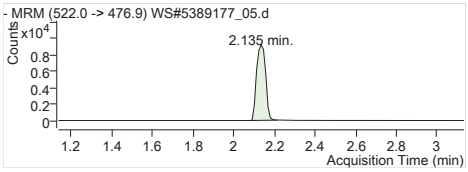



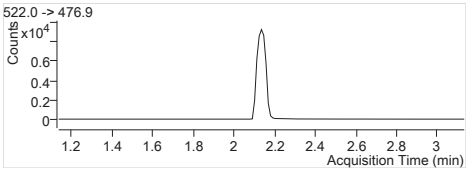

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



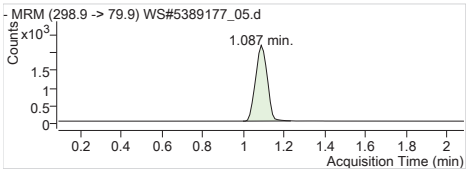



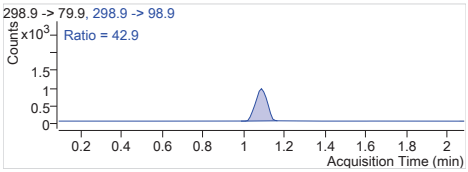

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



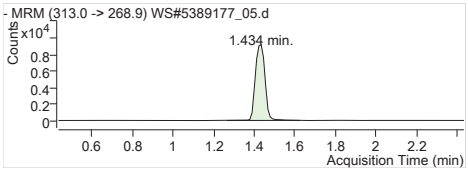



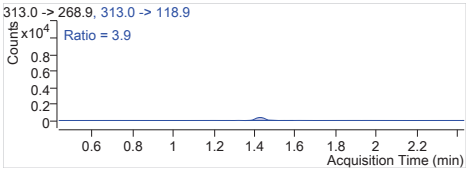

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



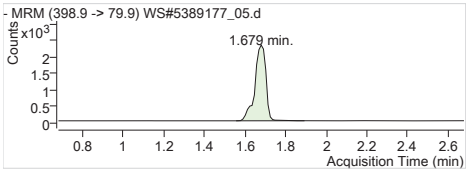



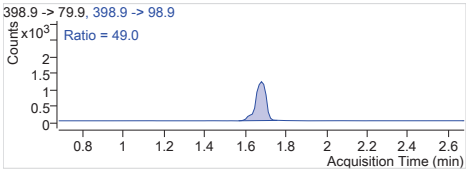

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 13.21 µg/L
Area ratio: 6.08199
Sample type: Calibration



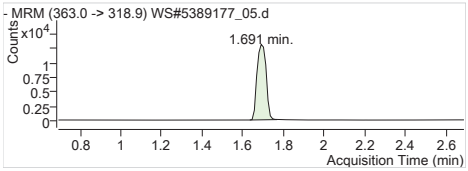



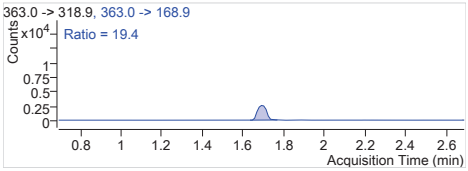

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 12.44 µg/L
Area ratio: 5.14152
Sample type: Calibration



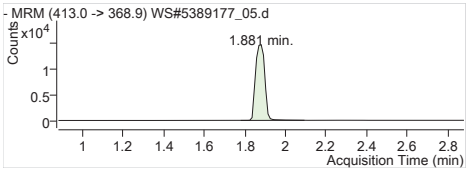



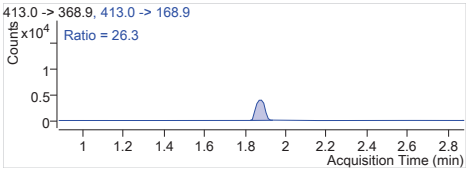

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 13.71 µg/L
Area ratio: 6.13104
Sample type: Calibration



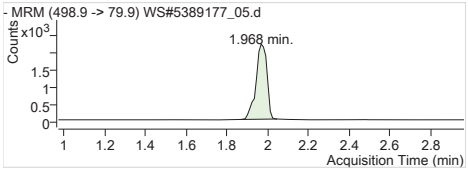



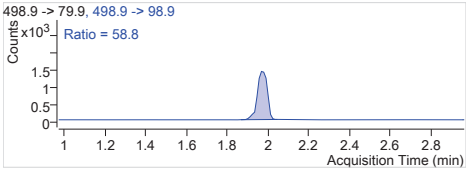

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.98 µg/L
Area ratio: 5.35336
Sample type: Calibration



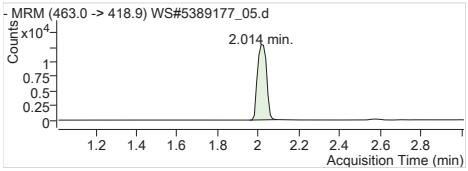



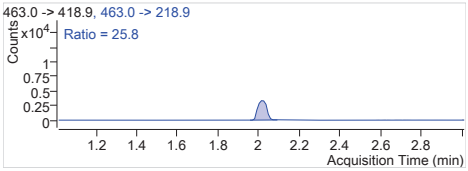

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 13.87 µg/L
Area ratio: 5.90042
Sample type: Calibration



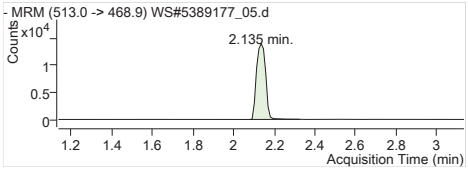



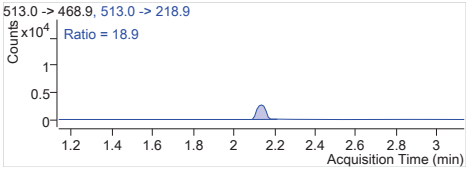

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 11.34 µg/L
Area ratio: 4.28117
Sample type: Calibration



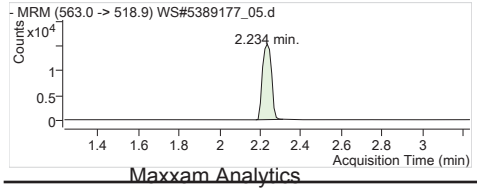



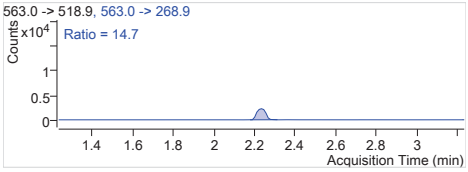

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 13.18 µg/L
Area ratio: 4.98091
Sample type: Calibration



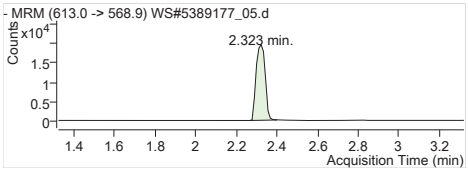



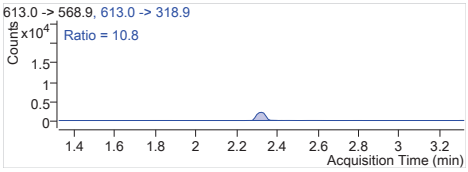

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 12.43 µg/L
Area ratio: 5.96347
Sample type: Calibration



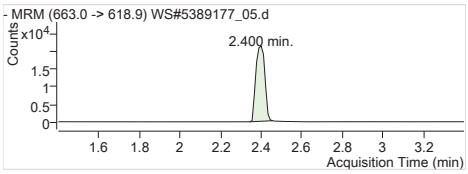



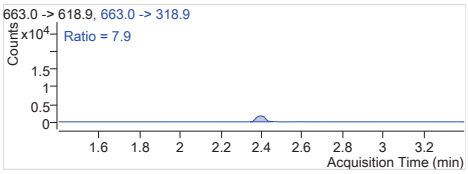

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 12.69 µg/L
Area ratio: 5.61125
Sample type: Calibration



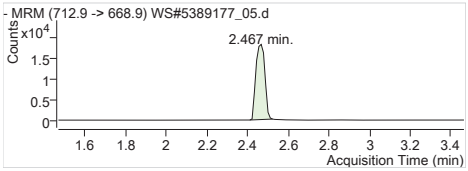



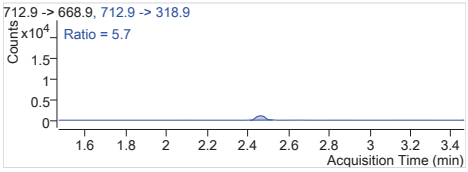

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 12.05 µg/L
Area ratio: 5.24406
Sample type: Calibration



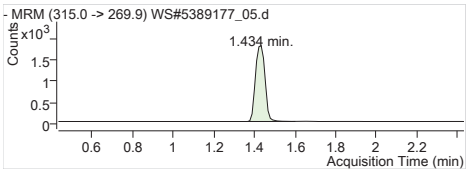



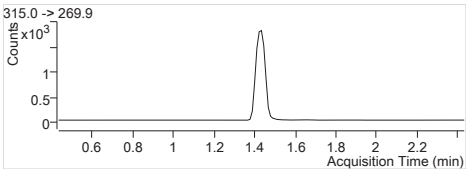

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 12.98 µg/L
Area ratio: 5.26123
Sample type: Calibration



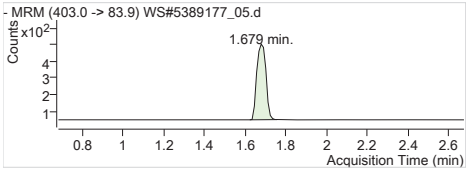



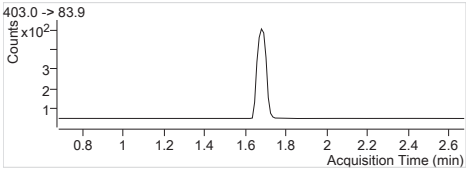

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 12.78 µg/L
Area ratio: 4.51091
Sample type: Calibration



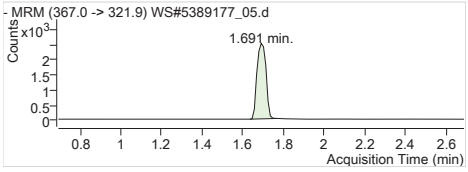



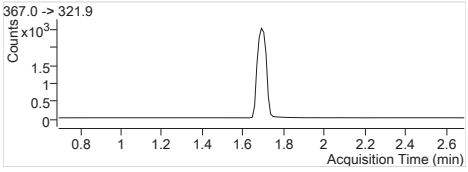

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 96.51 µg/L
Area ratio: 0.27059
Sample type: Calibration



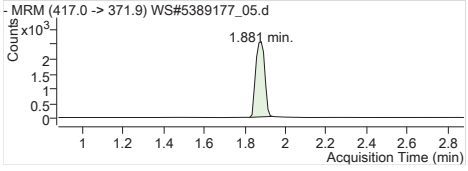



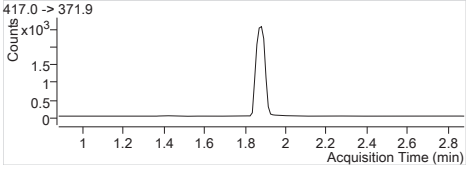

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 91.25 µg/L
Area ratio: 0.06592
Sample type: Calibration



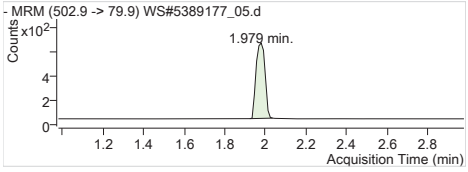



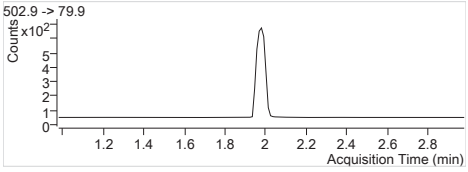

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 95.03 µg/L
Area ratio: 0.35438
Sample type: Calibration



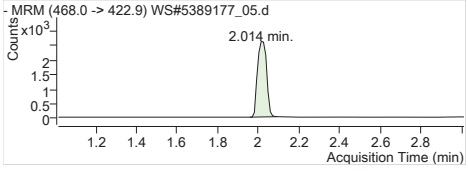



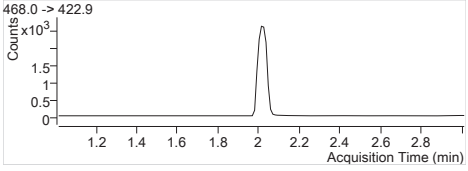

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 90.57 µg/L
Area ratio: 0.36136
Sample type: Calibration



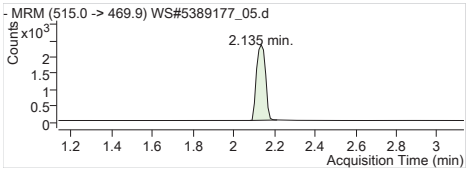



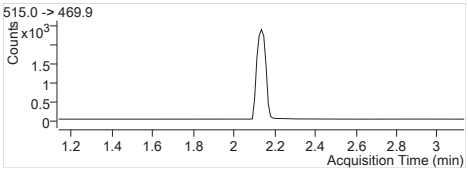

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 99.97 µg/L
Area ratio: 0.08855
Sample type: Calibration



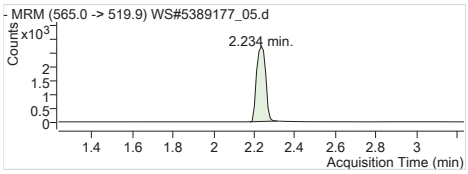



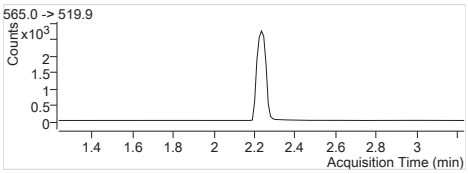

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 92.64 µg/L
Area ratio: 0.37263
Sample type: Calibration



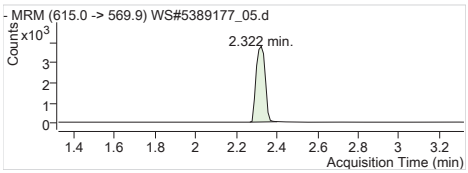



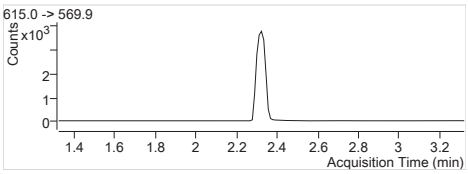

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 100.20 µg/L
Area ratio: 0.25238
Sample type: Calibration



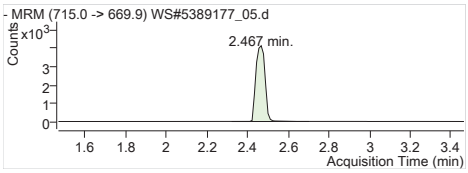



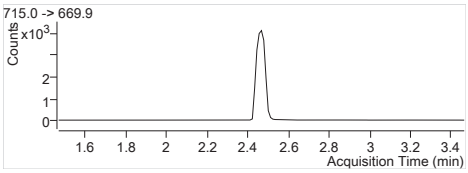

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 98.44 µg/L
Area ratio: 0.29571
Sample type: Calibration



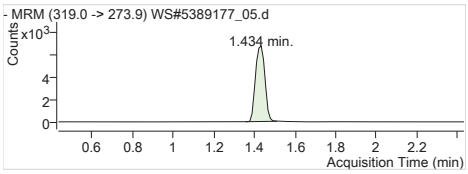



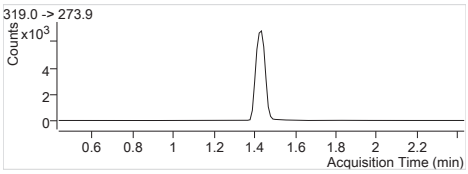

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 103.00 µg/L
Area ratio: 0.40820
Sample type: Calibration



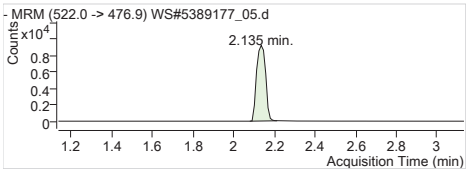



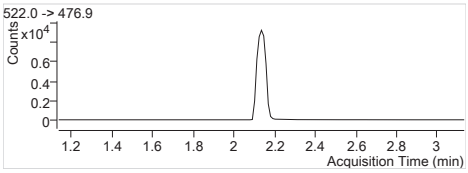

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 95.18 µg/L
Area ratio: 0.45145
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 101.12 µg/L
Area ratio: 0
Sample type: Calibration



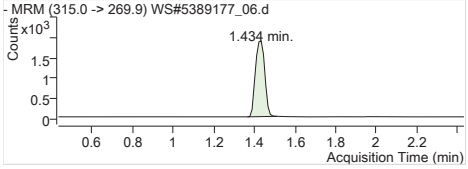

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 99.51 µg/L
Area ratio: 0
Sample type: Calibration

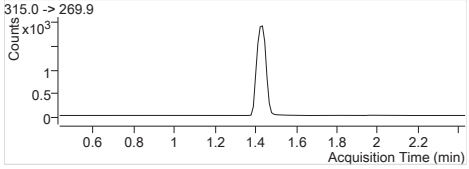
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 5** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_06.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A6 |
| **Acq. Date** | 2018/02/09 12:22:06 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

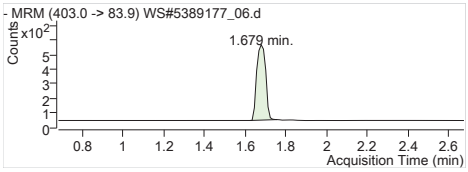
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5985 | 1.43 | 1 µg/L | | |
| MPFHxS | 1588 | 1.68 | 1 µg/L | | |
| MPFHpA | 7697 | 1.69 | 1 µg/L | | |
| MPFOA | 8325 | 1.88 | 1 µg/L | | |
| MPFOS | 1757 | 1.98 | 1 µg/L | | |
| MPFNA | 8273 | 2.01 | 1 µg/L | | |
| MPFDA | 6911 | 2.14 | 1 µg/L | | |
| MPFUnA | 8225 | 2.23 | 1 µg/L | | |
| MPFDoA | 10477 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12863 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 20825 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 26760 | 2.13 | 1 µg/L | | |

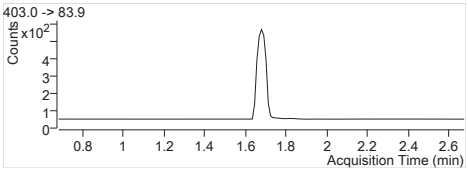
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 16004 | 1.09 | 25.00 | 21.89 µg/L | 87.58 |
| PFHxA 1 | 60745 | 1.43 | 25.00 | 24.45 µg/L | 97.79 |
| PFHxS 1 | 16354 | 1.68 | 25.00 | 22.93 µg/L | 91.74 |
| PFHpA 1 | 80239 | 1.69 | 25.00 | 25.19 µg/L | 100.78 |
| PFOA 1 | 88474 | 1.88 | 25.00 | 24.97 µg/L | 99.88 |
| PFOS 1 | 16958 | 1.97 | 25.00 | 25.40 µg/L | 101.62 |
| PFNA 1 | 79008 | 2.01 | 25.00 | 25.21 µg/L | 100.86 |
| PFDA 1 | 83684 | 2.14 | 25.00 | 25.13 µg/L | 100.53 |
| PFUnA 1 | 89716 | 2.23 | 25.00 | 24.59 µg/L | 98.36 |
| PFDoA 1 | 115272 | 2.32 | 25.00 | 25.16 µg/L | 100.65 |
| PFTrDA 1 | 126598 | 2.40 | 25.00 | 24.30 µg/L | 97.21 |
| PFTeDA 1 | 108923 | 2.47 | 25.00 | 23.92 µg/L | 95.70 |
| 13C2-PFHxA | 5985 | 1.43 | 100.00 | 102.51 µg/L | 102.51 |
| 18O2-PFHxS | 1588 | 1.68 | 100.00 | 105.57 µg/L | 105.57 |
| 13C4-PFHpA | 7697 | 1.69 | 100.00 | 99.11 µg/L | 99.11 |
| 13C4-PFOA | 8325 | 1.88 | 100.00 | 100.19 µg/L | 100.19 |
| 13C4-PFOS | 1757 | 1.98 | 100.00 | 95.26 µg/L | 95.26 |
| 13C5-PFNA | 8273 | 2.01 | 100.00 | 98.76 µg/L | 98.76 |
| 13C2-PFDA | 6772 | 2.14 | 100.00 | 100.47 µg/L | 100.47 |
| 13C2-PFUnA | 8225 | 2.23 | 100.00 | 102.32 µg/L | 102.32 |
| 13C2-PFDoA | 10477 | 2.32 | 100.00 | 98.79 µg/L | 98.79 |
| 13C2-PFTeDA | 13265 | 2.47 | 100.00 | 104.51 µg/L | 104.51 |
| 13C6-PFHxA | 20825 | 1.43 | 100.00 | 97.27 µg/L | 97.27 |
| 13C9-PFDA | 26760 | 2.13 | 100.00 | 93.64 µg/L | 93.64 |



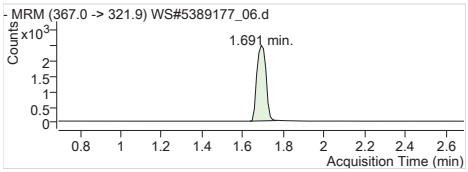



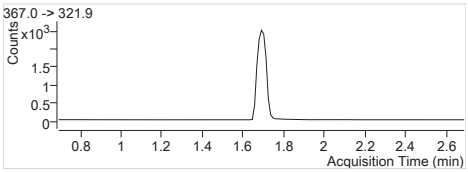

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



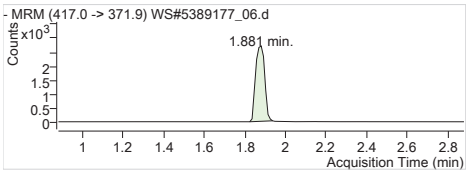



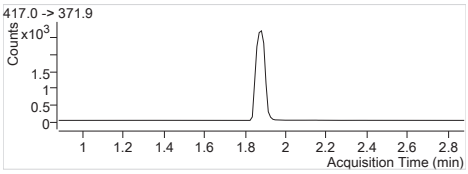

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Calibration



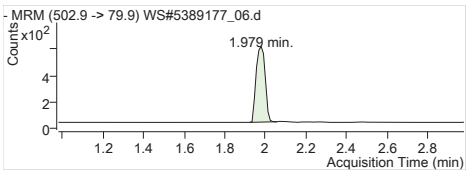



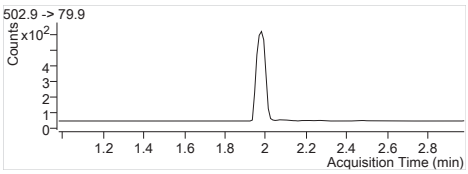

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Calibration



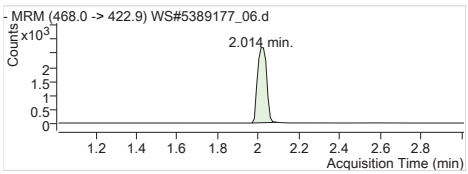



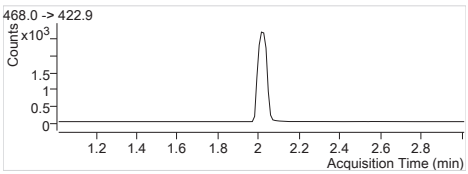

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



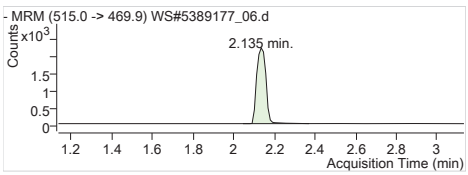



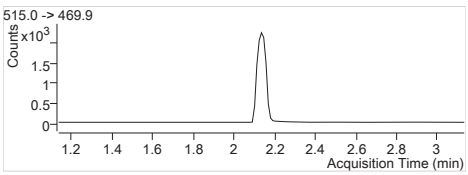

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



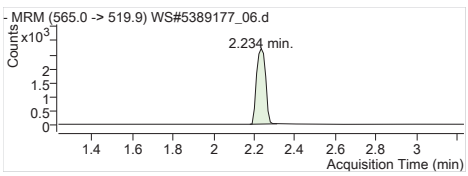



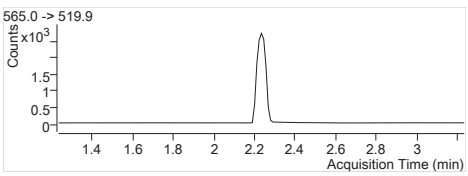

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Calibration



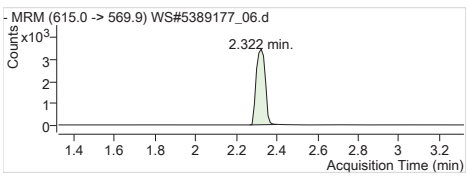



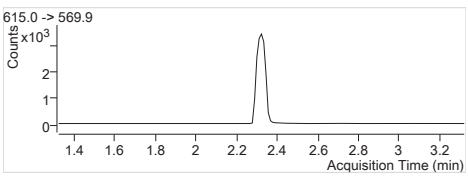

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



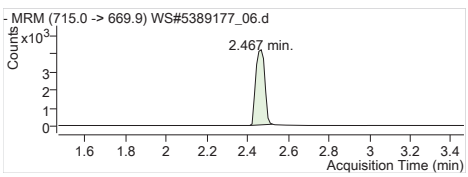



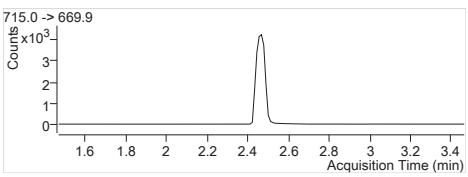

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Calibration



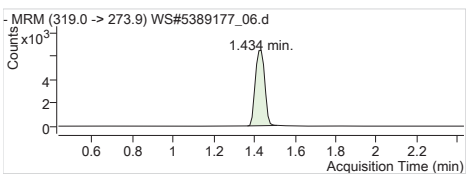



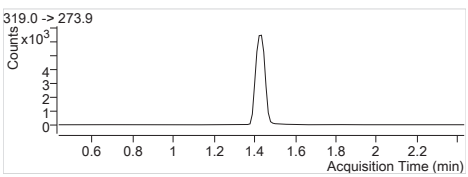

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



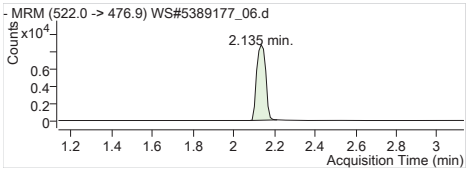



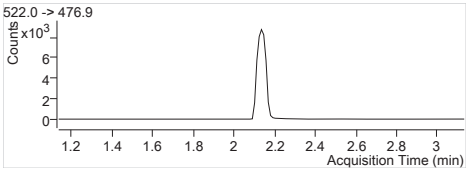

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



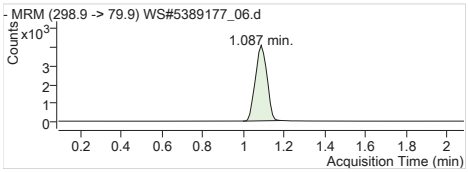



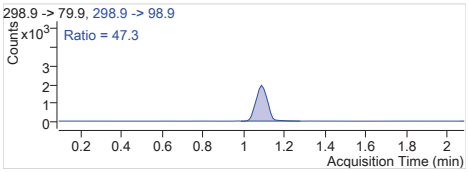

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



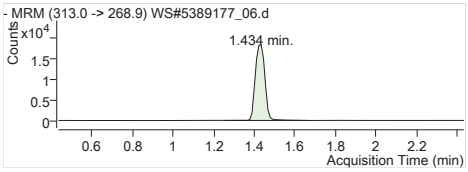



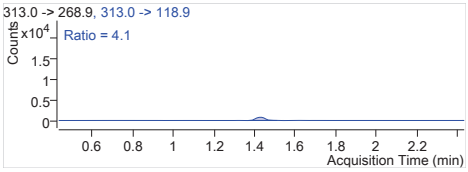

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



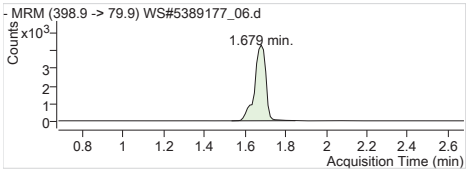



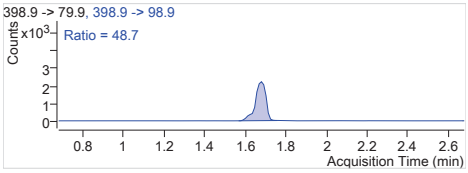

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 21.89 µg/L
Area ratio: 10.07809
Sample type: Calibration



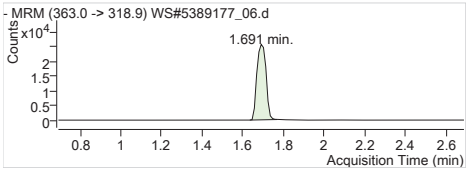



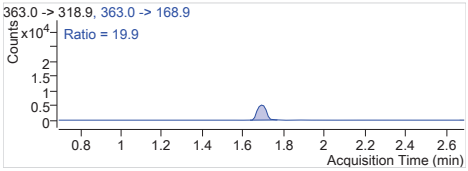

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 24.45 µg/L
Area ratio: 10.14954
Sample type: Calibration



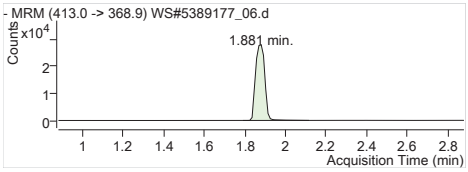



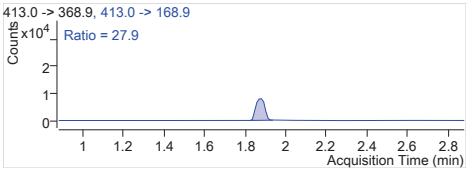

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 22.93 µg/L
Area ratio: 10.29849
Sample type: Calibration



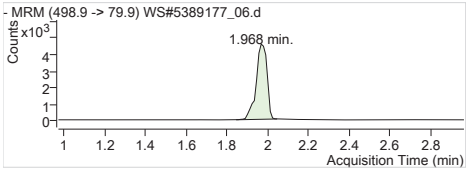



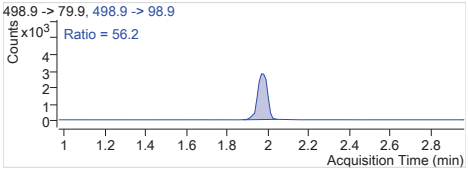

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 25.19 µg/L
Area ratio: 10.42471
Sample type: Calibration



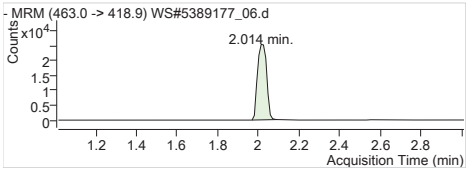



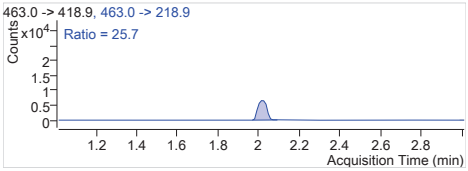

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 24.97 µg/L
Area ratio: 10.62751
Sample type: Calibration



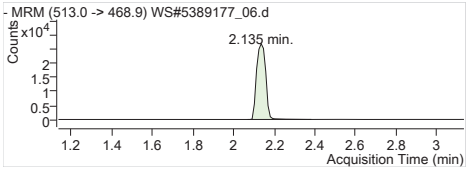



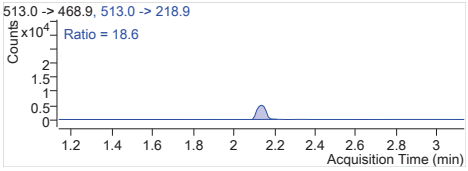

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 25.40 µg/L
Area ratio: 9.65168
Sample type: Calibration



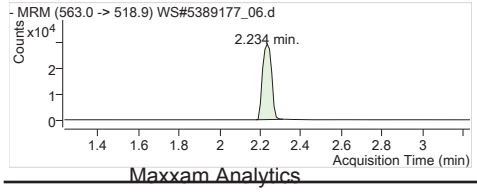



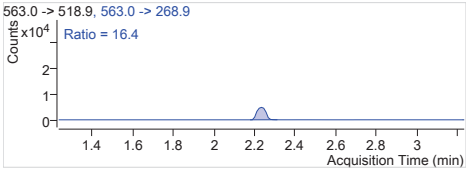

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 25.21 µg/L
Area ratio: 9.55010
Sample type: Calibration



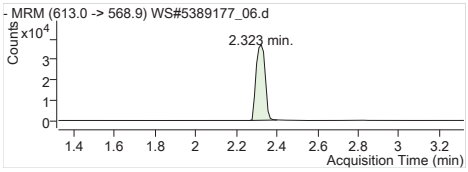



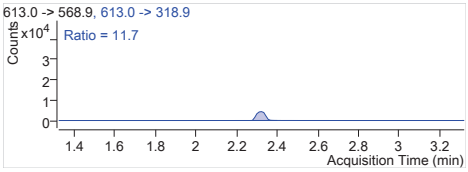

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 25.13 µg/L
Area ratio: 12.10881
Sample type: Calibration



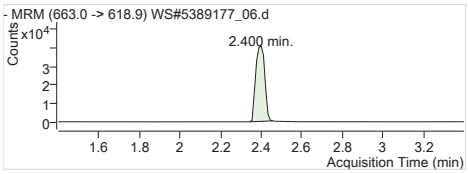



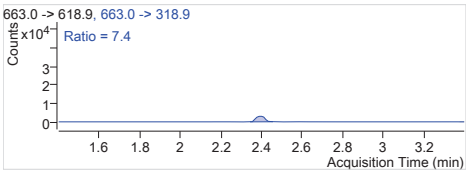

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 24.59 µg/L
Area ratio: 10.90772
Sample type: Calibration



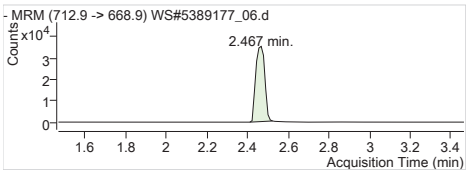



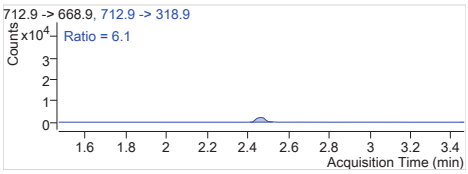

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 25.16 µg/L
Area ratio: 11.00239
Sample type: Calibration



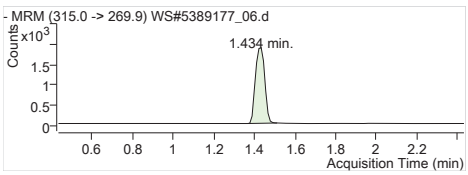



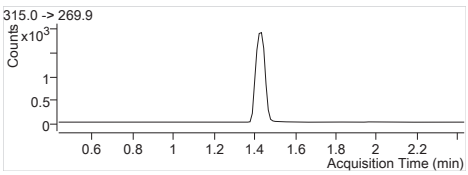

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 24.30 µg/L
Area ratio: 9.84203
Sample type: Calibration



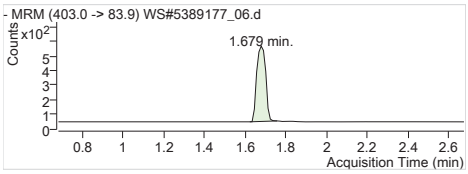



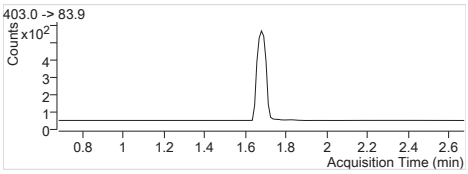

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 23.92 µg/L
Area ratio: 8.46793
Sample type: Calibration



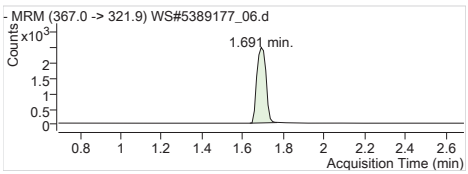



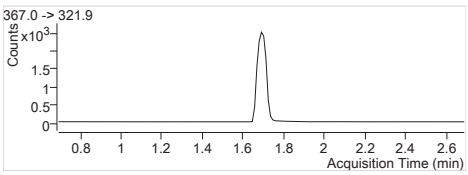

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 102.51 µg/L
Area ratio: 0.28739
Sample type: Calibration



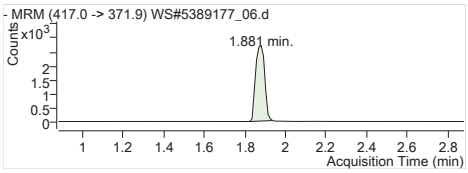



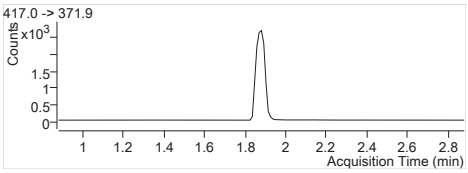

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 105.57 µg/L
Area ratio: 0.07625
Sample type: Calibration



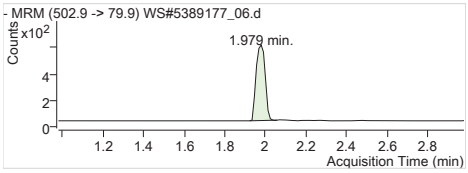



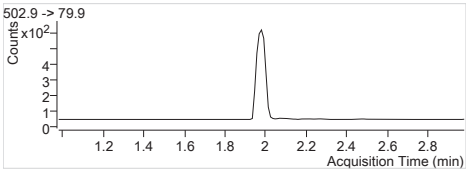

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 99.11 µg/L
Area ratio: 0.36960
Sample type: Calibration



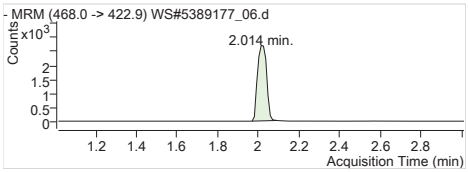



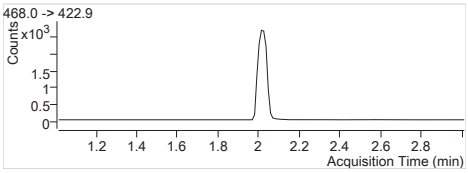

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 100.19 µg/L
Area ratio: 0.39976
Sample type: Calibration



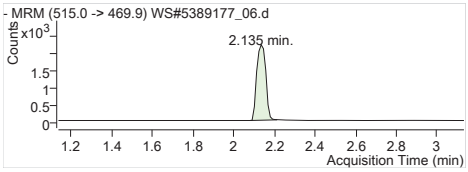



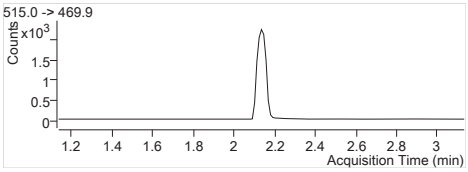

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 95.26 µg/L
Area ratio: 0.08437
Sample type: Calibration



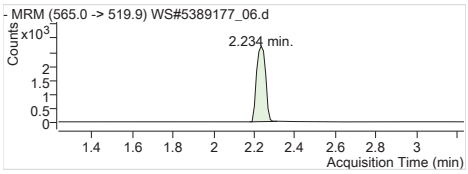



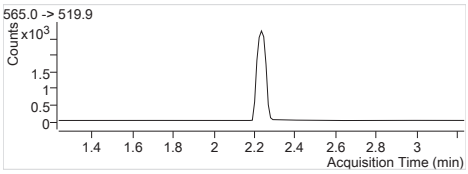

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 98.76 µg/L
Area ratio: 0.39726
Sample type: Calibration



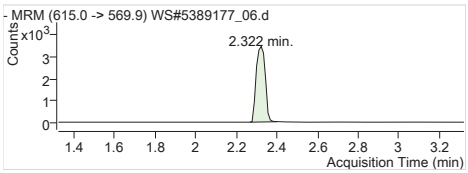



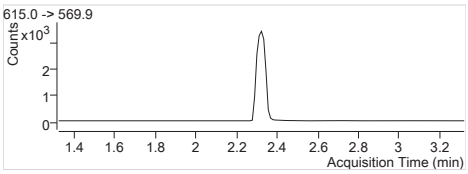

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 100.47 µg/L
Area ratio: 0.25306
Sample type: Calibration



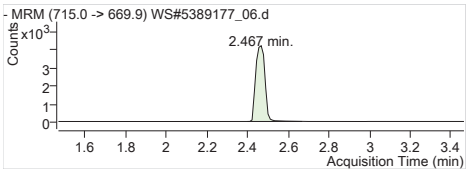



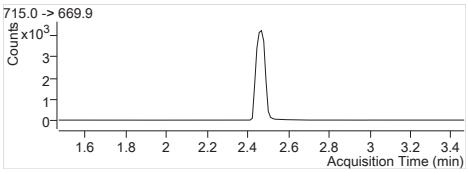

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 102.32 µg/L
Area ratio: 0.30736
Sample type: Calibration



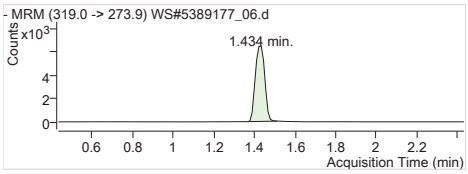



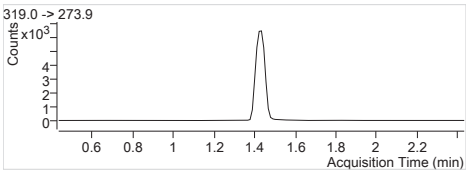

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 98.79 µg/L
Area ratio: 0.39152
Sample type: Calibration



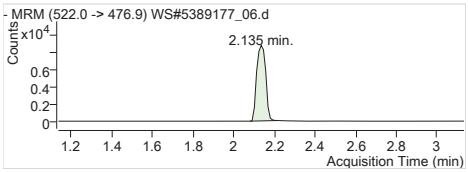



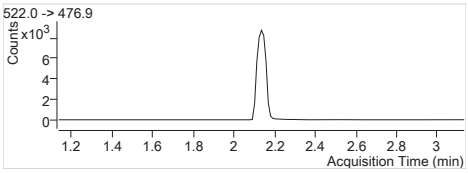

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 104.51 µg/L
Area ratio: 0.49570
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 97.27 µg/L
Area ratio: 0
Sample type: Calibration



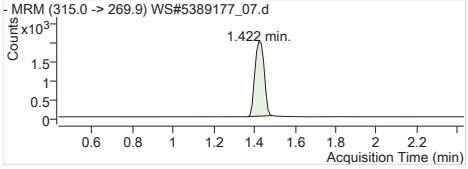

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 93.64 µg/L
Area ratio: 0
Sample type: Calibration

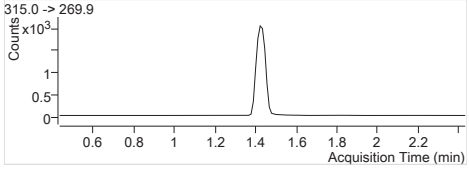
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 6** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_07.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A7 |
| **Acq. Date** | 2018/02/09 12:27:02 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

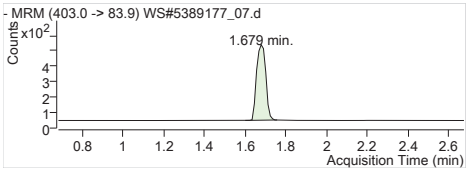
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6287 | 1.42 | 1 µg/L | | |
| MPFHxS | 1541 | 1.68 | 1 µg/L | | |
| MPFHpA | 8110 | 1.69 | 1 µg/L | | |
| MPFOA | 9175 | 1.88 | 1 µg/L | | |
| MPFOS | 1886 | 1.98 | 1 µg/L | | |
| MPFNA | 8857 | 2.01 | 1 µg/L | | |
| MPFDA | 7627 | 2.14 | 1 µg/L | | |
| MPFUnA | 8962 | 2.23 | 1 µg/L | | |
| MPFDoA | 11555 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13813 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 21682 | 1.42 | 1 µg/L | | |
| 13C9-PFDA IS | 28751 | 2.13 | 1 µg/L | | |

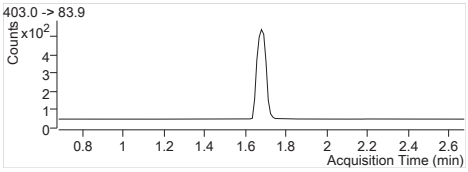
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 31202 | 1.09 | 41.70 | 43.99 µg/L | 105.50 |
| PFHxA 1 | 111030 | 1.42 | 41.70 | 42.45 µg/L | 101.80 |
| PFHxS 1 | 29470 | 1.68 | 41.70 | 42.48 µg/L | 101.87 |
| PFHpA 1 | 138947 | 1.69 | 41.70 | 41.34 µg/L | 99.15 |
| PFOA 1 | 158054 | 1.88 | 41.70 | 40.47 µg/L | 97.05 |
| PFOS 1 | 30641 | 1.97 | 41.70 | 42.67 µg/L | 102.32 |
| PFNA 1 | 137642 | 2.01 | 41.70 | 40.99 µg/L | 98.29 |
| PFDA 1 | 153798 | 2.14 | 41.70 | 41.78 µg/L | 100.19 |
| PFUnA 1 | 167796 | 2.23 | 41.70 | 42.14 µg/L | 101.06 |
| PFDoA 1 | 213116 | 2.32 | 41.70 | 42.11 µg/L | 100.99 |
| PFTrDA 1 | 234625 | 2.40 | 41.70 | 41.96 µg/L | 100.63 |
| PFTeDA 1 | 207867 | 2.47 | 41.70 | 42.46 µg/L | 101.81 |
| 13C2-PFHxA | 6287 | 1.42 | 100.00 | 103.42 µg/L | 103.42 |
| 18O2-PFHxS | 1541 | 1.68 | 100.00 | 98.39 µg/L | 98.39 |
| 13C4-PFHpA | 8110 | 1.69 | 100.00 | 100.30 µg/L | 100.30 |
| 13C4-PFOA | 9175 | 1.88 | 100.00 | 106.06 µg/L | 106.06 |
| 13C4-PFOS | 1886 | 1.98 | 100.00 | 98.21 µg/L | 98.21 |
| 13C5-PFNA | 8835 | 2.01 | 100.00 | 101.30 µg/L | 101.30 |
| 13C2-PFDA | 7561 | 2.14 | 100.00 | 104.41 µg/L | 104.41 |
| 13C2-PFUnA | 8962 | 2.23 | 100.00 | 103.76 µg/L | 103.76 |
| 13C2-PFDoA | 11555 | 2.32 | 100.00 | 101.41 µg/L | 101.41 |
| 13C2-PFTeDA | 14192 | 2.47 | 100.00 | 104.07 µg/L | 104.07 |
| 13C6-PFHxA | 21682 | 1.42 | 100.00 | 101.28 µg/L | 101.28 |
| 13C9-PFDA | 28751 | 2.13 | 100.00 | 100.60 µg/L | 100.60 |



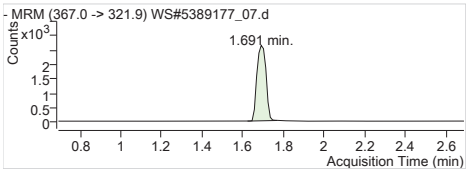



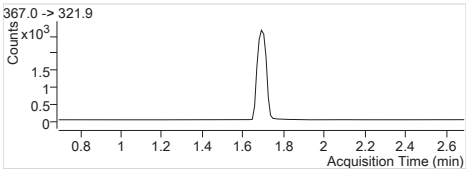

**MPFHxA** Internal Standard
RT (Exp. RT): 1.422 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



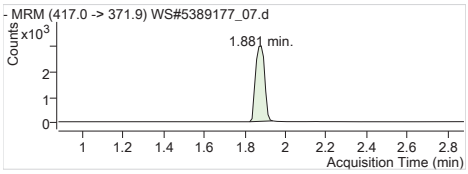



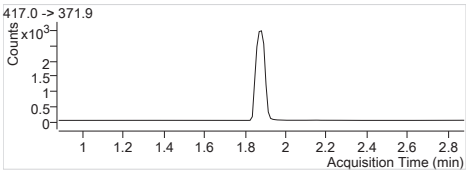

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Calibration



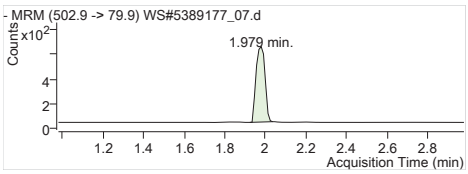



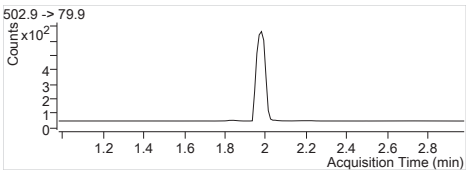

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Calibration



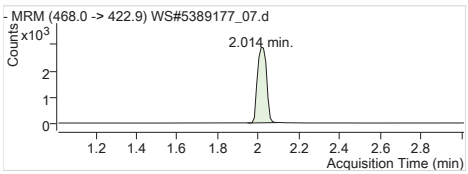



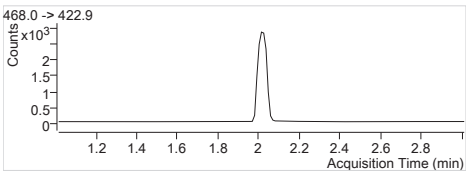

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



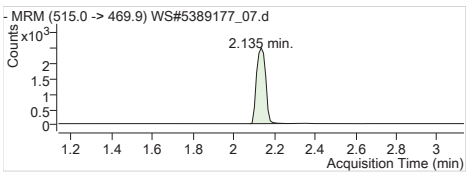



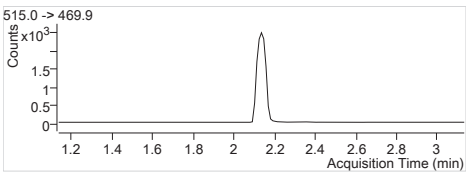

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



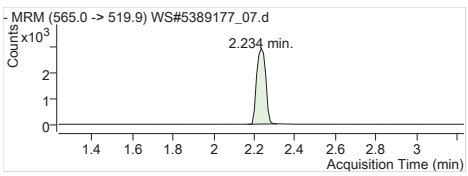



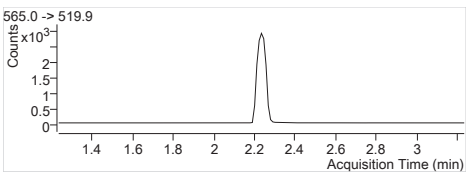

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Calibration



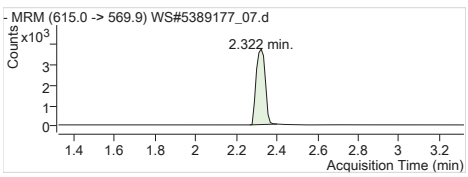



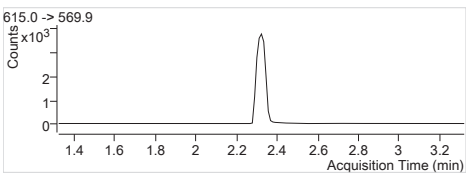

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



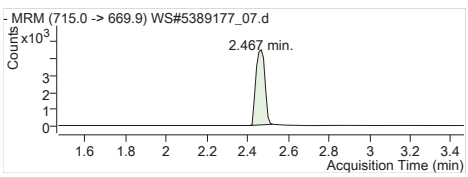



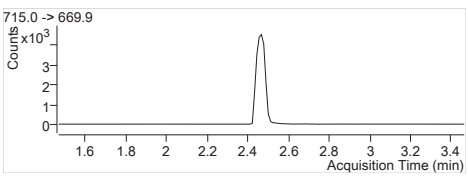

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Calibration



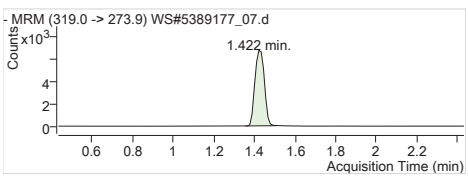



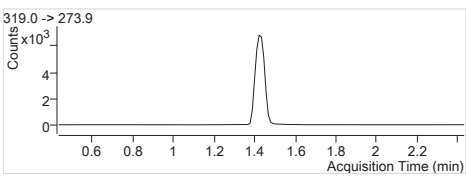

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



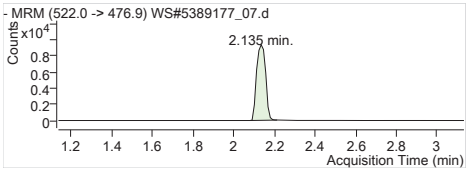



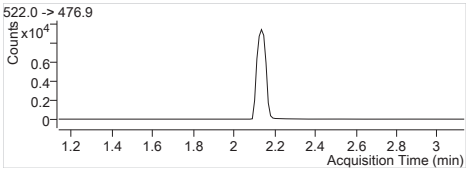

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



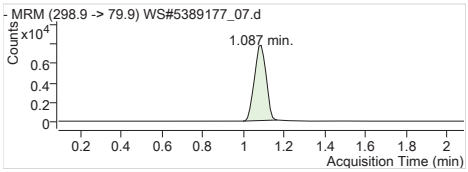



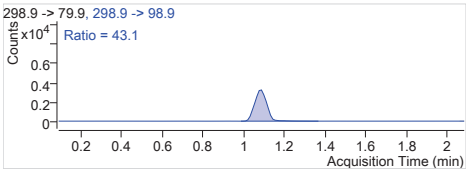

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.422 (1.434)
Concentration: 1 µg/L
Sample type: Calibration



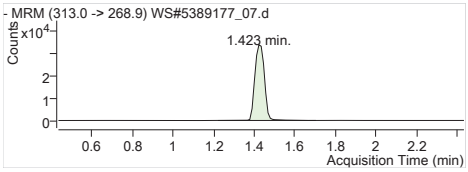



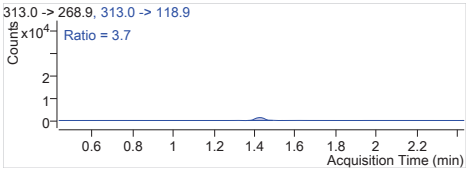

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



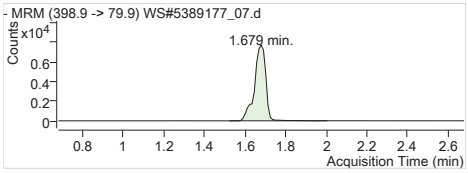



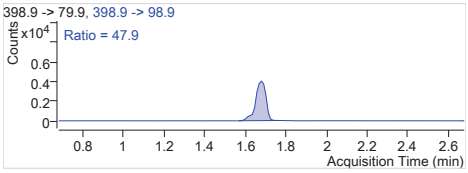

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 43.99 µg/L
Area ratio: 20.24789
Sample type: Calibration



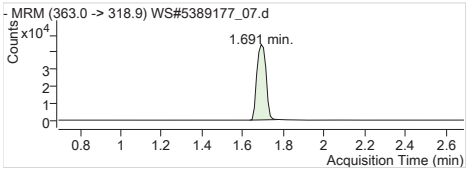



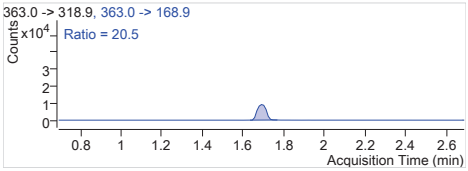

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.434)
Calc. conc. 42.45 µg/L
Area ratio: 17.66025
Sample type: Calibration



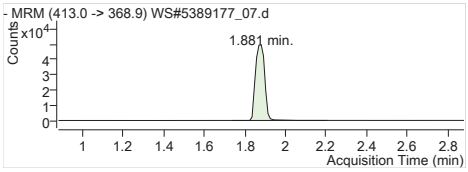



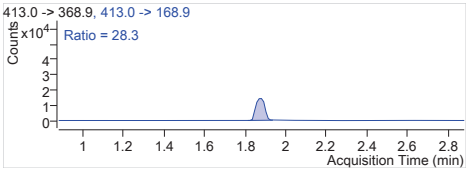

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 42.48 µg/L
Area ratio: 19.12395
Sample type: Calibration



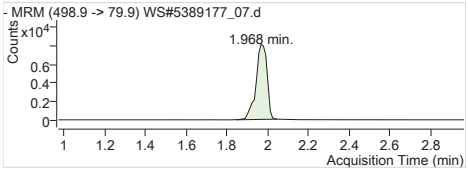



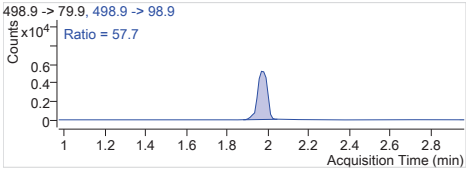

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 41.34 µg/L
Area ratio: 17.13280
Sample type: Calibration



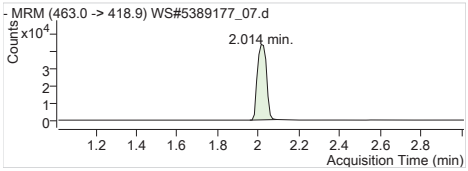



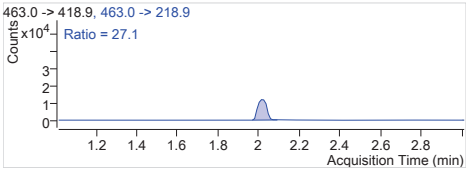

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 40.47 µg/L
Area ratio: 17.22659
Sample type: Calibration



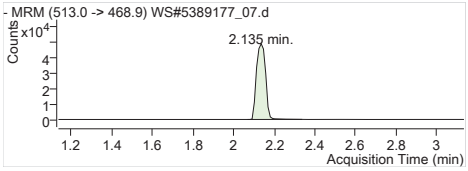



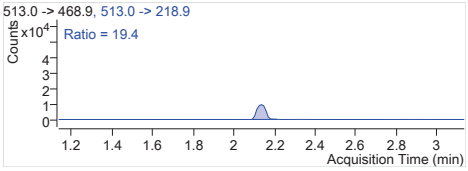

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 42.67 µg/L
Area ratio: 16.24655
Sample type: Calibration



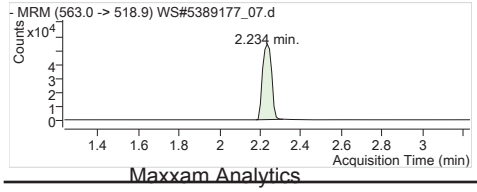



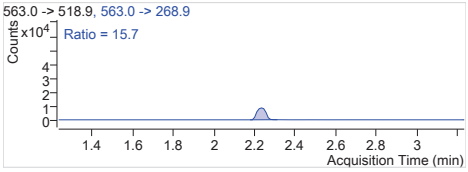

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 40.99 µg/L
Area ratio: 15.54048
Sample type: Calibration



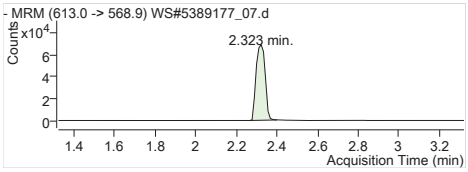



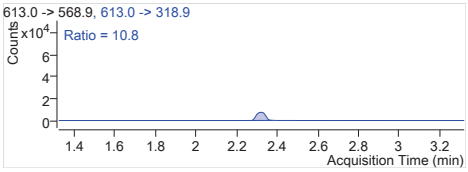

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 41.78 µg/L
Area ratio: 20.16494
Sample type: Calibration



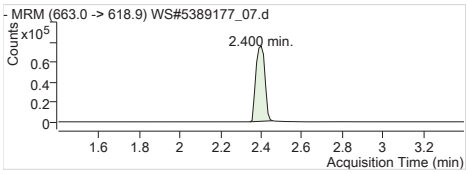



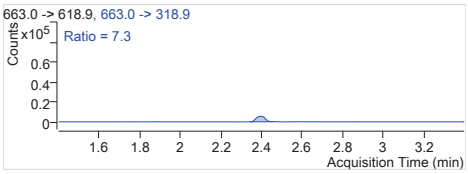

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 42.14 µg/L
Area ratio: 18.72305
Sample type: Calibration



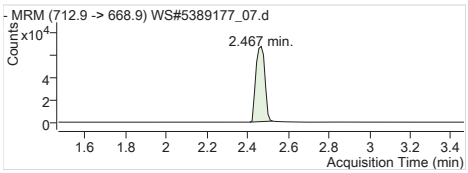



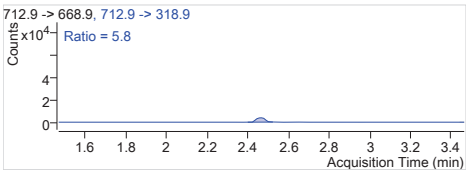

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 42.11 µg/L
Area ratio: 18.44362
Sample type: Calibration



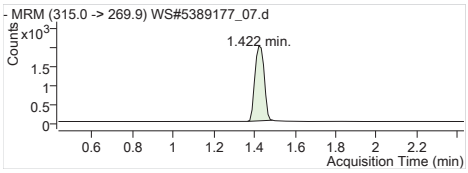



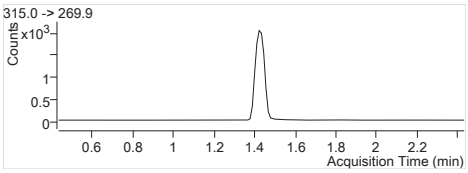

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 41.96 µg/L
Area ratio: 16.98581
Sample type: Calibration



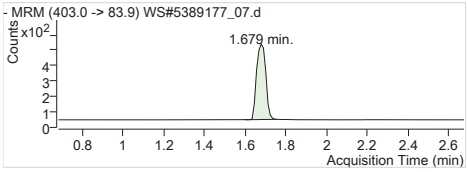



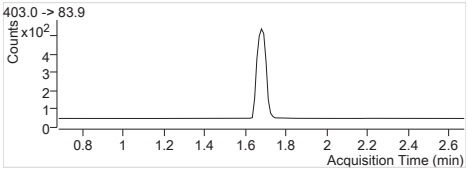

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 42.46 µg/L
Area ratio: 15.04865
Sample type: Calibration



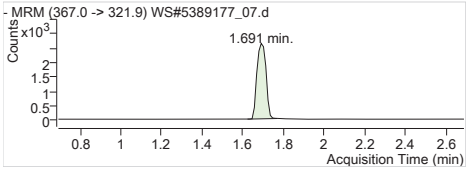



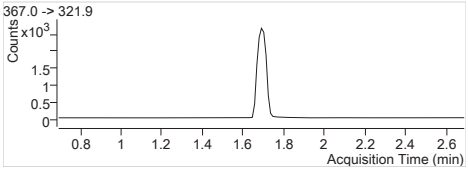

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.434)
Calc. conc. 103.42 µg/L
Area ratio: 0.28996
Sample type: Calibration



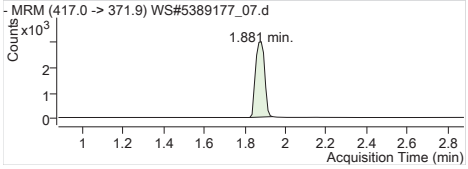



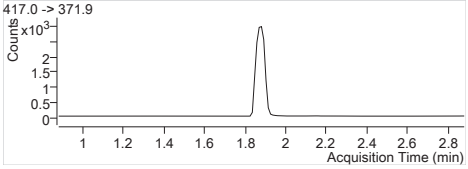

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 98.39 µg/L
Area ratio: 0.07107
Sample type: Calibration



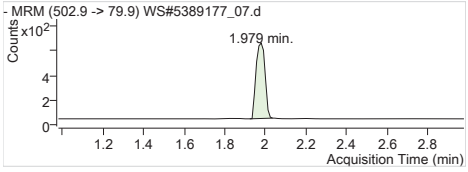



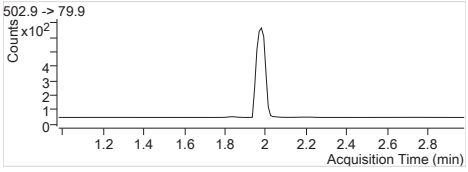

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 100.30 µg/L
Area ratio: 0.37404
Sample type: Calibration



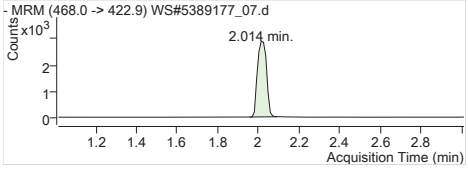



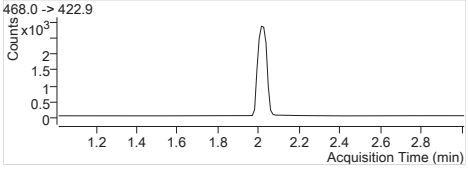

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 106.06 µg/L
Area ratio: 0.42316
Sample type: Calibration



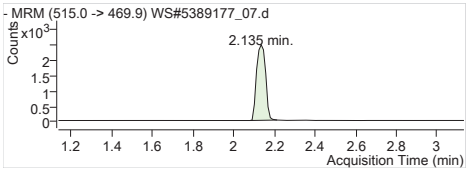



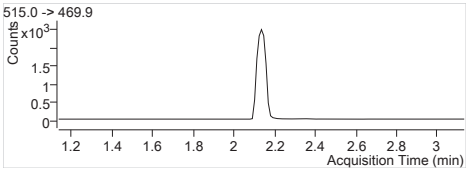

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 98.21 µg/L
Area ratio: 0.08698
Sample type: Calibration



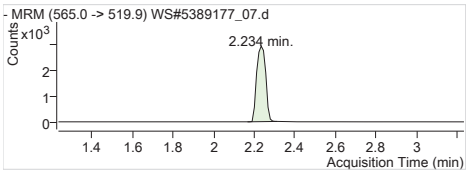



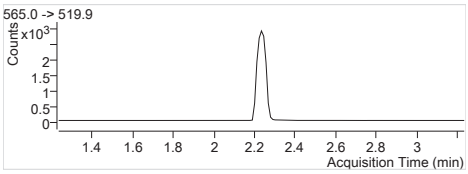

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 101.30 µg/L
Area ratio: 0.40748
Sample type: Calibration



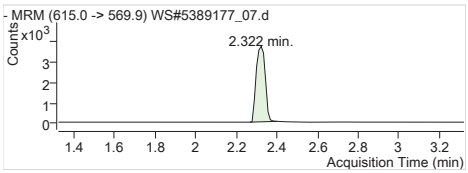



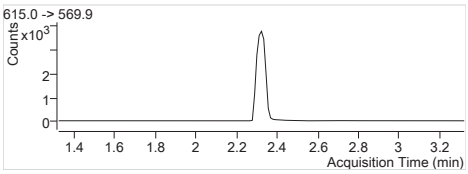

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 104.41 µg/L
Area ratio: 0.26298
Sample type: Calibration



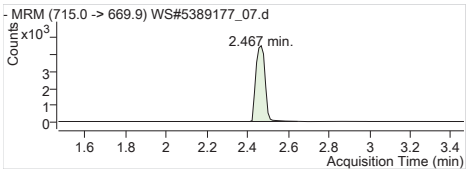



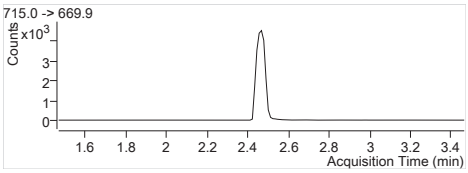

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 103.76 µg/L
Area ratio: 0.31171
Sample type: Calibration



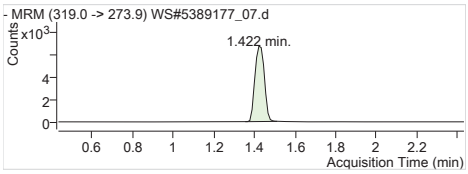



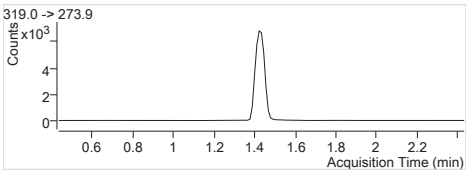

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 101.41 µg/L
Area ratio: 0.40190
Sample type: Calibration



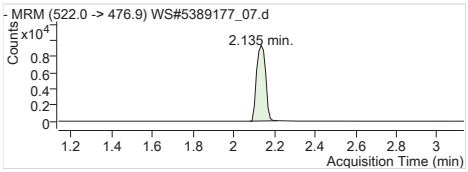



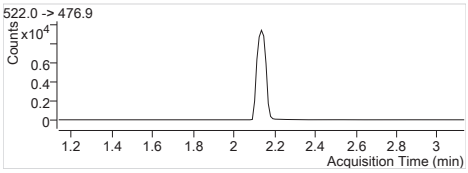

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 104.07 µg/L
Area ratio: 0.49362
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.422 (1.434)
Calc. conc. 101.28 µg/L
Area ratio: 0
Sample type: Calibration




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 100.60 µg/L
Area ratio: 0
Sample type: Calibration

# Quantitation Results

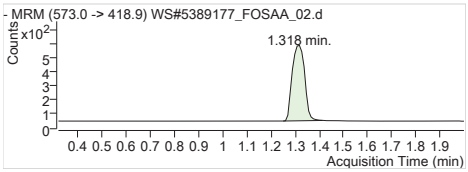
Agilent Technologies

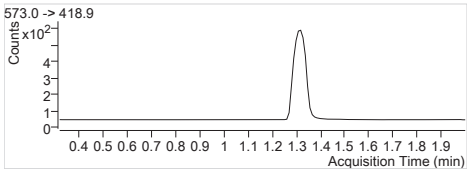
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 1** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_02.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A2 |
| **Acq. Date** | 2018/02/08 6:03:55 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

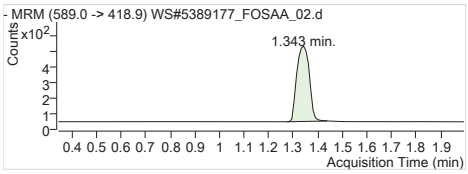
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1945 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1717 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 24326 | 0.91 | 1 µg/L | | |

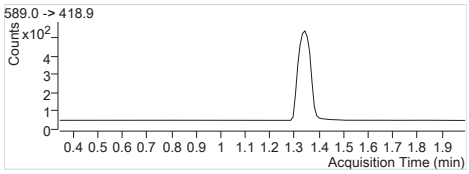
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 646 | 1.31 | 0.83 | 0.88 µg/L | 106.40 |
| EtFOSAA 1 | 675 | 1.34 | 0.83 | 0.90 µg/L | 108.56 |
| D3-MeFOSAA | 1957 | 1.32 | 100.00 | 96.57 µg/L | 96.57 |
| D5-EtFOSAA | 1746 | 1.34 | 100.00 | 94.58 µg/L | 94.58 |
| 13C9-PFDA | 23559 | 0.91 | 100.00 | 108.80 µg/L | 108.80 |



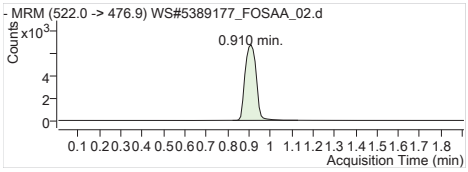



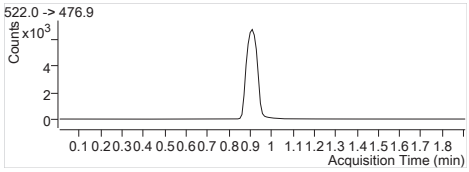

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Calibration



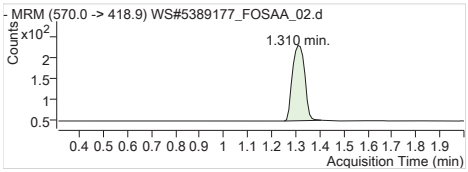



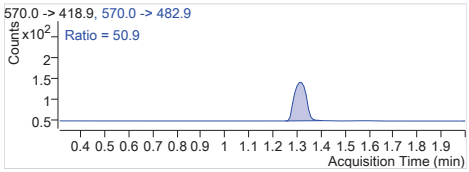

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Calibration



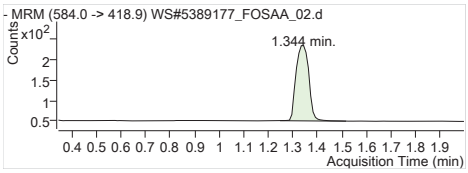



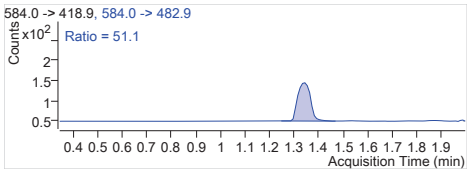

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: Calibration



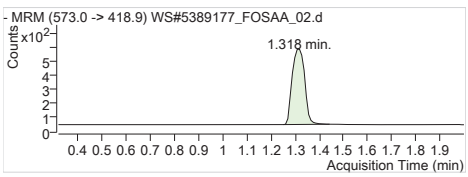



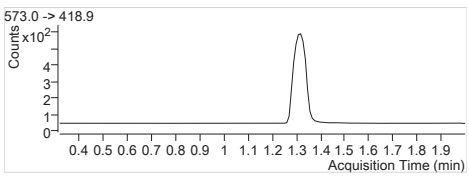

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 0.88 µg/L
Area ratio: 0.33213
Sample type: Calibration



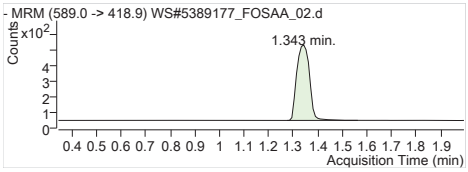



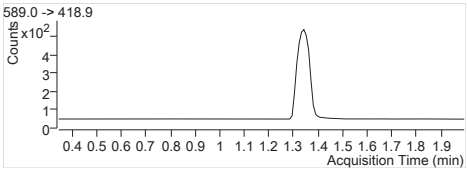

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 0.90 µg/L
Area ratio: 0.39313
Sample type: Calibration



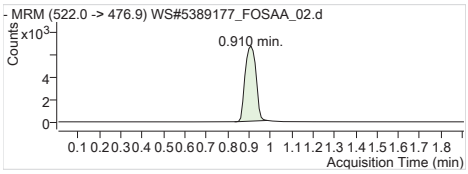



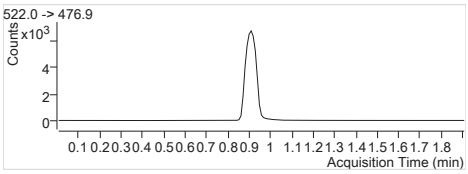

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 96.57 µg/L
Area ratio: 0.08045
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 94.58 µg/L |
| Area ratio: | 0.07178 |
| Sample type: | Calibration |



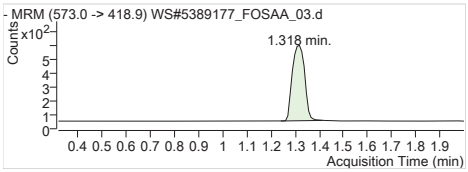

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 108.80 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

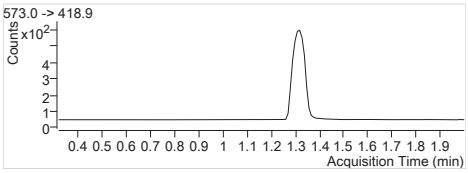
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 2** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_03.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A3 |
| **Acq. Date** | 2018/02/08 6:06:20 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

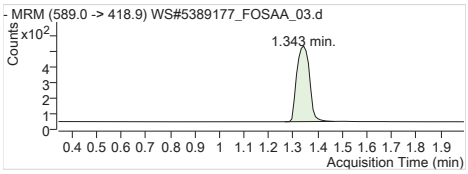
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1946 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1752 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 21526 | 0.91 | 1 µg/L | | |

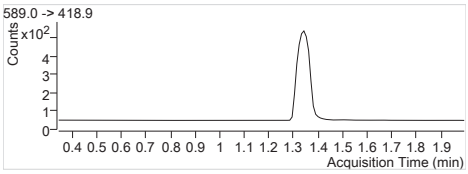
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 1054 | 1.31 | 1.70 | 1.46 µg/L | 85.80 |
| EtFOSAA 1 | 1039 | 1.34 | 1.70 | 1.38 µg/L | 80.90 |
| D3-MeFOSAA | 1964 | 1.32 | 100.00 | 109.52 µg/L | 109.52 |
| D5-EtFOSAA | 1752 | 1.34 | 100.00 | 107.25 µg/L | 107.25 |
| 13C9-PFDA | 20838 | 0.91 | 100.00 | 96.23 µg/L | 96.23 |



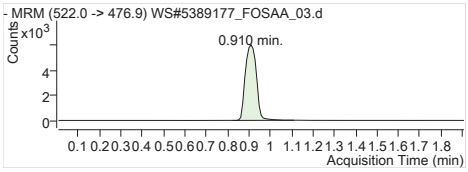



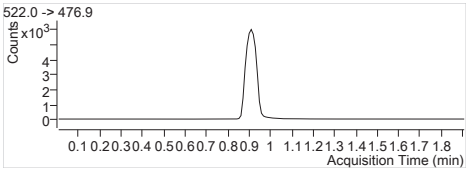

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Calibration



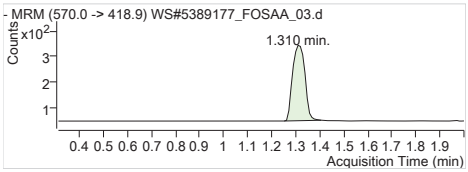



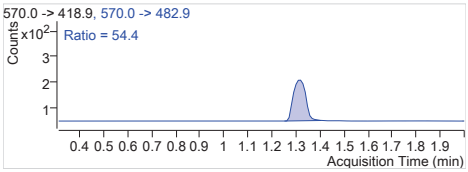

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Calibration



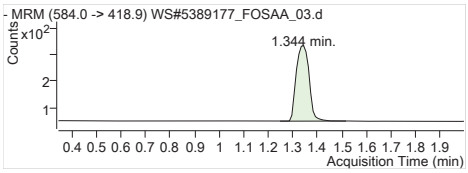



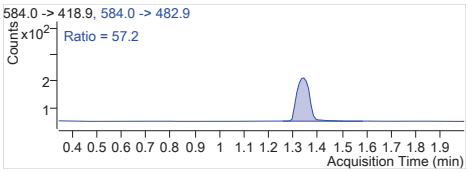

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: Calibration



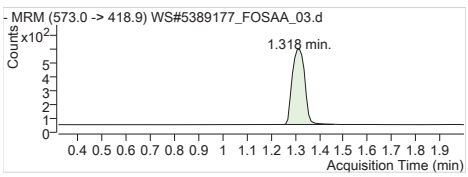



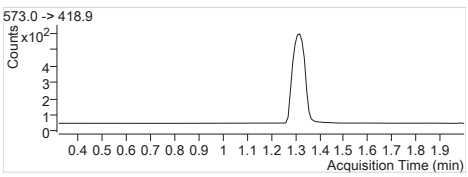

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 1.46 µg/L
Area ratio: 0.54162
Sample type: Calibration



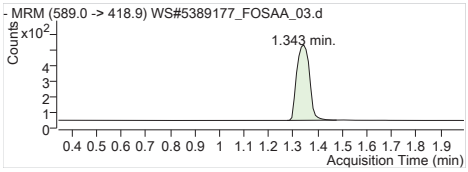



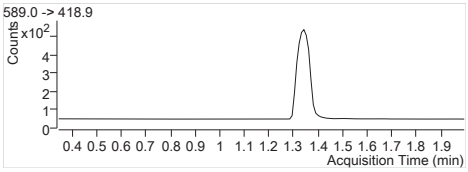

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 1.38 µg/L
Area ratio: 0.59304
Sample type: Calibration



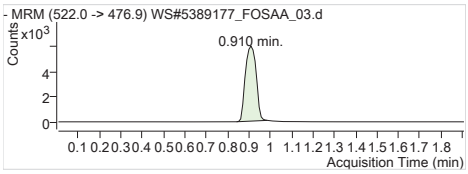



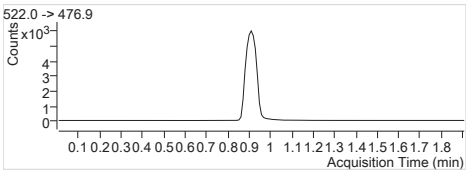

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 109.52 µg/L
Area ratio: 0.09124
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 107.25 µg/L |
| Area ratio: | 0.08139 |
| Sample type: | Calibration |



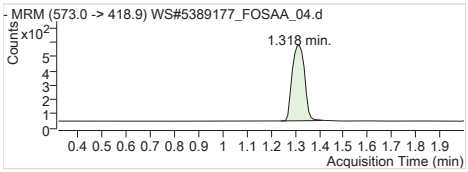

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 96.23 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

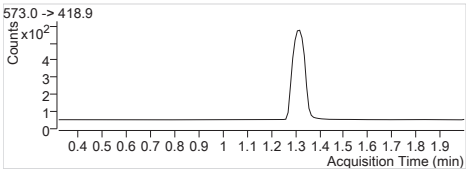
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 3** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_04.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A4 |
| **Acq. Date** | 2018/02/08 6:08:45 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

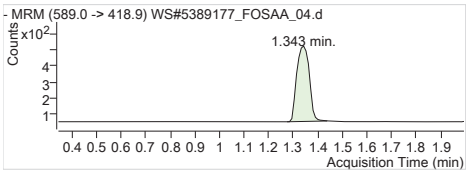
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1882 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1690 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 23563 | 0.91 | 1 µg/L | | |

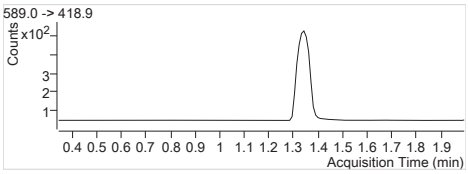
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 3499 | 1.31 | 5.00 | 5.08 µg/L | 101.57 |
| EtFOSAA 1 | 3674 | 1.34 | 5.00 | 5.13 µg/L | 102.52 |
| D3-MeFOSAA | 1900 | 1.32 | 100.00 | 96.79 µg/L | 96.79 |
| D5-EtFOSAA | 1731 | 1.34 | 100.00 | 96.80 µg/L | 96.80 |
| 13C9-PFDA | 22696 | 0.91 | 100.00 | 104.82 µg/L | 104.82 |



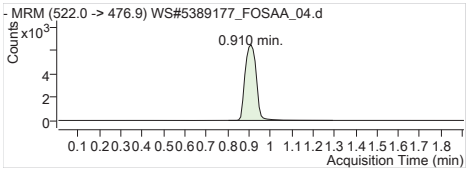



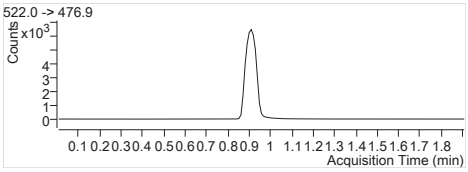

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Calibration



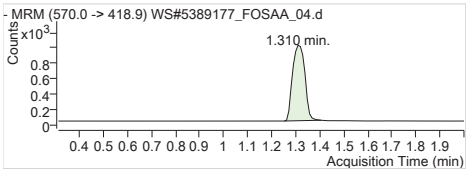



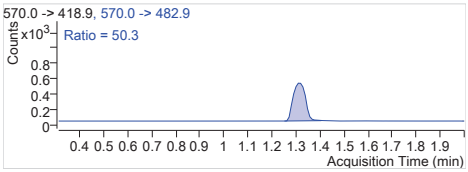

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Calibration



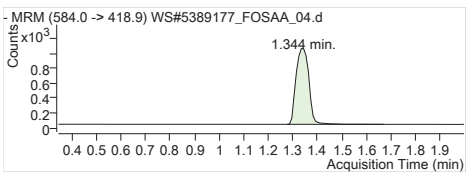



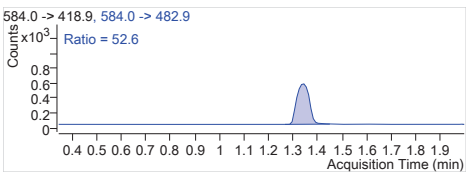

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: Calibration



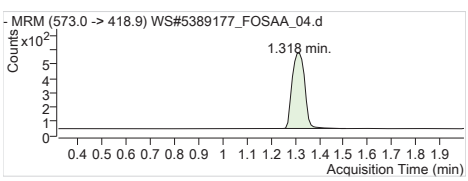



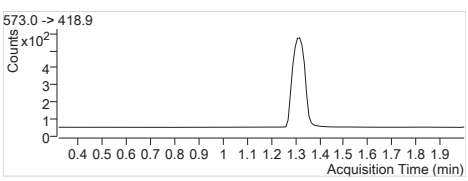

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 5.08 µg/L
Area ratio: 1.85919
Sample type: Calibration



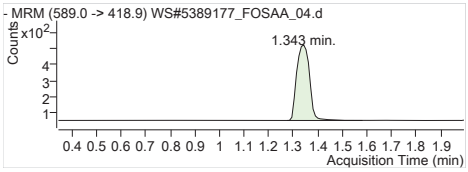



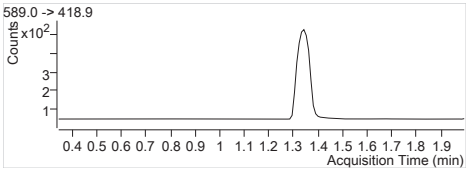

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 5.13 µg/L
Area ratio: 2.17396
Sample type: Calibration



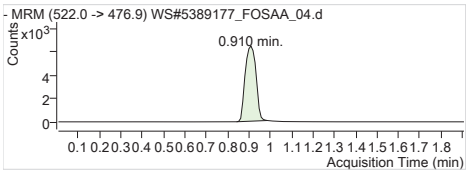



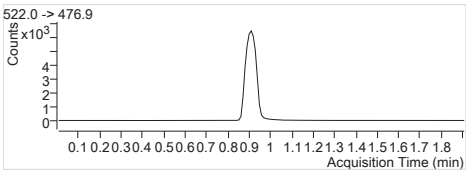

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 96.79 µg/L
Area ratio: 0.08063
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 96.80 µg/L |
| Area ratio: | 0.07346 |
| Sample type: | Calibration |



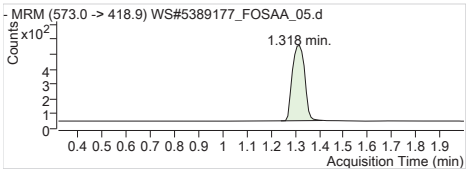

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 104.82 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

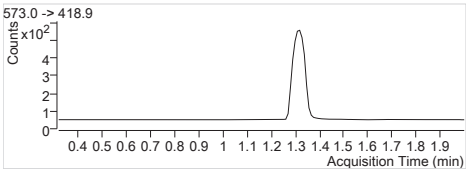
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 4** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_05.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A5 |
| **Acq. Date** | 2018/02/08 6:11:11 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

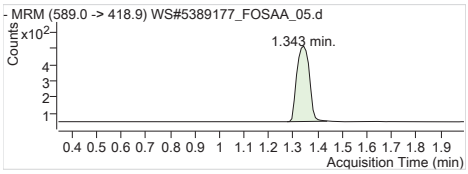
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1811 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1646 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 22636 | 0.91 | 1 µg/L | | |

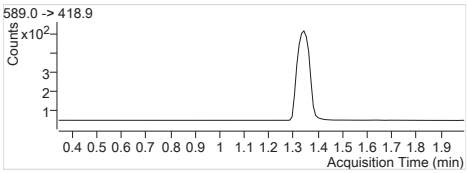
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 8486 | 1.31 | 12.50 | 12.84 µg/L | 102.75 |
| EtFOSAA 1 | 9022 | 1.34 | 12.50 | 12.97 µg/L | 103.78 |
| D3-MeFOSAA | 1815 | 1.32 | 100.00 | 96.25 µg/L | 96.25 |
| D5-EtFOSAA | 1657 | 1.34 | 100.00 | 96.46 µg/L | 96.46 |
| 13C9-PFDA | 21791 | 0.91 | 100.00 | 100.64 µg/L | 100.64 |



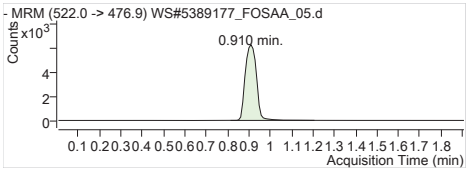



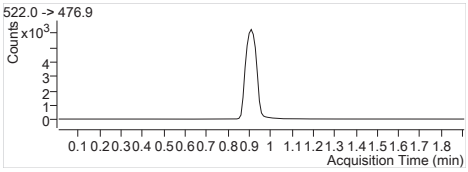

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Calibration



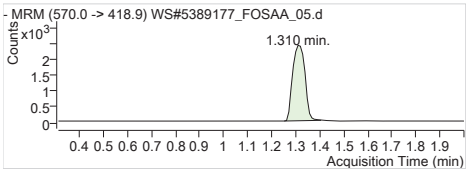



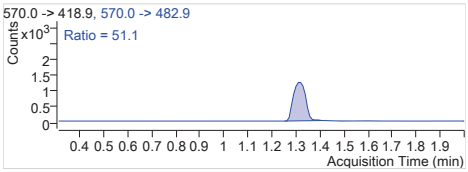

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Calibration



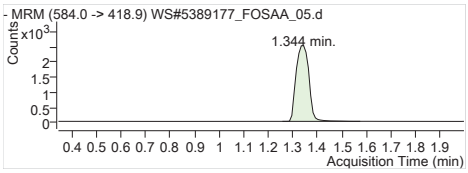



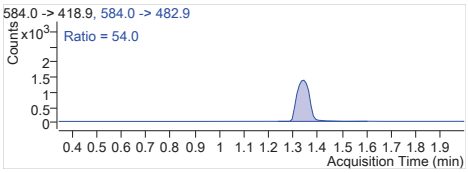

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: Calibration



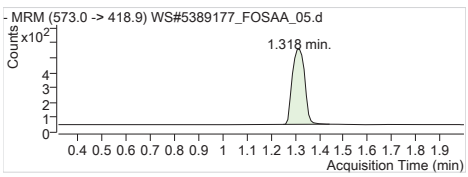



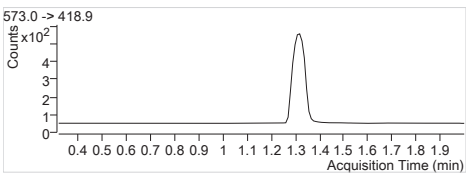

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 12.84 µg/L
Area ratio: 4.68581
Sample type: Calibration



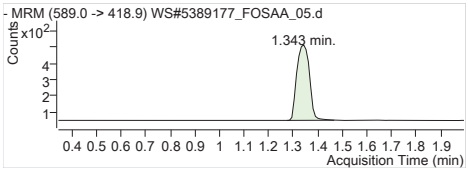



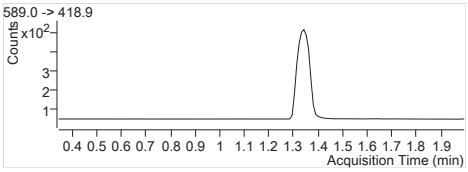

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 12.97 µg/L
Area ratio: 5.48117
Sample type: Calibration



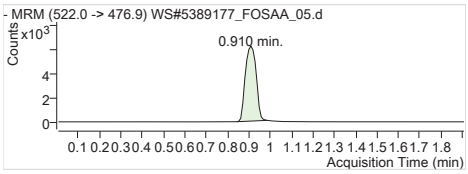



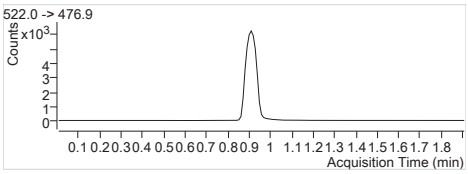

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 96.25 µg/L
Area ratio: 0.08018
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 96.46 µg/L |
| Area ratio: | 0.07320 |
| Sample type: | Calibration |



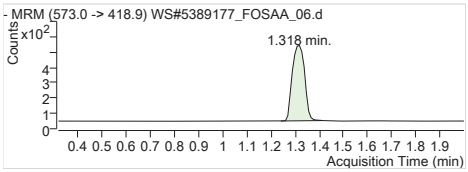

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 100.64 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

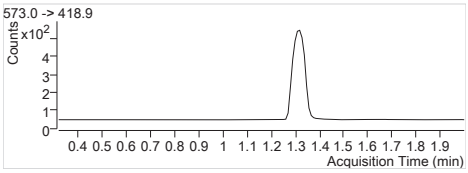
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 5** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_06.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A6 |
| **Acq. Date** | 2018/02/08 6:13:35 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

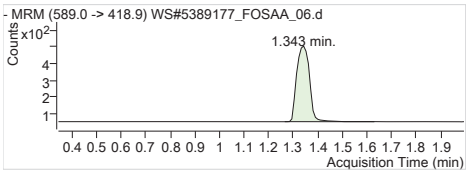
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1762 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1647 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 21784 | 0.91 | 1 µg/L | | |

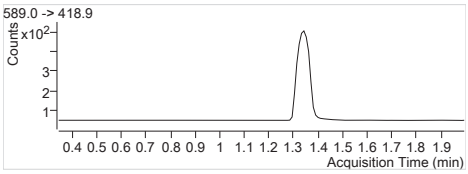
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 16326 | 1.31 | 25.00 | 25.43 µg/L | 101.70 |
| EtFOSAA 1 | 17565 | 1.34 | 25.00 | 25.27 µg/L | 101.08 |
| D3-MeFOSAA | 1772 | 1.32 | 100.00 | 97.64 µg/L | 97.64 |
| D5-EtFOSAA | 1642 | 1.34 | 100.00 | 99.32 µg/L | 99.32 |
| 13C9-PFDA | 20945 | 0.91 | 100.00 | 96.73 µg/L | 96.73 |



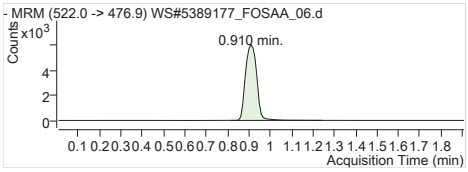



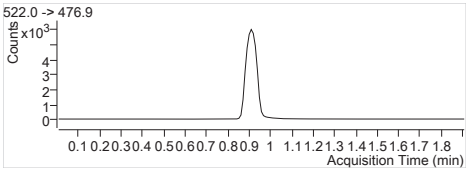

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Calibration



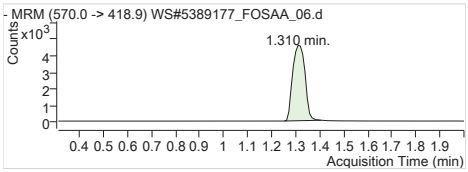



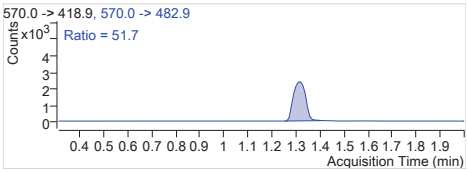

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Calibration



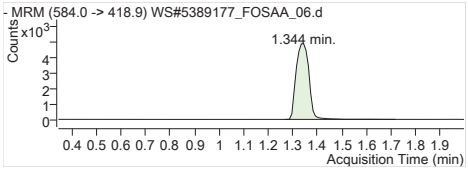



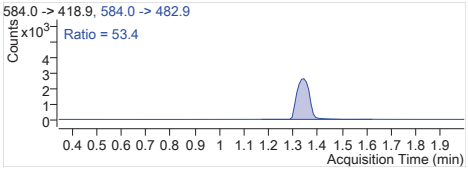

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: Calibration



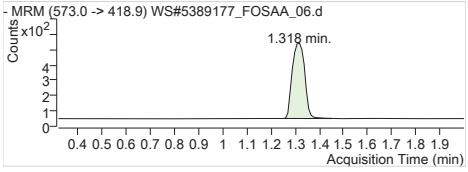



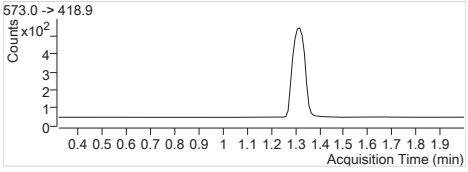

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 25.43 µg/L
Area ratio: 9.26561
Sample type: Calibration



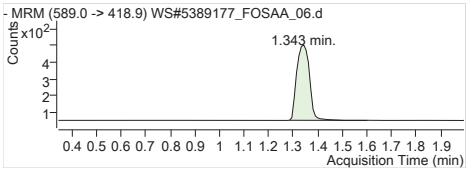



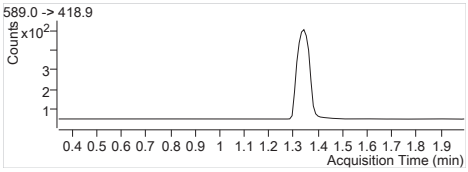

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 25.27 µg/L
Area ratio: 10.66485
Sample type: Calibration



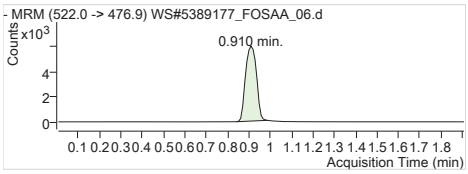



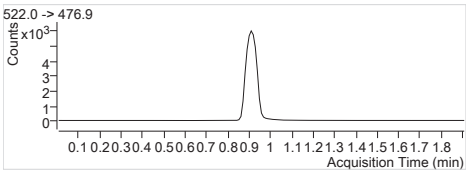

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 97.64 µg/L
Area ratio: 0.08134
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 99.32 µg/L |
| Area ratio: | 0.07538 |
| Sample type: | Calibration |



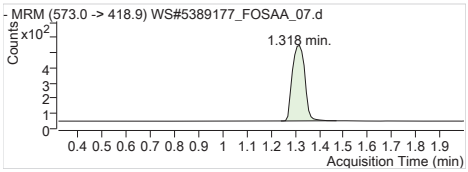

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 96.73 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

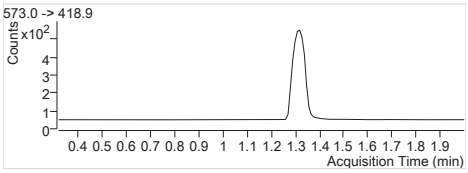
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 6** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_07.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A7 |
| **Acq. Date** | 2018/02/08 6:16:01 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

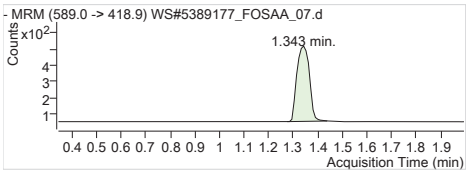
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1800 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1658 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 20928 | 0.91 | 1 µg/L | | |

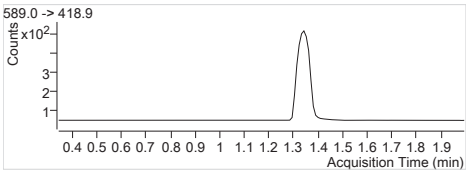
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 27826 | 1.31 | 41.70 | 42.44 µg/L | 101.78 |
| EtFOSAA 1 | 30083 | 1.34 | 41.70 | 43.02 µg/L | 103.16 |
| D3-MeFOSAA | 1800 | 1.32 | 100.00 | 103.24 µg/L | 103.24 |
| D5-EtFOSAA | 1677 | 1.34 | 100.00 | 105.59 µg/L | 105.59 |
| 13C9-PFDA | 20091 | 0.91 | 100.00 | 92.78 µg/L | 92.78 |



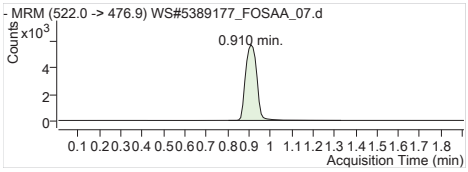



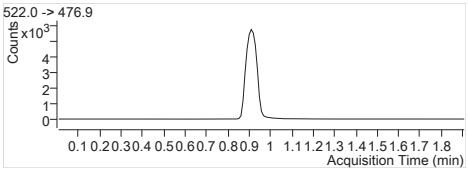

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: Calibration



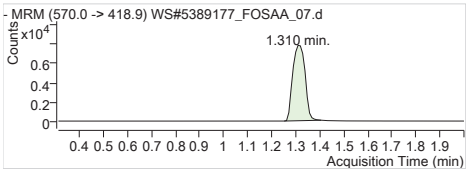



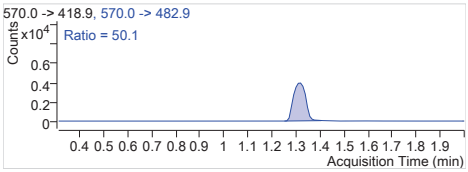

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: Calibration



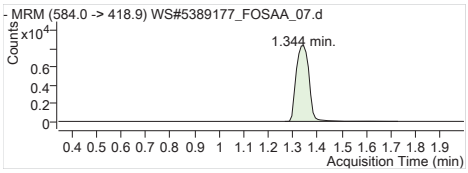



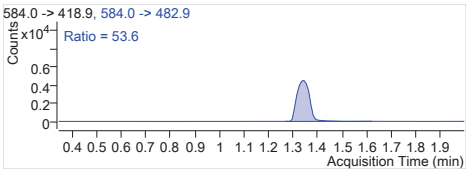

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: Calibration



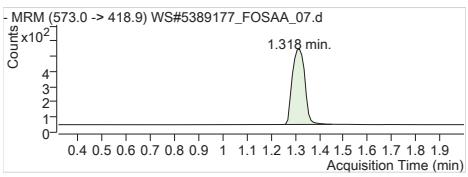



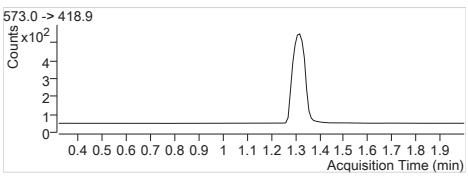

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 42.44 µg/L
Area ratio: 15.45889
Sample type: Calibration



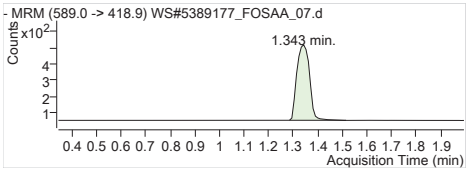



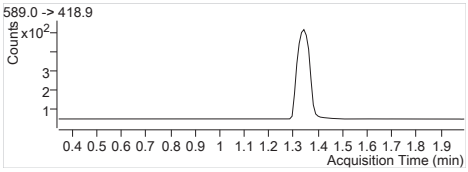

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 43.02 µg/L
Area ratio: 18.14415
Sample type: Calibration



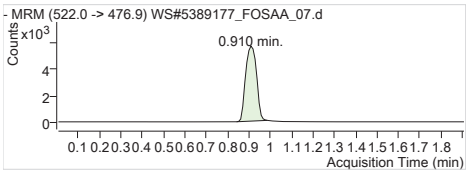



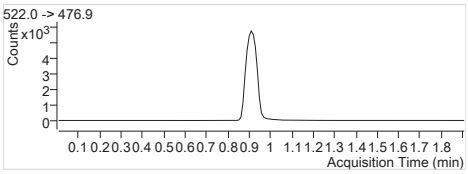

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 103.24 µg/L
Area ratio: 0.08601
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 105.59 µg/L |
| Area ratio: | 0.08013 |
| Sample type: | Calibration |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 92.78 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

# Quantitation Results

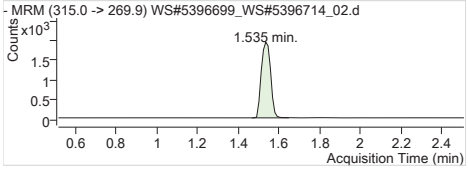
Agilent Technologies

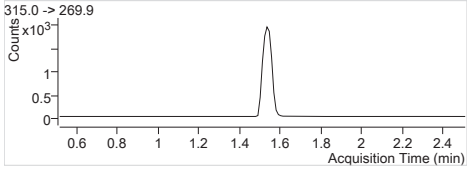
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 1** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_02.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A2 |
| **Acq. Date** | 2018/02/15 4:15:51 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

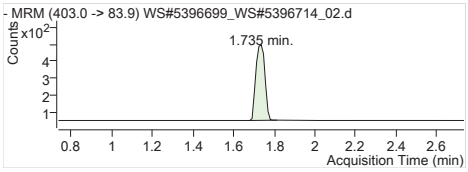
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6091 | 1.53 | 1 µg/L | | |
| MPFHxS | 1395 | 1.74 | 1 µg/L | | |
| MPFHpA | 7275 | 1.78 | 1 µg/L | | |
| MPFOA | 6798 | 1.96 | 1 µg/L | | |
| MPFOS | 1734 | 2.01 | 1 µg/L | | |
| MPFNA | 6762 | 2.09 | 1 µg/L | | |
| MPFDA | 4713 | 2.20 | 1 µg/L | | |
| MPFUnA | 6168 | 2.30 | 1 µg/L | | |
| MPFDoA | 7706 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6867 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 25716 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 25927 | 2.20 | 1 µg/L | | |

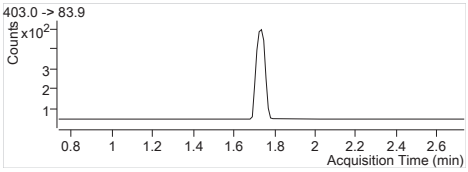
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 618 | 1.20 | 0.83 | 1.03 µg/L | 123.82 |
| PFHxA 1 | 1923 | 1.53 | 0.83 | 0.97 µg/L | 117.09 |
| PFHxS 1 | 647 | 1.74 | 0.83 | 1.05 µg/L | 126.31 |
| PFHpA 1 | 2918 | 1.78 | 0.83 | 0.94 µg/L | 113.69 |
| PFOA 1 | 2877 | 1.96 | 0.83 | 0.94 µg/L | 113.13 |
| PFOS 1 | 607 | 2.01 | 0.83 | 0.96 µg/L | 115.67 |
| PFNA 1 | 2216 | 2.09 | 0.83 | 1.01 µg/L | 121.77 |
| PFDA 1 | 2473 | 2.20 | 0.83 | 0.87 µg/L | 104.50 |
| PFUnA 1 | 2510 | 2.30 | 0.83 | 0.94 µg/L | 112.67 |
| PFDoA 1 | 2949 | 2.38 | 0.83 | 0.91 µg/L | 109.10 |
| PFTrDA 1 | 2946 | 2.46 | 0.83 | 0.89 µg/L | 107.01 |
| PFTeDA 1 | 2545 | 2.51 | 0.83 | 0.92 µg/L | 110.88 |
| 13C2-PFHxA | 6059 | 1.53 | 100.00 | 100.03 µg/L | 100.03 |
| 18O2-PFHxS | 1395 | 1.74 | 100.00 | 98.80 µg/L | 98.80 |
| 13C4-PFHpA | 7275 | 1.78 | 100.00 | 100.67 µg/L | 100.67 |
| 13C4-PFOA | 6798 | 1.96 | 100.00 | 99.09 µg/L | 99.09 |
| 13C4-PFOS | 1734 | 2.01 | 100.00 | 109.36 µg/L | 109.36 |
| 13C5-PFNA | 6762 | 2.09 | 100.00 | 105.65 µg/L | 105.65 |
| 13C2-PFDA | 4649 | 2.20 | 100.00 | 98.75 µg/L | 98.75 |
| 13C2-PFUnA | 6168 | 2.30 | 100.00 | 101.19 µg/L | 101.19 |
| 13C2-PFDoA | 7706 | 2.38 | 100.00 | 97.12 µg/L | 97.12 |
| 13C2-PFTeDA | 6881 | 2.51 | 100.00 | 98.11 µg/L | 98.11 |
| 13C6-PFHxA | 25716 | 1.53 | 100.00 | 104.88 µg/L | 104.88 |
| 13C9-PFDA | 25927 | 2.20 | 100.00 | 106.49 µg/L | 106.49 |



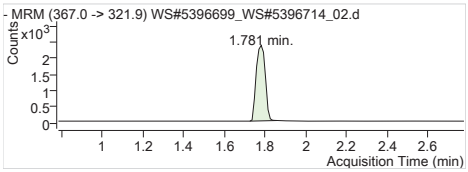



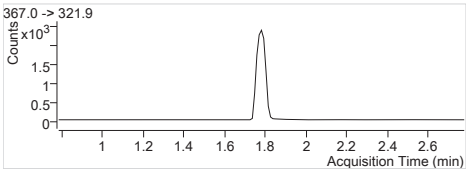

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Calibration |



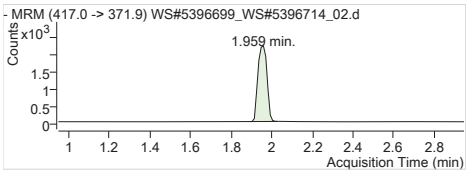



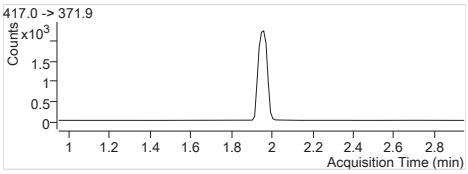

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: Calibration



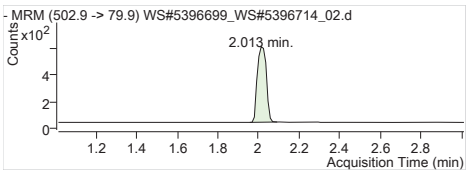



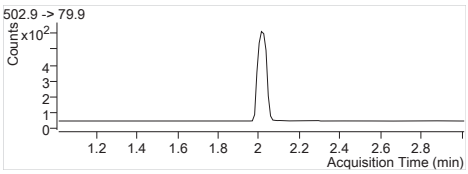

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Calibration



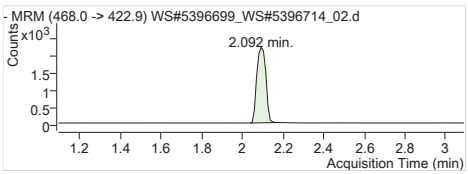



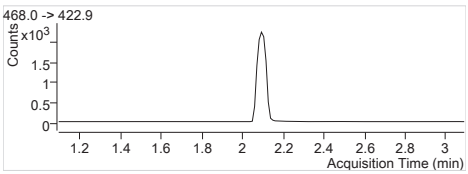

**MPFOA** Internal Standard
RT (Exp. RT): 1.959 (1.948)
Concentration: 1 µg/L
Sample type: Calibration



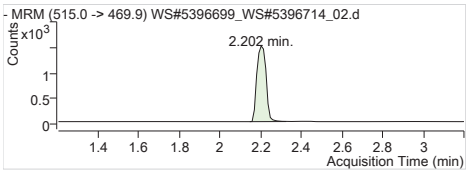



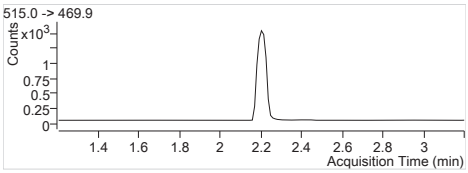

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Calibration



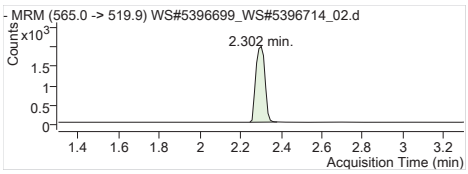



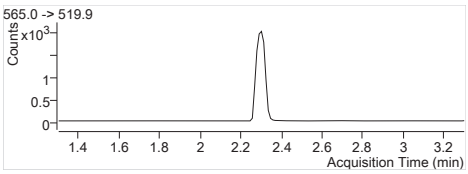

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Calibration



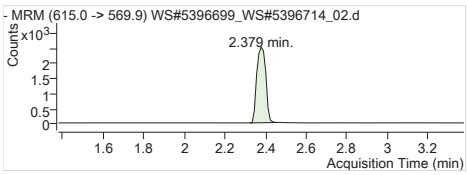



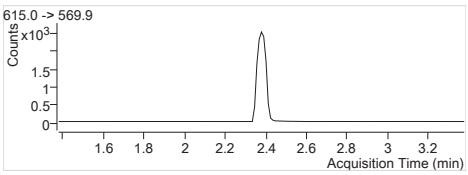

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Calibration



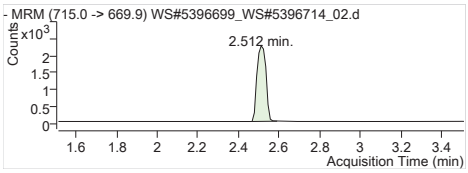



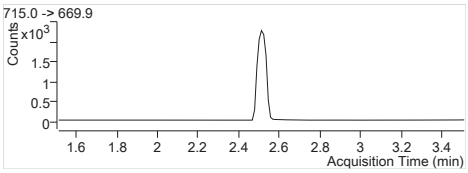

**MPFUnA** Internal Standard
RT (Exp. RT): 2.302 (2.302)
Concentration: 1 µg/L
Sample type: Calibration



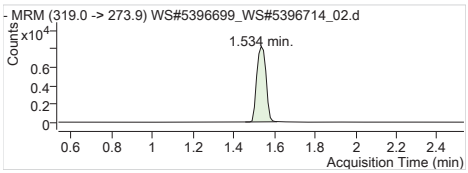



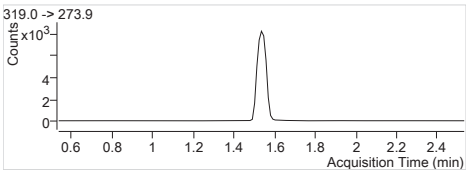

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Calibration



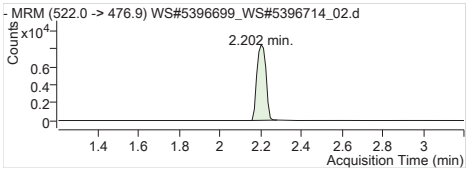



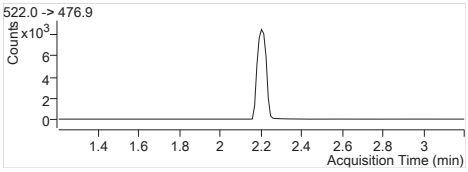

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Calibration



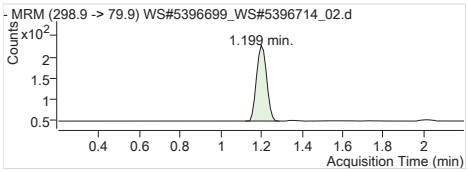



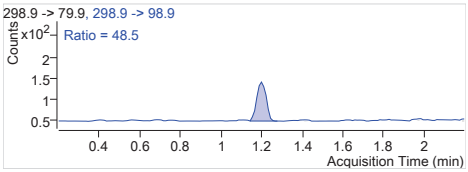

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Calibration



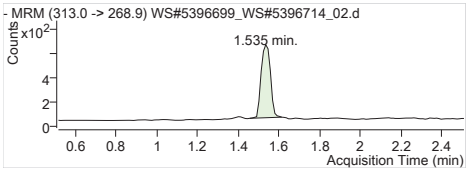



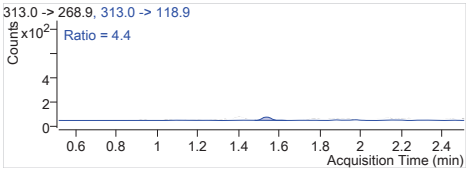

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Calibration



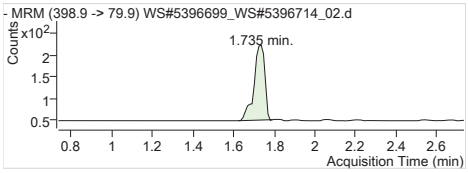



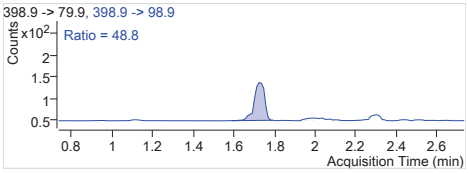

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.199 (1.199)
Calc. conc. 1.03 µg/L
Area ratio: 0.44301
Sample type: Calibration



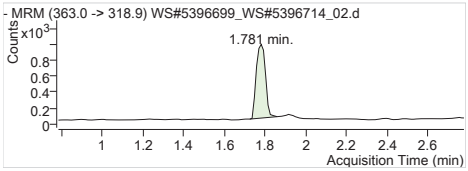



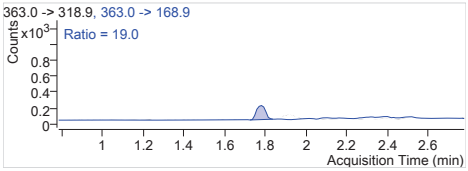

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 0.97 µg/L
Area ratio: 0.31571
Sample type: Calibration



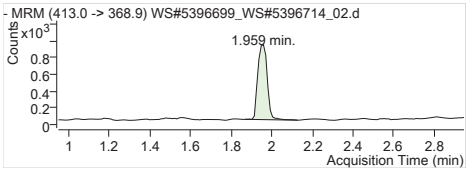



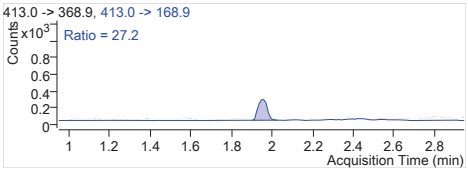

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.735 (1.735)
Calc. conc. 1.05 µg/L
Area ratio: 0.46380
Sample type: Calibration



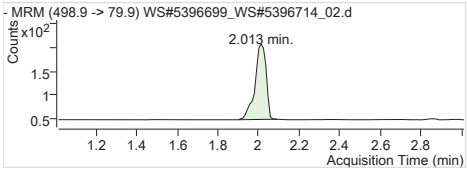



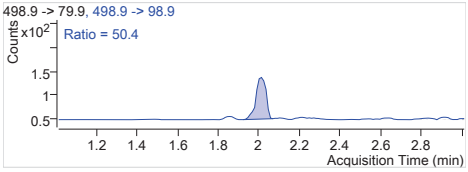

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 0.94 µg/L
Area ratio: 0.40110
Sample type: Calibration



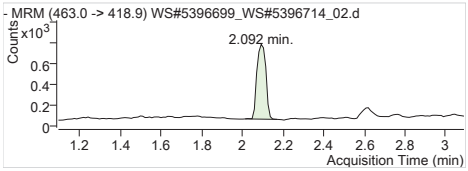



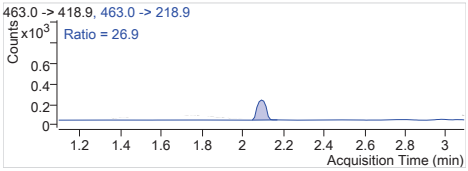

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.959 (1.948)
Calc. conc. 0.94 µg/L
Area ratio: 0.42321
Sample type: Calibration



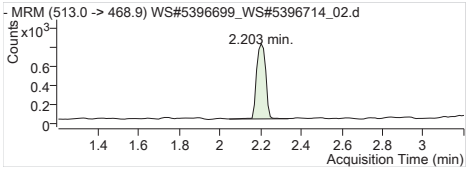



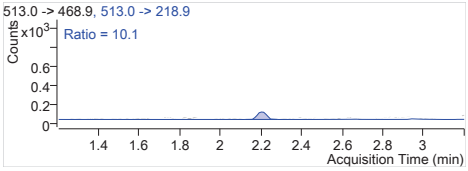

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 0.96 µg/L
Area ratio: 0.35006
Sample type: Calibration



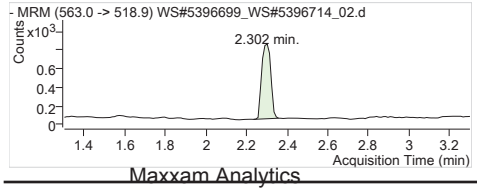



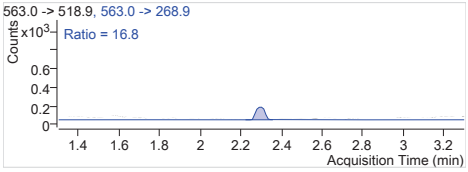

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 1.01 µg/L
Area ratio: 0.32771
Sample type: Calibration



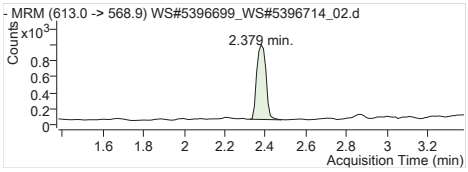



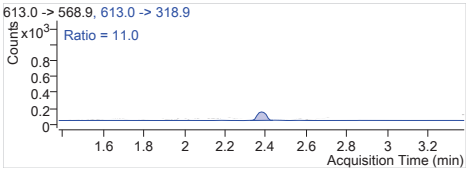

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 0.87 µg/L
Area ratio: 0.52472
Sample type: Calibration



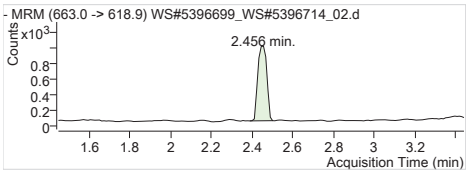



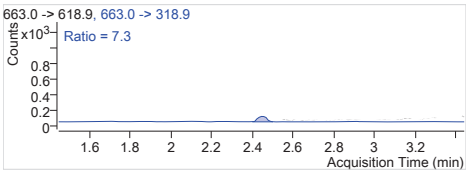

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 0.94 µg/L
Area ratio: 0.40694
Sample type: Calibration



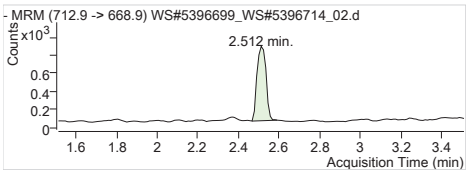



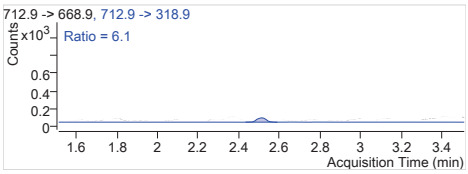

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 0.91 µg/L
Area ratio: 0.38269
Sample type: Calibration



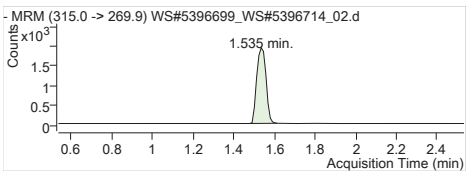



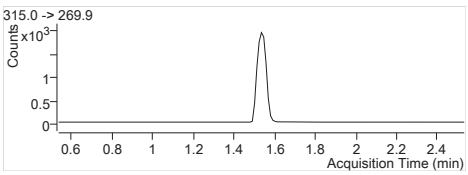

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.456 (2.445)
Calc. conc. 0.89 µg/L
Area ratio: 0.42901
Sample type: Calibration



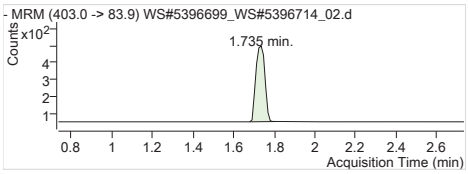



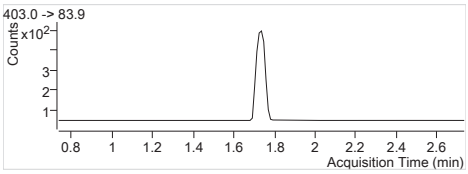

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 0.92 µg/L
Area ratio: 0.37061
Sample type: Calibration



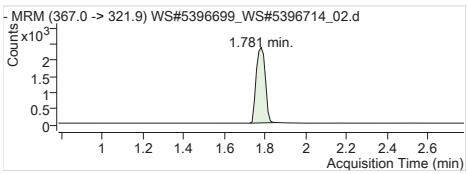



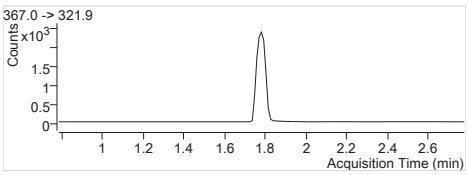

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.535 (1.535)
Calc. conc. 100.03 µg/L
Area ratio: 0.23561
Sample type: Calibration



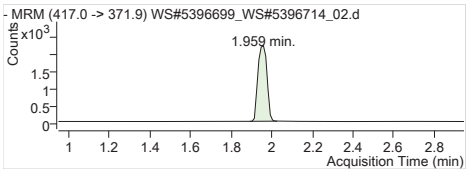



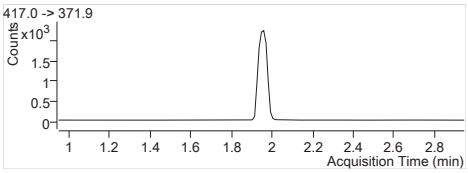

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.735 (1.735)
Calc. conc. 98.80 µg/L
Area ratio: 0.05425
Sample type: Calibration



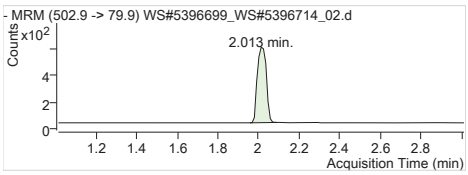



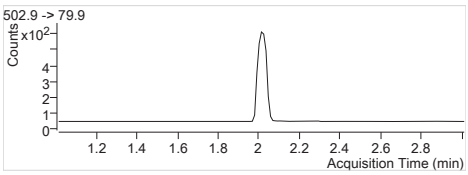

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 100.67 µg/L
Area ratio: 0.28290
Sample type: Calibration



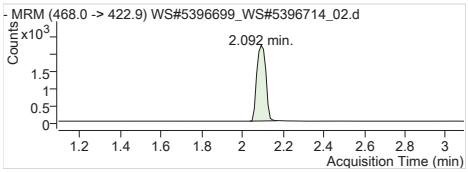



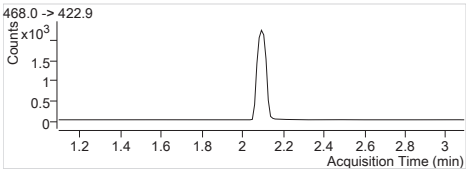

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.959 (1.948)
Calc. conc. 99.09 µg/L
Area ratio: 0.26435
Sample type: Calibration



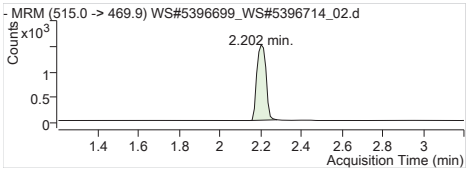



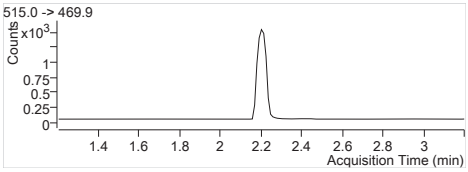

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 109.36 µg/L
Area ratio: 0.06743
Sample type: Calibration



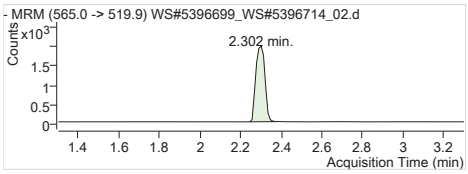



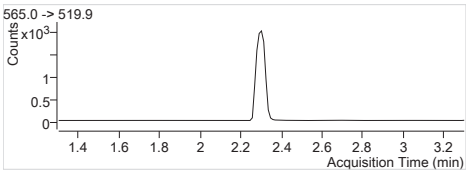

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 105.65 µg/L
Area ratio: 0.26295
Sample type: Calibration



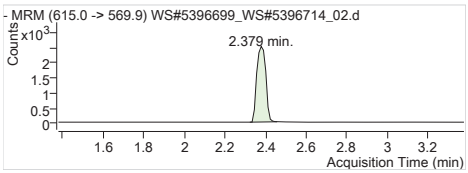



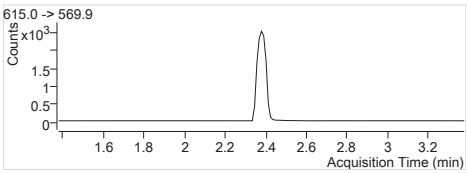

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 98.75 µg/L
Area ratio: 0.17931
Sample type: Calibration



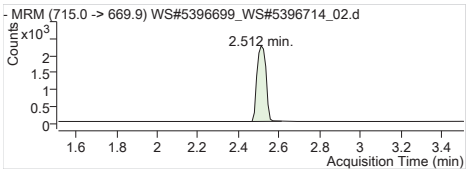



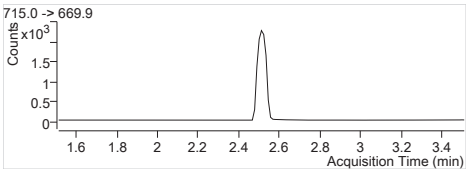

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 101.19 µg/L
Area ratio: 0.23790
Sample type: Calibration



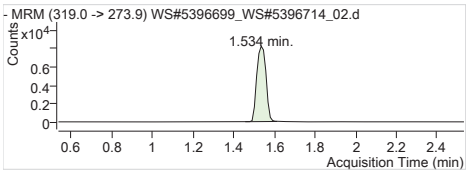



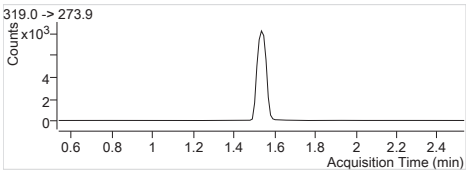

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 97.12 µg/L
Area ratio: 0.29722
Sample type: Calibration



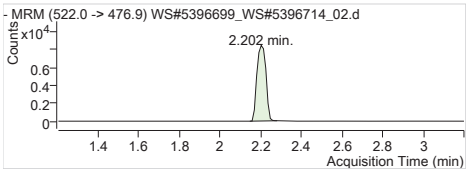



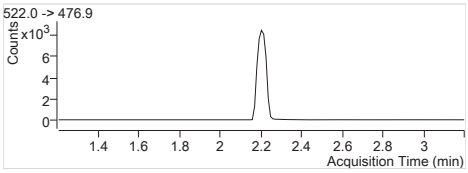

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 98.11 µg/L
Area ratio: 0.26540
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 104.88 µg/L
Area ratio: 0
Sample type: Calibration



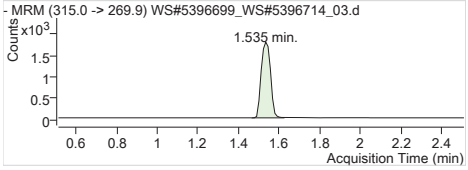

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 106.49 µg/L
Area ratio: 0
Sample type: Calibration

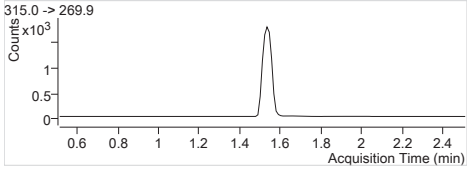
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 2** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_03.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A3 |
| **Acq. Date** | 2018/02/15 4:20:46 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

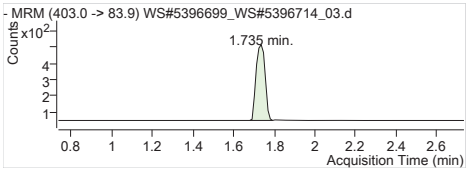
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5608 | 1.53 | 1 µg/L | | |
| MPFHxS | 1438 | 1.74 | 1 µg/L | | |
| MPFHpA | 6709 | 1.78 | 1 µg/L | | |
| MPFOA | 6765 | 1.96 | 1 µg/L | | |
| MPFOS | 1510 | 2.01 | 1 µg/L | | |
| MPFNA | 6174 | 2.09 | 1 µg/L | | |
| MPFDA | 4346 | 2.20 | 1 µg/L | | |
| MPFUnA | 5424 | 2.30 | 1 µg/L | | |
| MPFDoA | 7237 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6223 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 25017 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 24969 | 2.20 | 1 µg/L | | |

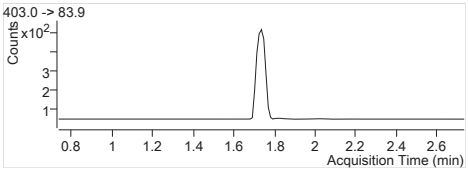
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 1211 | 1.20 | 1.70 | 1.59 µg/L | 93.57 |
| PFHxA 1 | 3875 | 1.53 | 1.70 | 1.65 µg/L | 97.03 |
| PFHxS 1 | 1218 | 1.74 | 1.70 | 1.60 µg/L | 94.41 |
| PFHpA 1 | 5438 | 1.78 | 1.70 | 1.64 µg/L | 96.45 |
| PFOA 1 | 5513 | 1.96 | 1.70 | 1.56 µg/L | 91.92 |
| PFOS 1 | 1119 | 2.01 | 1.70 | 1.67 µg/L | 98.05 |
| PFNA 1 | 4138 | 2.09 | 1.70 | 1.61 µg/L | 94.59 |
| PFDA 1 | 4803 | 2.20 | 1.70 | 1.65 µg/L | 97.33 |
| PFUnA 1 | 4875 | 2.30 | 1.70 | 1.75 µg/L | 102.86 |
| PFDoA 1 | 5881 | 2.38 | 1.70 | 1.64 µg/L | 96.73 |
| PFTrDA 1 | 5994 | 2.46 | 1.70 | 1.67 µg/L | 98.52 |
| PFTeDA 1 | 4651 | 2.51 | 1.70 | 1.62 µg/L | 95.25 |
| 13C2-PFHxA | 5564 | 1.53 | 100.00 | 94.43 µg/L | 94.43 |
| 18O2-PFHxS | 1438 | 1.74 | 100.00 | 104.70 µg/L | 104.70 |
| 13C4-PFHpA | 6709 | 1.78 | 100.00 | 95.43 µg/L | 95.43 |
| 13C4-PFOA | 6765 | 1.96 | 100.00 | 101.37 µg/L | 101.37 |
| 13C4-PFOS | 1510 | 2.01 | 100.00 | 97.89 µg/L | 97.89 |
| 13C5-PFNA | 6173 | 2.09 | 100.00 | 99.14 µg/L | 99.14 |
| 13C2-PFDA | 4295 | 2.20 | 100.00 | 94.73 µg/L | 94.73 |
| 13C2-PFUnA | 5424 | 2.30 | 100.00 | 92.40 µg/L | 92.40 |
| 13C2-PFDoA | 7237 | 2.38 | 100.00 | 94.71 µg/L | 94.71 |
| 13C2-PFTeDA | 6269 | 2.51 | 100.00 | 92.81 µg/L | 92.81 |
| 13C6-PFHxA | 25017 | 1.53 | 100.00 | 102.02 µg/L | 102.02 |
| 13C9-PFDA | 24969 | 2.20 | 100.00 | 102.56 µg/L | 102.56 |



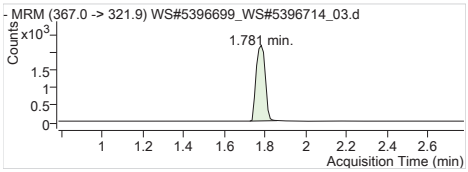



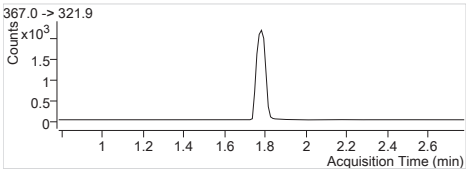

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Calibration |



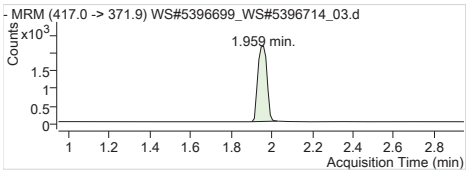



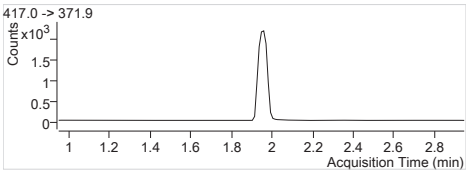

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: Calibration



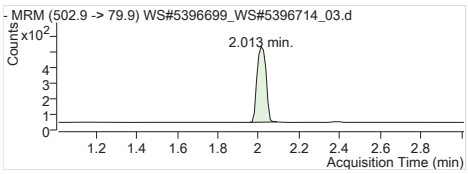



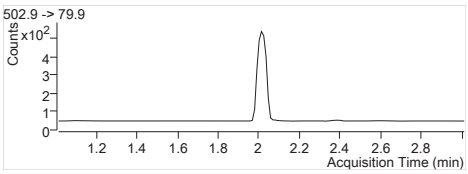

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Calibration



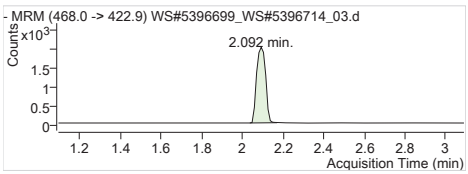



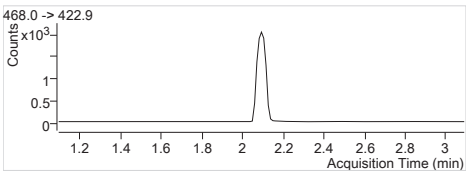

**MPFOA** Internal Standard
RT (Exp. RT): 1.959 (1.948)
Concentration: 1 µg/L
Sample type: Calibration



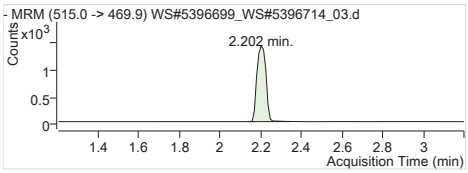



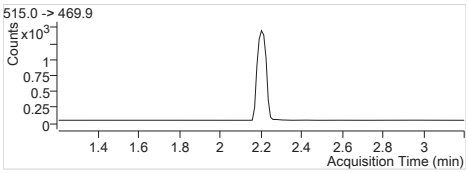

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Calibration



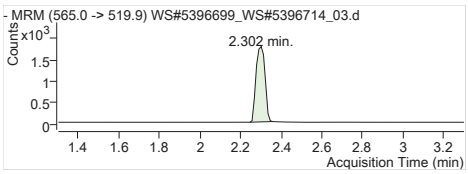



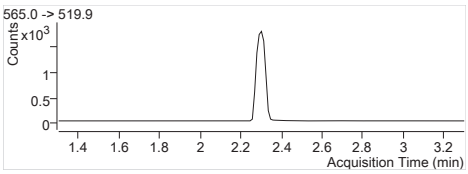

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Calibration



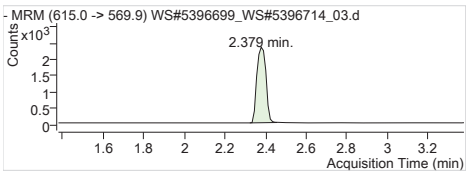



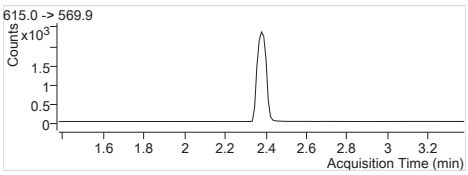

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Calibration



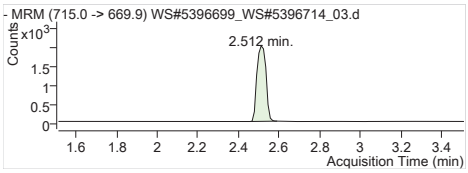



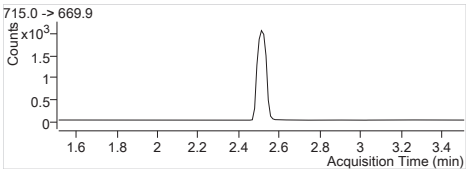

**MPFUnA** Internal Standard
RT (Exp. RT): 2.302 (2.302)
Concentration: 1 µg/L
Sample type: Calibration



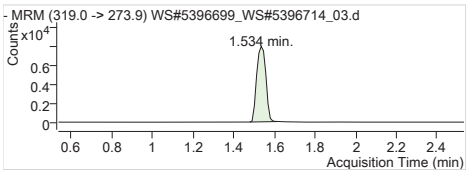



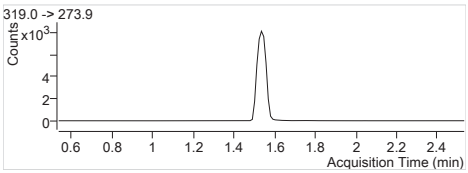

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Calibration



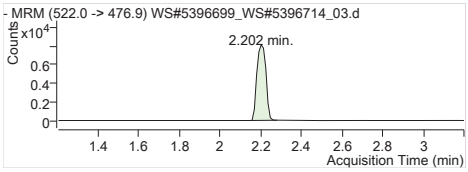



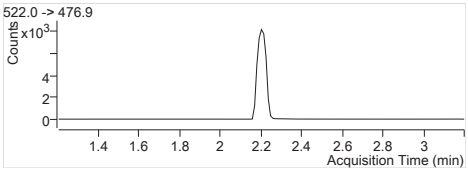

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Calibration



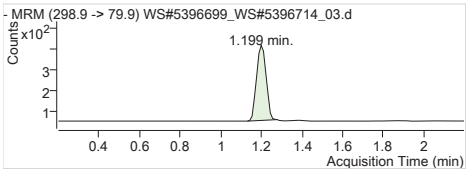



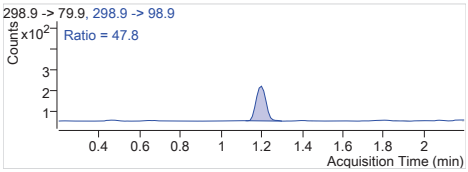

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Calibration



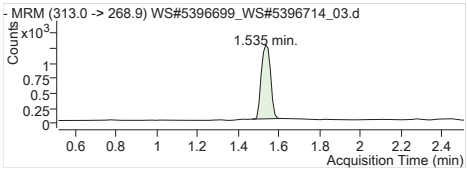



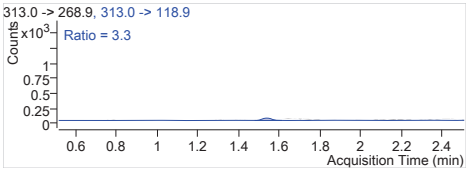

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Calibration



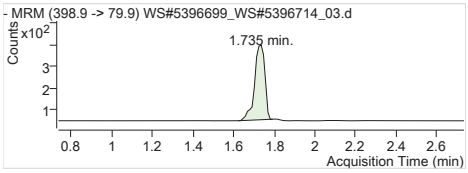



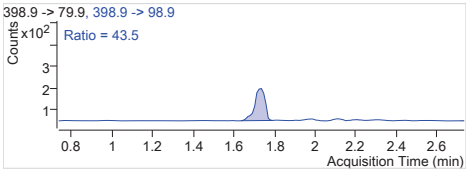

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.199 (1.199)
Calc. conc. 1.59 µg/L
Area ratio: 0.84214
Sample type: Calibration



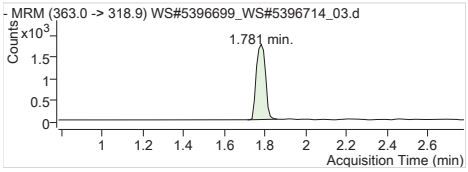



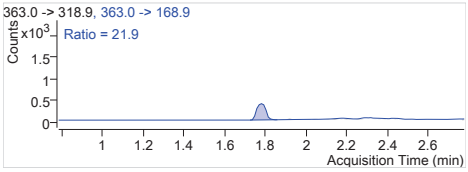

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 1.65 µg/L
Area ratio: 0.69098
Sample type: Calibration



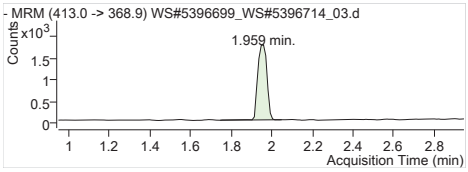



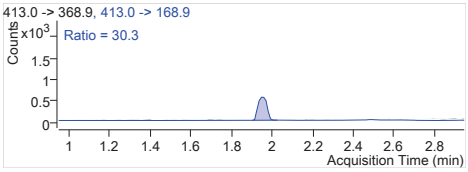

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.735 (1.735)
Calc. conc. 1.60 µg/L
Area ratio: 0.84701
Sample type: Calibration



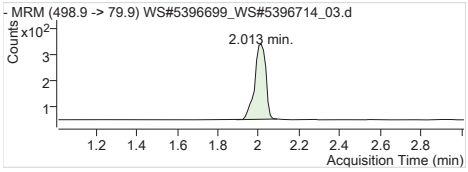



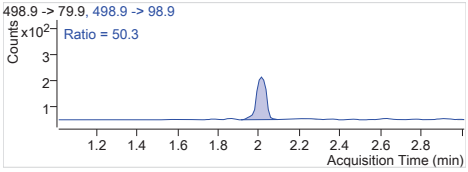

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 1.64 µg/L
Area ratio: 0.81055
Sample type: Calibration



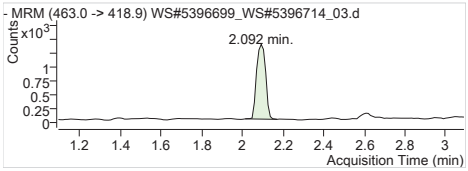



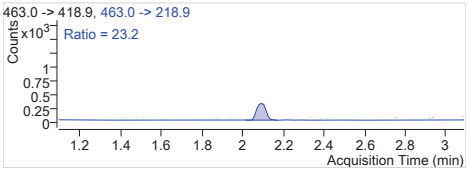

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.959 (1.948)
Calc. conc. 1.56 µg/L
Area ratio: 0.81493
Sample type: Calibration



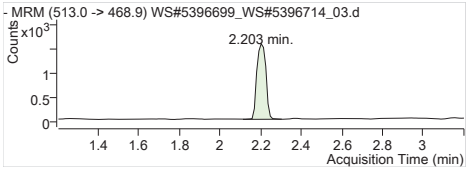



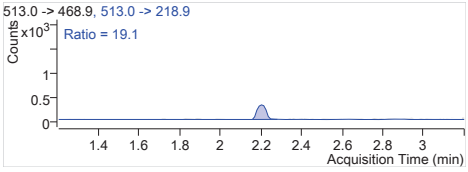

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 1.67 µg/L
Area ratio: 0.74106
Sample type: Calibration



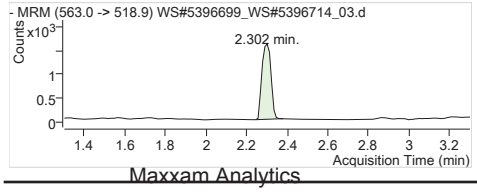



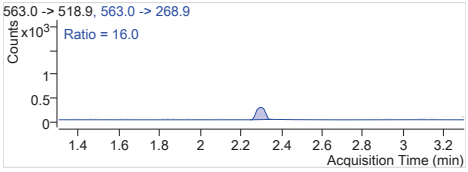

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 1.61 µg/L
Area ratio: 0.67023
Sample type: Calibration



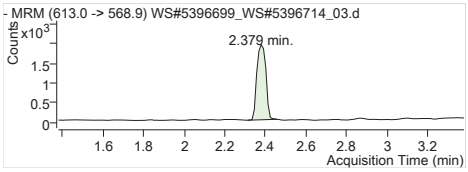



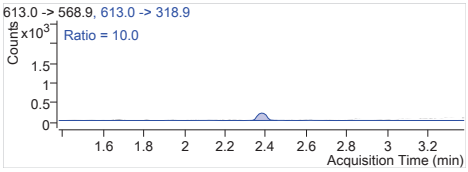

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 1.65 µg/L
Area ratio: 1.10515
Sample type: Calibration



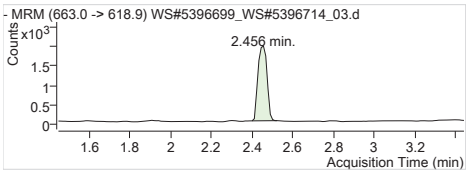



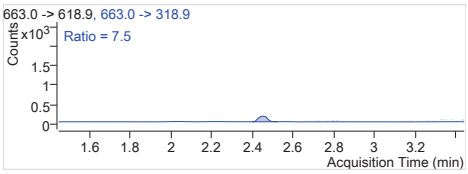

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 1.75 µg/L
Area ratio: 0.89878
Sample type: Calibration



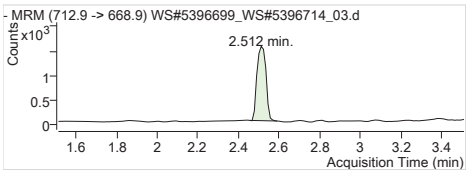



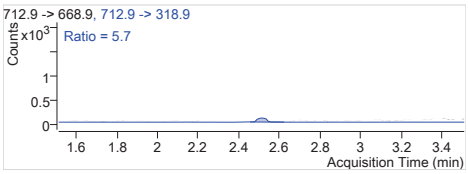

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 1.64 µg/L
Area ratio: 0.81263
Sample type: Calibration



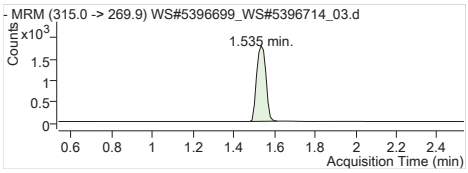



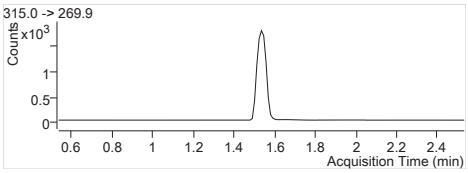

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.456 (2.445)
Calc. conc. 1.67 µg/L
Area ratio: 0.96320
Sample type: Calibration



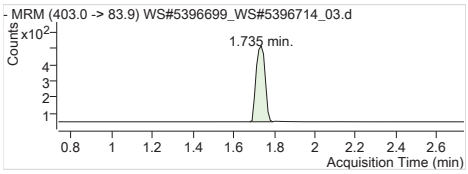



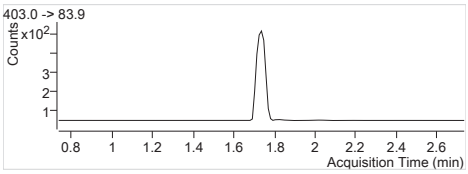

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 1.62 µg/L
Area ratio: 0.74739
Sample type: Calibration



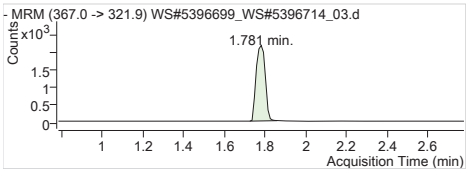



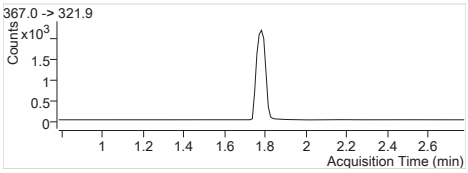

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.535 (1.535)
Calc. conc. 94.43 µg/L
Area ratio: 0.22241
Sample type: Calibration



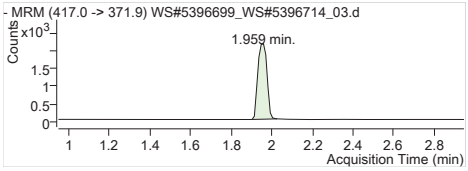



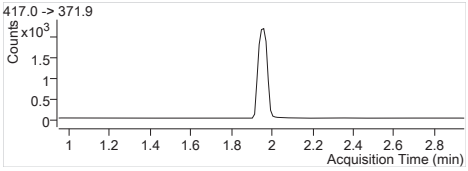

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.735 (1.735)
Calc. conc. 104.70 µg/L
Area ratio: 0.05748
Sample type: Calibration



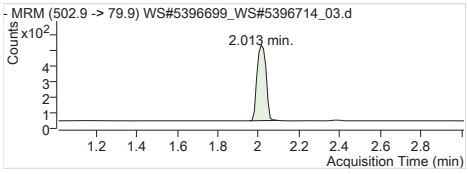



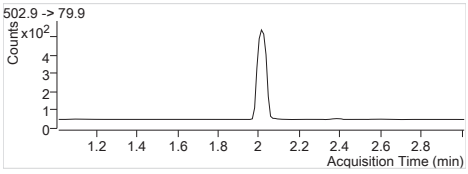

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 95.43 µg/L
Area ratio: 0.26818
Sample type: Calibration



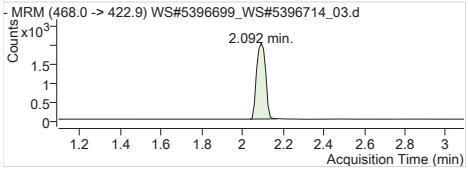



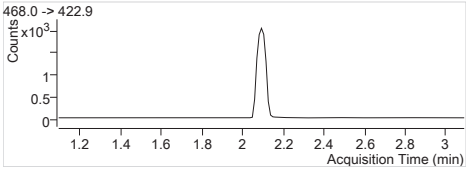

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.959 (1.948)
Calc. conc. 101.37 µg/L
Area ratio: 0.27042
Sample type: Calibration



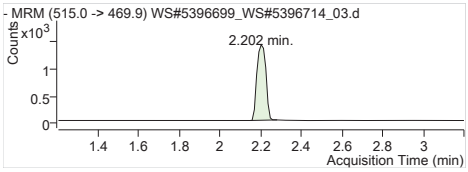



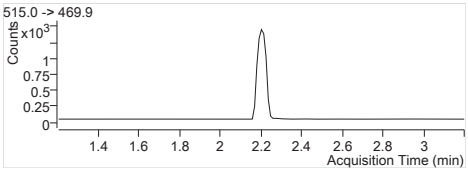

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 97.89 µg/L
Area ratio: 0.06036
Sample type: Calibration



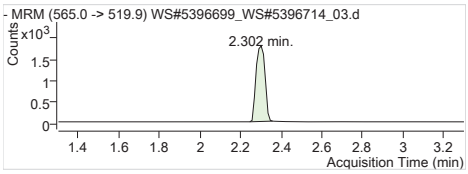



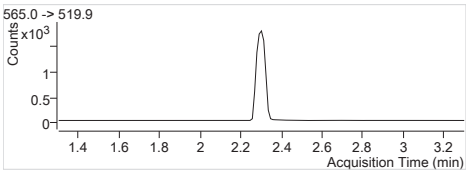

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 99.14 µg/L
Area ratio: 0.24675
Sample type: Calibration



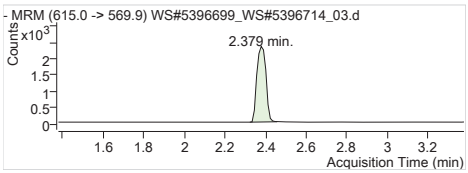



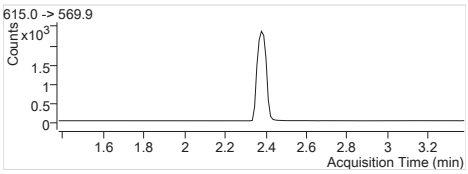

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 94.73 µg/L
Area ratio: 0.17201
Sample type: Calibration



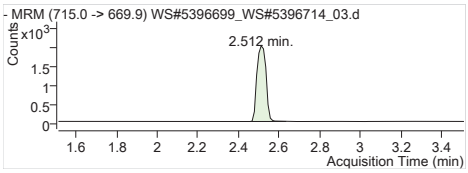



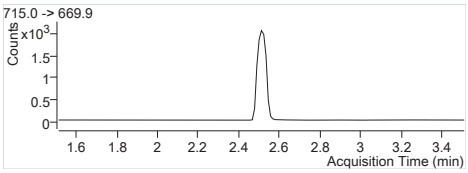

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 92.40 µg/L
Area ratio: 0.21723
Sample type: Calibration



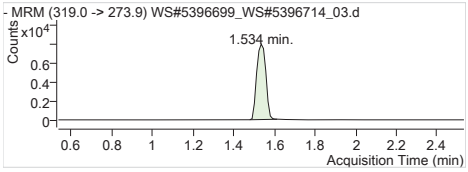



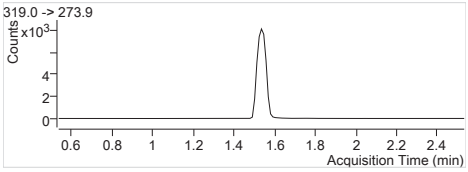

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 94.71 µg/L
Area ratio: 0.28984
Sample type: Calibration



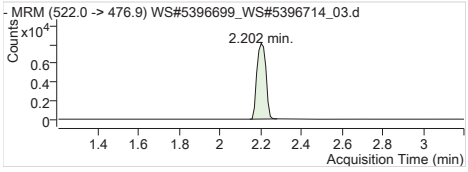



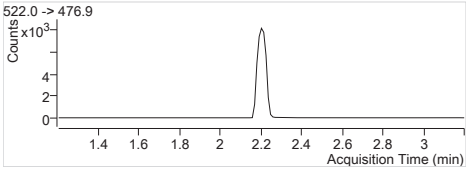

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 92.81 µg/L
Area ratio: 0.25107
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 102.02 µg/L
Area ratio: 0
Sample type: Calibration



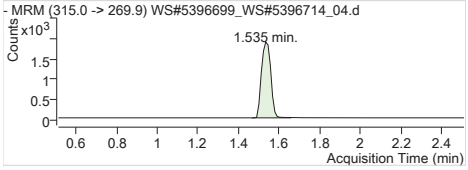

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 102.56 µg/L
Area ratio: 0
Sample type: Calibration

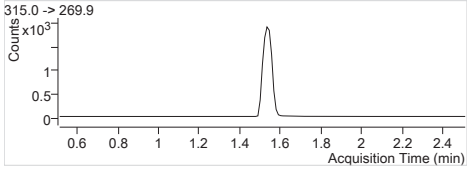
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 3** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_04.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A4 |
| **Acq. Date** | 2018/02/15 4:25:43 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

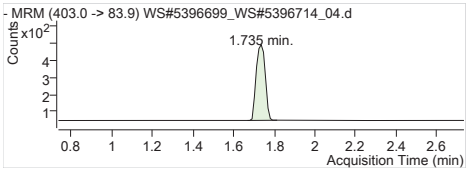
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5937 | 1.53 | 1 µg/L | | |
| MPFHxS | 1374 | 1.74 | 1 µg/L | | |
| MPFHpA | 6724 | 1.78 | 1 µg/L | | |
| MPFOA | 6150 | 1.96 | 1 µg/L | | |
| MPFOS | 1446 | 2.01 | 1 µg/L | | |
| MPFNA | 5916 | 2.09 | 1 µg/L | | |
| MPFDA | 4134 | 2.20 | 1 µg/L | | |
| MPFUnA | 5911 | 2.30 | 1 µg/L | | |
| MPFDoA | 7133 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6233 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 25568 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 25417 | 2.20 | 1 µg/L | | |

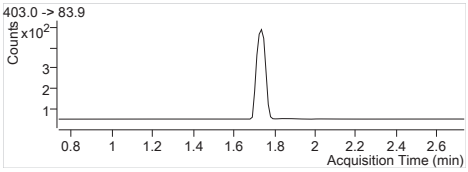
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 3621 | 1.20 | 5.00 | 4.12 µg/L | 82.40 |
| PFHxA 1 | 12228 | 1.53 | 5.00 | 4.12 µg/L | 82.42 |
| PFHxS 1 | 3323 | 1.74 | 5.00 | 3.89 µg/L | 77.74 |
| PFHpA 1 | 16809 | 1.78 | 5.00 | 4.51 µg/L | 90.22 |
| PFOA 1 | 17004 | 1.96 | 5.00 | 4.67 µg/L | 93.34 |
| PFOS 1 | 3052 | 2.01 | 5.00 | 4.14 µg/L | 82.85 |
| PFNA 1 | 12817 | 2.09 | 5.00 | 4.22 µg/L | 84.34 |
| PFDA 1 | 13300 | 2.20 | 5.00 | 4.52 µg/L | 90.39 |
| PFUnA 1 | 13534 | 2.30 | 5.00 | 4.05 µg/L | 80.98 |
| PFDoA 1 | 17518 | 2.38 | 5.00 | 4.47 µg/L | 89.36 |
| PFTrDA 1 | 18012 | 2.44 | 5.00 | 4.51 µg/L | 90.23 |
| PFTeDA 1 | 14263 | 2.51 | 5.00 | 4.48 µg/L | 89.55 |
| 13C2-PFHxA | 5873 | 1.53 | 100.00 | 97.52 µg/L | 97.52 |
| 18O2-PFHxS | 1374 | 1.74 | 100.00 | 97.88 µg/L | 97.88 |
| 13C4-PFHpA | 6724 | 1.78 | 100.00 | 93.58 µg/L | 93.58 |
| 13C4-PFOA | 6150 | 1.96 | 100.00 | 90.17 µg/L | 90.17 |
| 13C4-PFOS | 1446 | 2.01 | 100.00 | 91.72 µg/L | 91.72 |
| 13C5-PFNA | 5916 | 2.09 | 100.00 | 92.96 µg/L | 92.96 |
| 13C2-PFDA | 4127 | 2.20 | 100.00 | 89.42 µg/L | 89.42 |
| 13C2-PFUnA | 5911 | 2.30 | 100.00 | 98.92 µg/L | 98.92 |
| 13C2-PFDoA | 7133 | 2.38 | 100.00 | 91.70 µg/L | 91.70 |
| 13C2-PFTeDA | 6254 | 2.51 | 100.00 | 90.96 µg/L | 90.96 |
| 13C6-PFHxA | 25568 | 1.53 | 100.00 | 104.27 µg/L | 104.27 |
| 13C9-PFDA | 25417 | 2.20 | 100.00 | 104.40 µg/L | 104.40 |



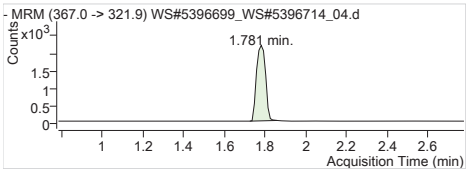



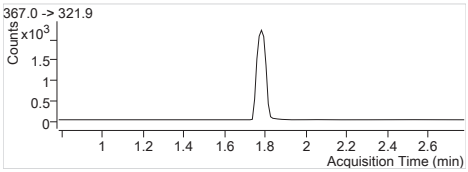

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Calibration |



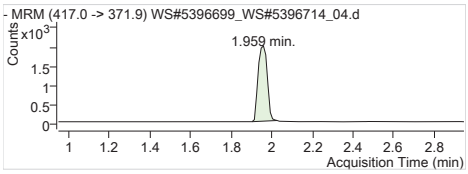



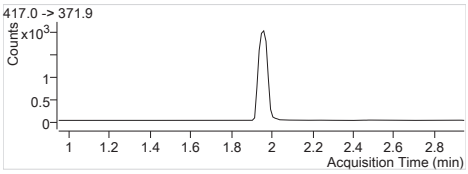

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: Calibration



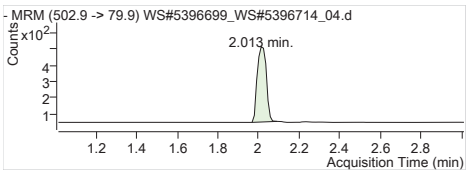



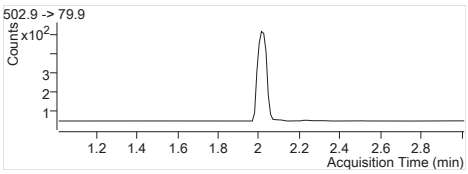

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Calibration



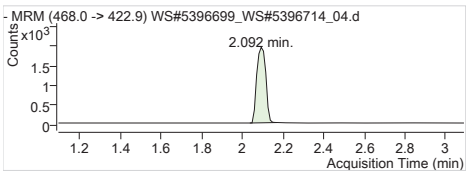



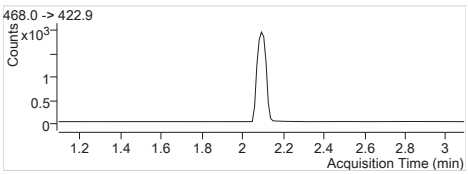

**MPFOA** Internal Standard
RT (Exp. RT): 1.959 (1.948)
Concentration: 1 µg/L
Sample type: Calibration



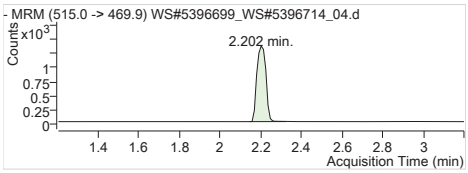



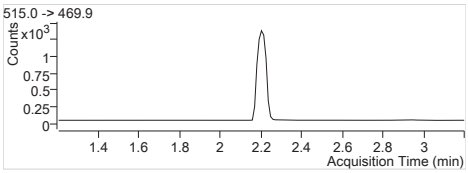

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Calibration



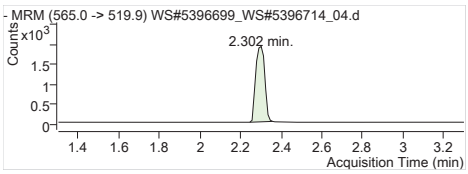



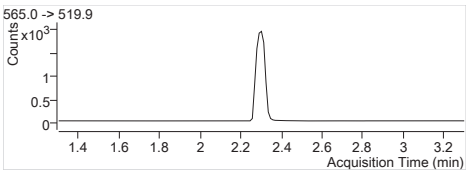

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Calibration



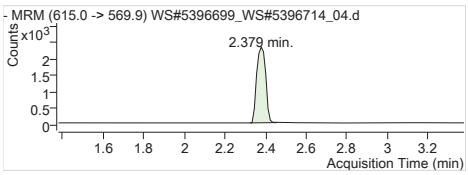



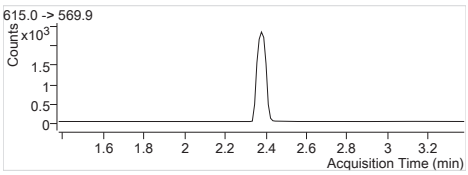

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Calibration



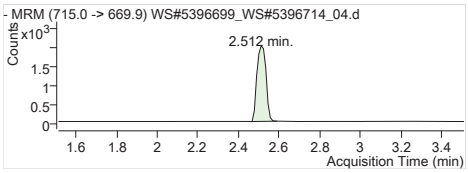



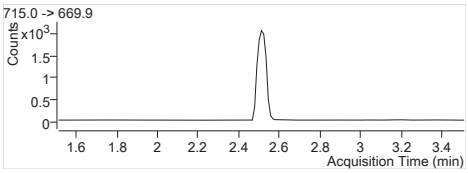

**MPFUnA** Internal Standard
RT (Exp. RT): 2.302 (2.302)
Concentration: 1 µg/L
Sample type: Calibration



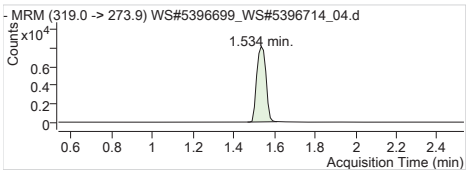



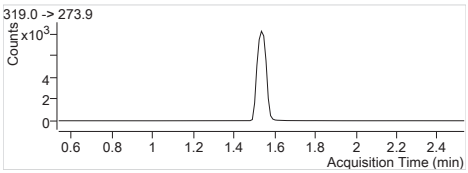

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Calibration



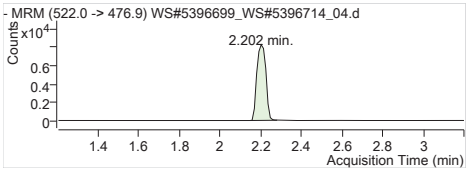



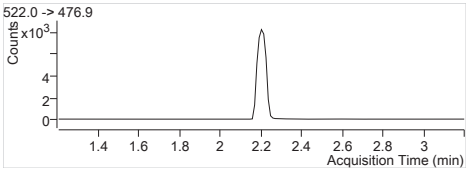

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Calibration



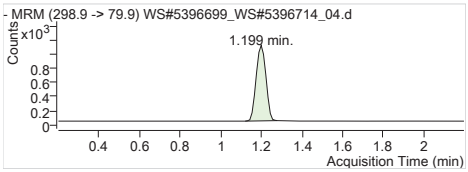



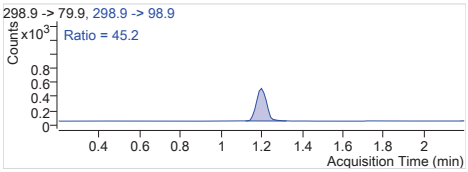

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Calibration



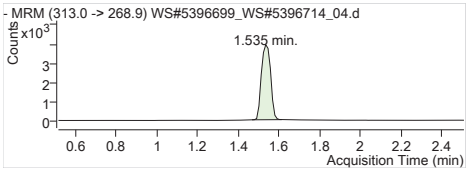



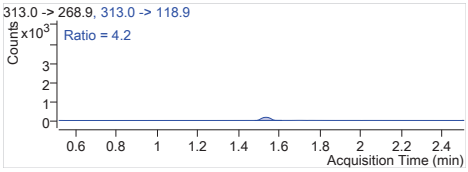

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Calibration



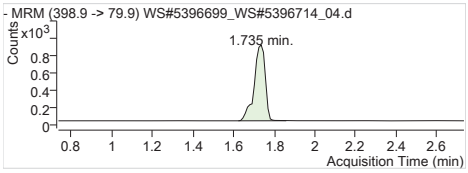



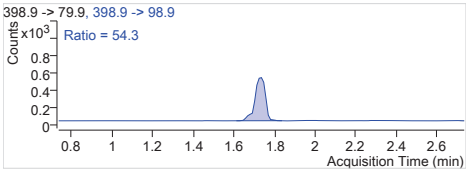

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.199 (1.199)
Calc. conc. 4.12 µg/L
Area ratio: 2.63537
Sample type: Calibration



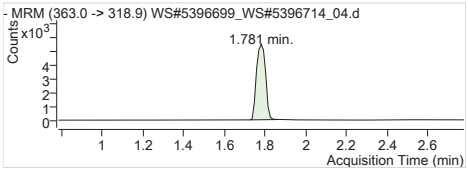



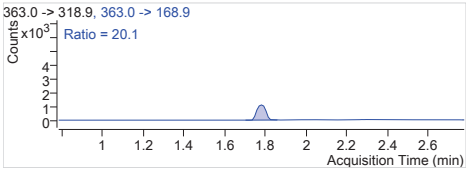

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 4.12 µg/L
Area ratio: 2.05963
Sample type: Calibration



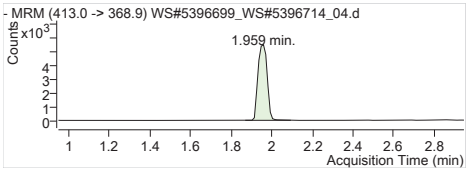



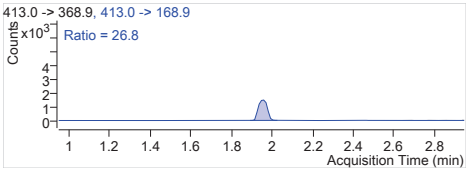

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.735 (1.735)
Calc. conc. 3.89 µg/L
Area ratio: 2.41849
Sample type: Calibration



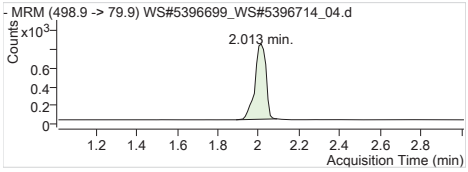



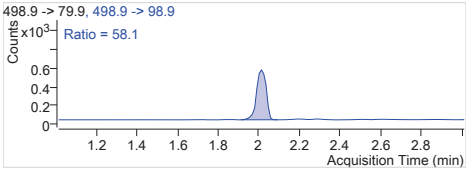

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 4.51 µg/L
Area ratio: 2.49985
Sample type: Calibration



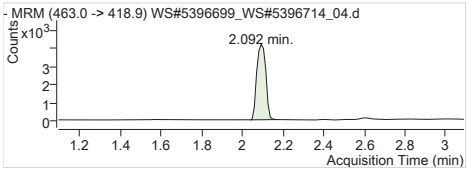



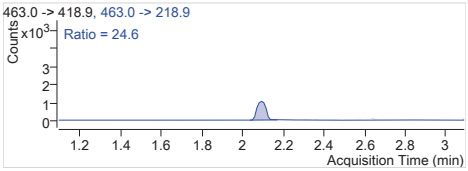

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.959 (1.948)
Calc. conc. 4.67 µg/L
Area ratio: 2.76488
Sample type: Calibration



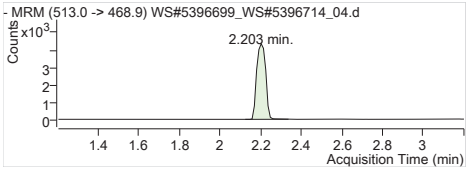



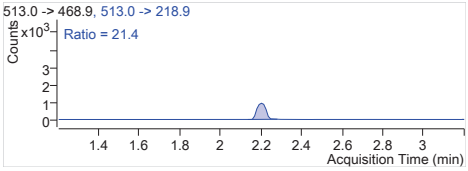

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 4.14 µg/L
Area ratio: 2.11065
Sample type: Calibration



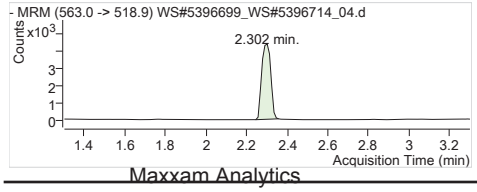



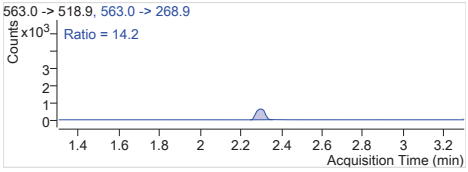

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 4.22 µg/L
Area ratio: 2.16650
Sample type: Calibration



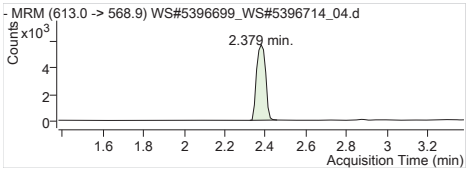



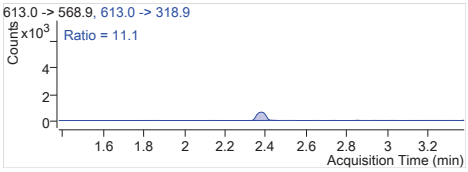

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 4.52 µg/L
Area ratio: 3.21722
Sample type: Calibration



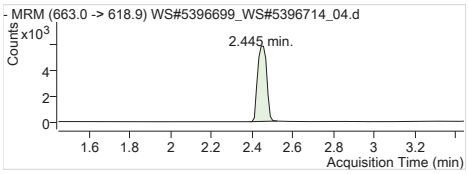



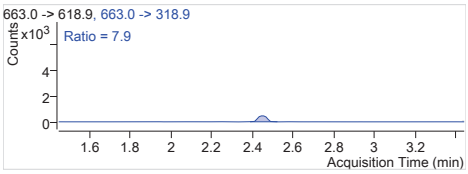

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 4.05 µg/L
Area ratio: 2.28963
Sample type: Calibration



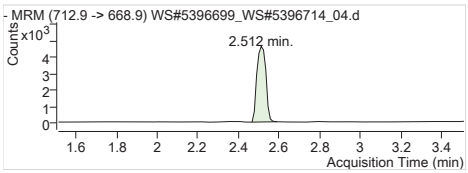



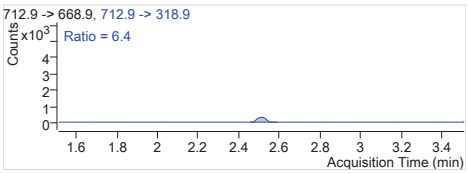

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.379 (2.379) |
| Calc. conc. | 4.47 µg/L |
| Area ratio: | 2.45591 |
| Sample type: | Calibration |



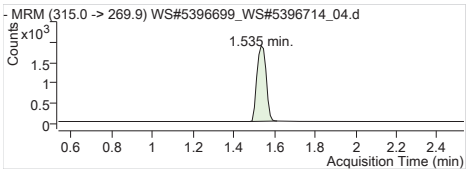



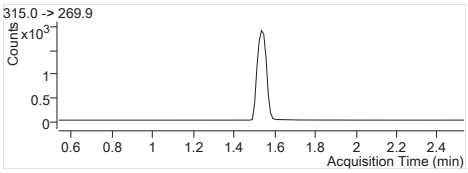

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.445 (2.445) |
| Calc. conc. | 4.51 µg/L |
| Area ratio: | 2.88978 |
| Sample type: | Calibration |



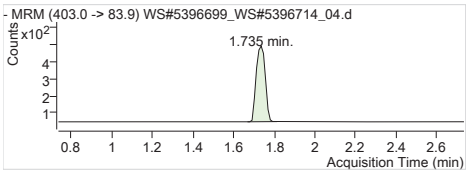



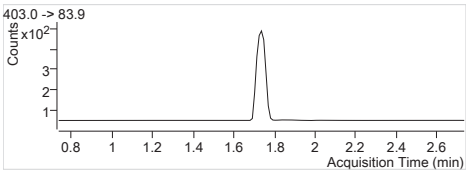

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.512 (2.512) |
| Calc. conc. | 4.48 µg/L |
| Area ratio: | 2.28830 |
| Sample type: | Calibration |



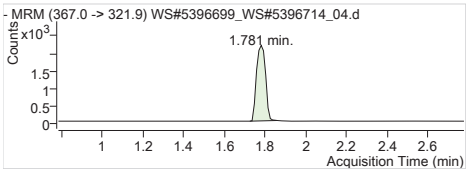



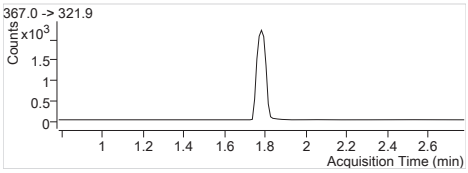

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 97.52 µg/L |
| Area ratio: | 0.22970 |
| Sample type: | Calibration |



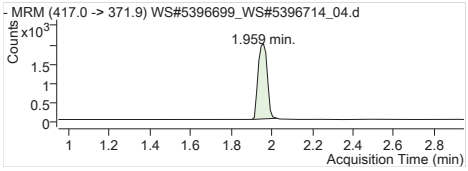



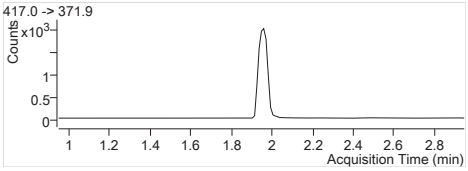

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 97.88 µg/L |
| Area ratio: | 0.05374 |
| Sample type: | Calibration |



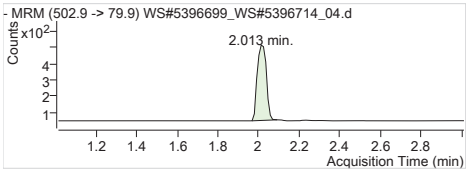



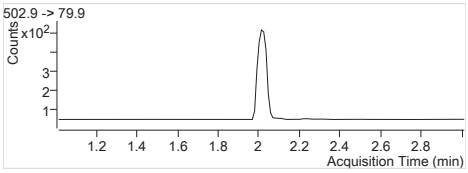

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 93.58 µg/L |
| Area ratio: | 0.26298 |
| Sample type: | Calibration |



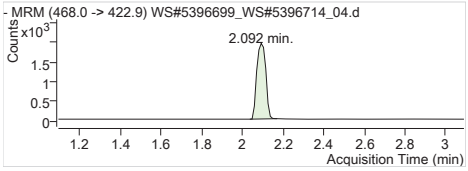



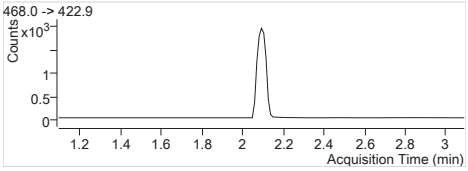

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.959 (1.948) |
| Calc. conc. | 90.17 µg/L |
| Area ratio: | 0.24054 |
| Sample type: | Calibration |



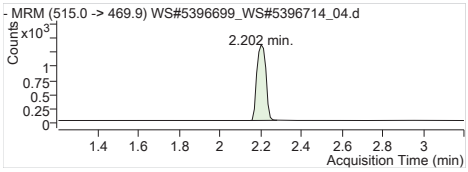



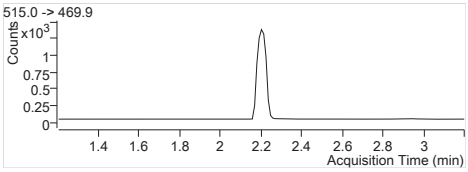

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 91.72 µg/L |
| Area ratio: | 0.05656 |
| Sample type: | Calibration |



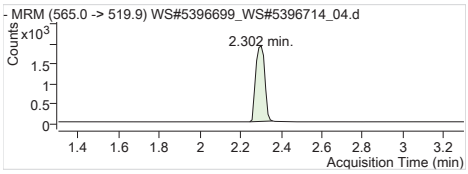



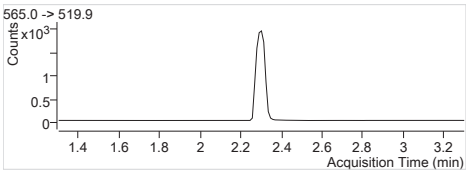

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 92.96 µg/L |
| Area ratio: | 0.23138 |
| Sample type: | Calibration |



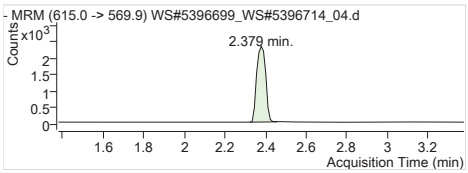



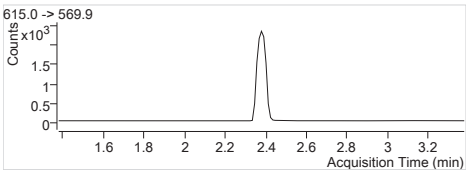

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 89.42 µg/L
Area ratio: 0.16237
Sample type: Calibration



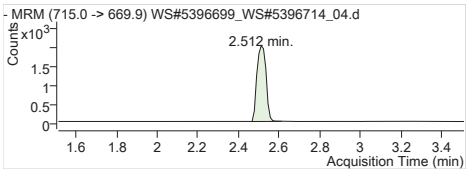



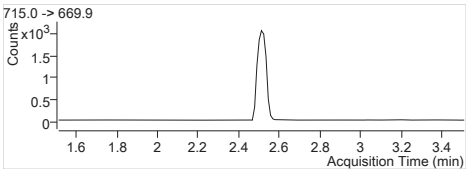

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 98.92 µg/L
Area ratio: 0.23256
Sample type: Calibration



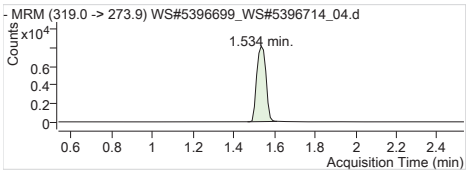



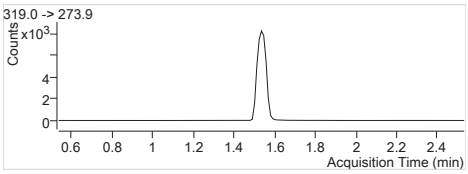

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 91.70 µg/L
Area ratio: 0.28064
Sample type: Calibration



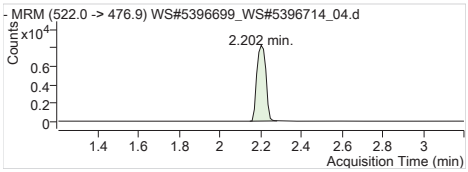



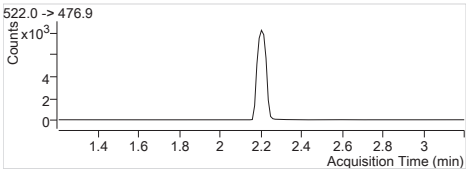

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 90.96 µg/L
Area ratio: 0.24606
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 104.27 µg/L
Area ratio: 0
Sample type: Calibration



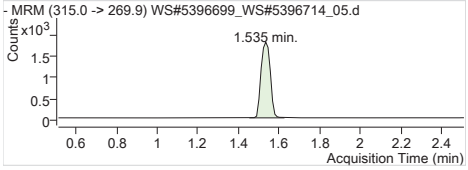

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 104.40 µg/L
Area ratio: 0
Sample type: Calibration

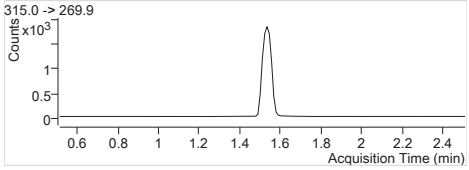
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 4** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_05.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/15 4:30:38 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

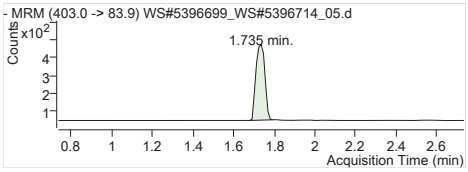
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5690 | 1.53 | 1 µg/L | | |
| MPFHxS | 1303 | 1.74 | 1 µg/L | | |
| MPFHpA | 6844 | 1.78 | 1 µg/L | | |
| MPFOA | 6231 | 1.96 | 1 µg/L | | |
| MPFOS | 1429 | 2.01 | 1 µg/L | | |
| MPFNA | 5913 | 2.09 | 1 µg/L | | |
| MPFDA | 4401 | 2.20 | 1 µg/L | | |
| MPFUnA | 5414 | 2.30 | 1 µg/L | | |
| MPFDoA | 7139 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6143 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 22891 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 22554 | 2.20 | 1 µg/L | | |

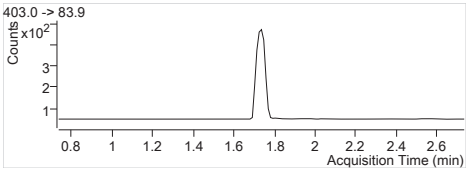
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 10141 | 1.20 | 12.50 | 11.38 µg/L | 91.04 |
| PFHxA 1 | 36651 | 1.53 | 12.50 | 12.03 µg/L | 96.26 |
| PFHxS 1 | 10001 | 1.74 | 12.50 | 11.52 µg/L | 92.17 |
| PFHpA 1 | 45851 | 1.78 | 12.50 | 11.65 µg/L | 93.19 |
| PFOA 1 | 46233 | 1.96 | 12.50 | 12.08 µg/L | 96.62 |
| PFOS 1 | 9097 | 2.01 | 12.50 | 11.83 µg/L | 94.67 |
| PFNA 1 | 36842 | 2.09 | 12.50 | 11.30 µg/L | 90.43 |
| PFDA 1 | 41124 | 2.20 | 12.50 | 12.83 µg/L | 102.64 |
| PFUnA 1 | 39617 | 2.30 | 12.50 | 12.37 µg/L | 98.92 |
| PFDoA 1 | 50698 | 2.38 | 12.50 | 12.45 µg/L | 99.61 |
| PFTrDA 1 | 51716 | 2.44 | 12.50 | 12.65 µg/L | 101.22 |
| PFTeDA 1 | 40717 | 2.51 | 12.50 | 12.53 µg/L | 100.22 |
| 13C2-PFHxA | 5648 | 1.53 | 100.00 | 104.76 µg/L | 104.76 |
| 18O2-PFHxS | 1303 | 1.74 | 100.00 | 103.68 µg/L | 103.68 |
| 13C4-PFHpA | 6844 | 1.78 | 100.00 | 106.39 µg/L | 106.39 |
| 13C4-PFOA | 6231 | 1.96 | 100.00 | 102.04 µg/L | 102.04 |
| 13C4-PFOS | 1429 | 2.01 | 100.00 | 101.25 µg/L | 101.25 |
| 13C5-PFNA | 5913 | 2.09 | 100.00 | 103.78 µg/L | 103.78 |
| 13C2-PFDA | 4337 | 2.20 | 100.00 | 105.90 µg/L | 105.90 |
| 13C2-PFUnA | 5414 | 2.30 | 100.00 | 102.10 µg/L | 102.10 |
| 13C2-PFDoA | 7139 | 2.38 | 100.00 | 103.43 µg/L | 103.43 |
| 13C2-PFTeDA | 6167 | 2.51 | 100.00 | 101.08 µg/L | 101.08 |
| 13C6-PFHxA | 22891 | 1.53 | 100.00 | 93.35 µg/L | 93.35 |
| 13C9-PFDA | 22554 | 2.20 | 100.00 | 92.64 µg/L | 92.64 |



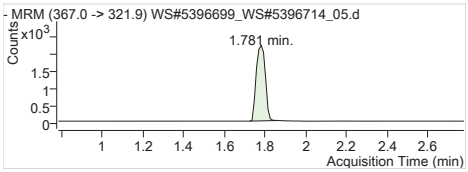



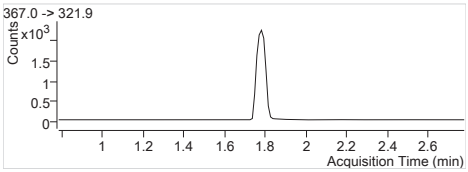

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Calibration |



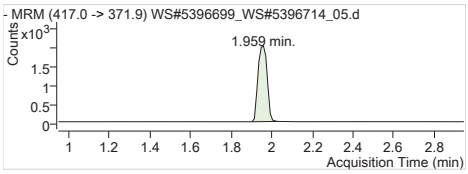



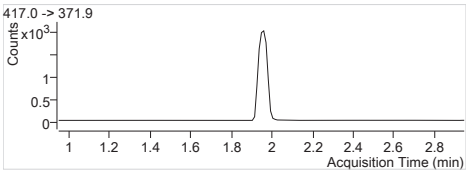

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: Calibration



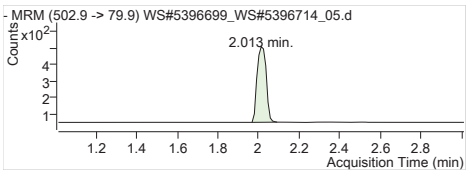



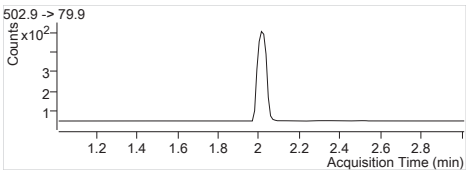

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Calibration



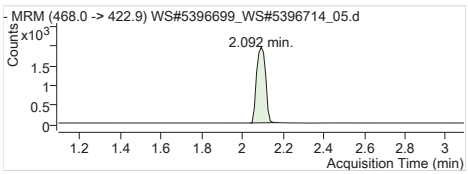



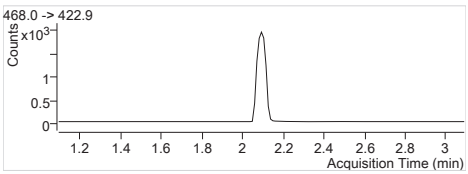

**MPFOA** Internal Standard
RT (Exp. RT): 1.959 (1.948)
Concentration: 1 µg/L
Sample type: Calibration



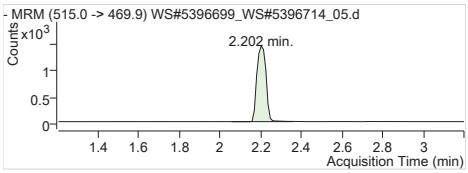



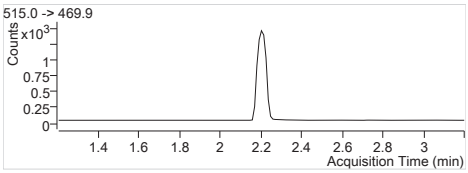

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Calibration



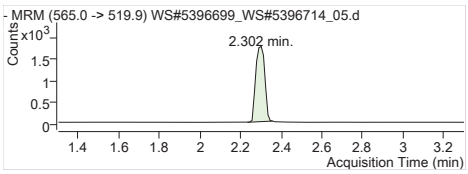



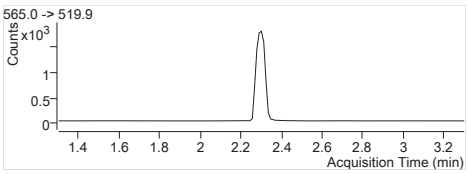

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Calibration



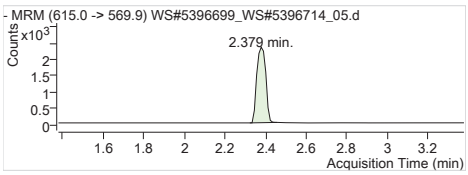



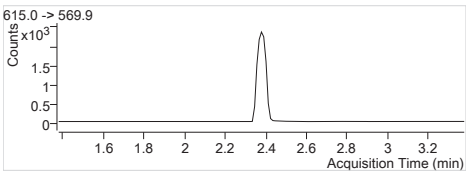

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Calibration



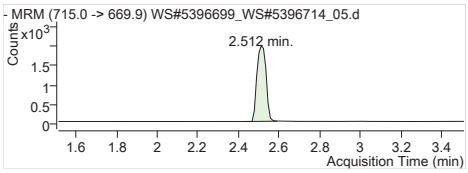



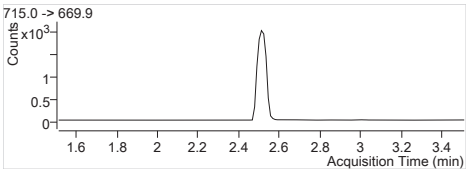

**MPFUnA** Internal Standard
RT (Exp. RT): 2.302 (2.302)
Concentration: 1 µg/L
Sample type: Calibration



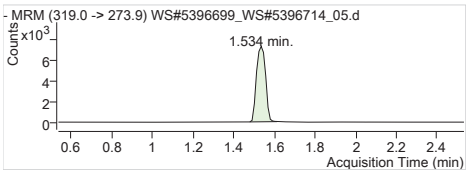



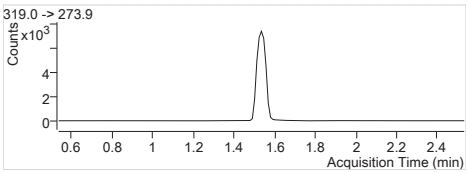

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Calibration



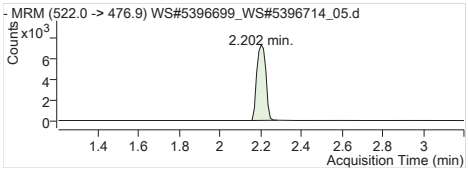



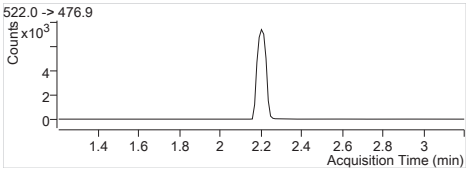

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Calibration



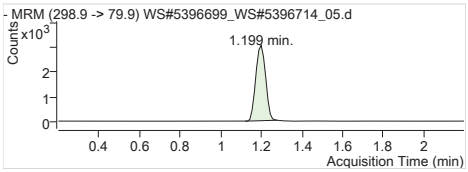



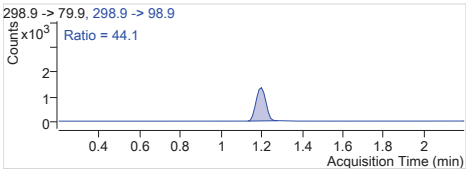

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Calibration



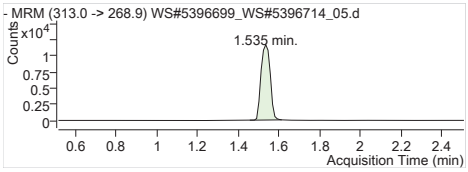



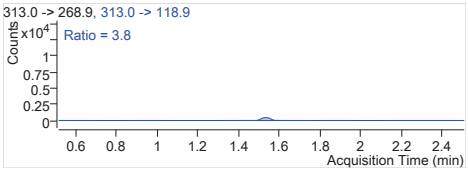

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Calibration



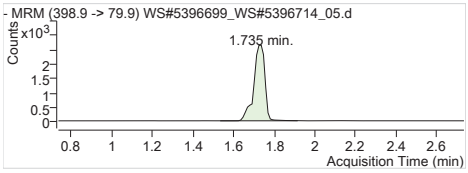



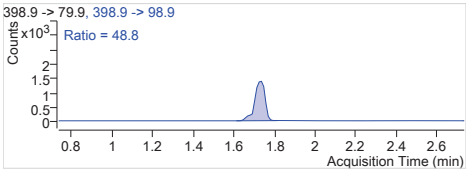

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.199 (1.199)
Calc. conc. 11.38 µg/L
Area ratio: 7.78281
Sample type: Calibration



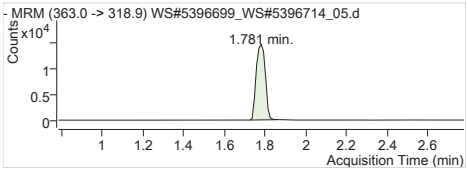



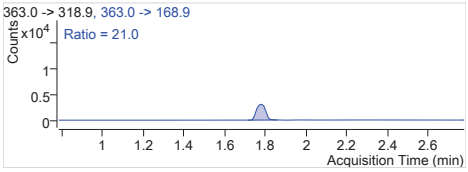

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 12.03 µg/L
Area ratio: 6.44130
Sample type: Calibration



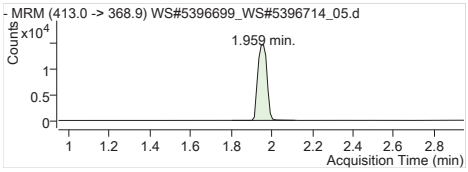



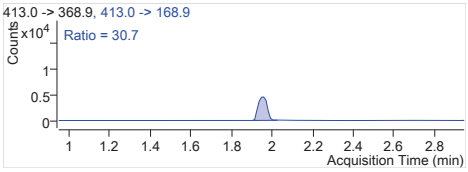

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.735 (1.735)
Calc. conc. 11.52 µg/L
Area ratio: 7.67536
Sample type: Calibration



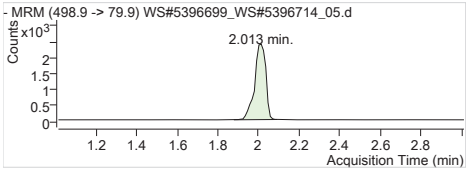



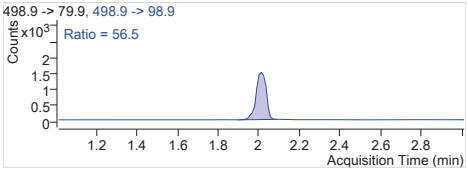

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 11.65 µg/L
Area ratio: 6.69944
Sample type: Calibration



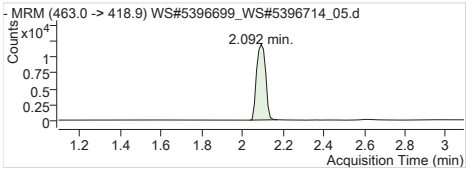



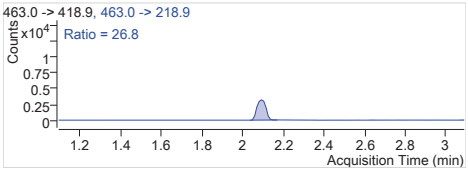

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.959 (1.948)
Calc. conc. 12.08 µg/L
Area ratio: 7.41984
Sample type: Calibration



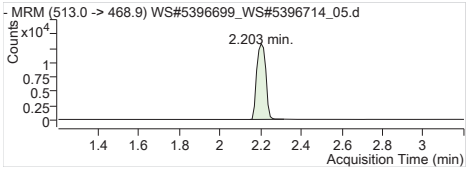



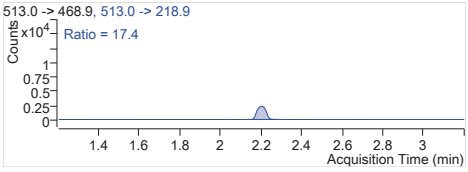

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 11.83 µg/L
Area ratio: 6.36599
Sample type: Calibration



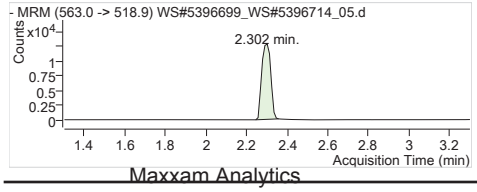



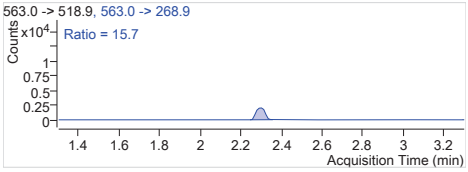

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 11.30 µg/L
Area ratio: 6.23068
Sample type: Calibration



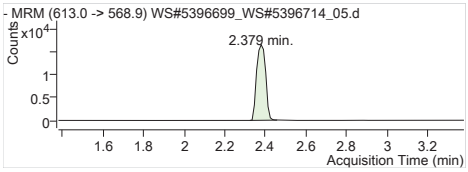



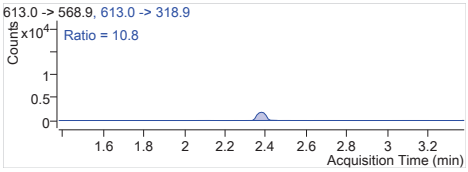

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 12.83 µg/L
Area ratio: 9.34424
Sample type: Calibration



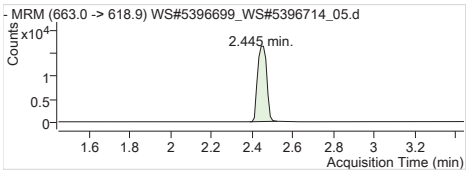



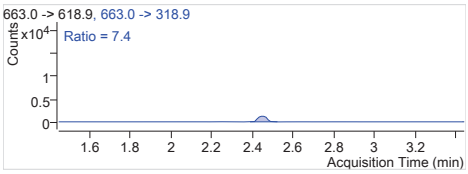

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 12.37 µg/L
Area ratio: 7.31751
Sample type: Calibration



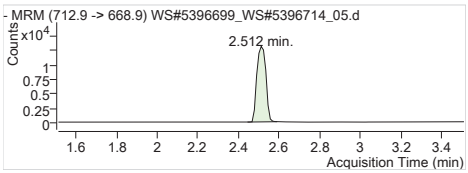



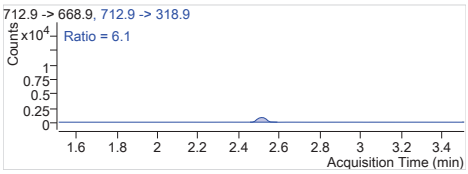

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.379 (2.379) |
| Calc. conc. | 12.45 µg/L |
| Area ratio: | 7.10155 |
| Sample type: | Calibration |



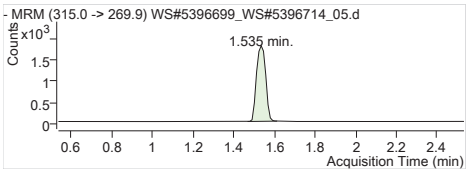



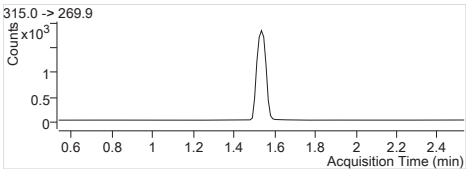

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.445 (2.445) |
| Calc. conc. | 12.65 µg/L |
| Area ratio: | 8.41869 |
| Sample type: | Calibration |



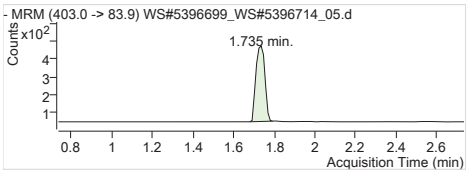



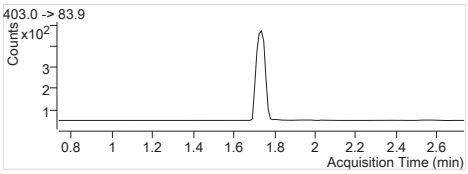

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.512 (2.512) |
| Calc. conc. | 12.53 µg/L |
| Area ratio: | 6.62819 |
| Sample type: | Calibration |



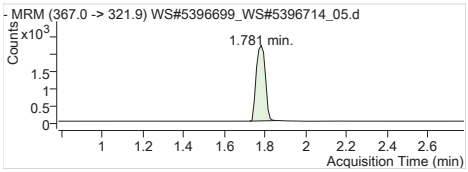



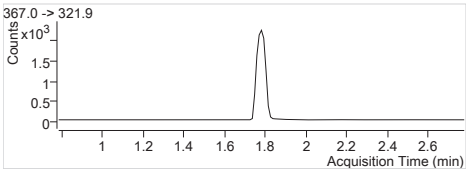

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 104.76 µg/L |
| Area ratio: | 0.24673 |
| Sample type: | Calibration |



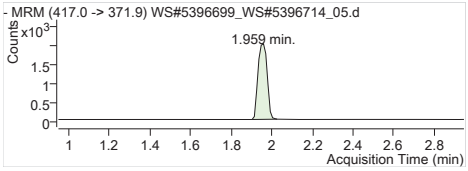



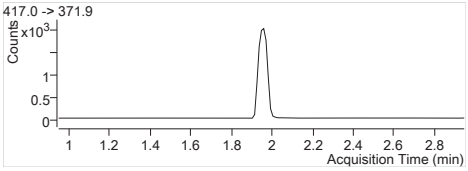

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 103.68 µg/L |
| Area ratio: | 0.05692 |
| Sample type: | Calibration |



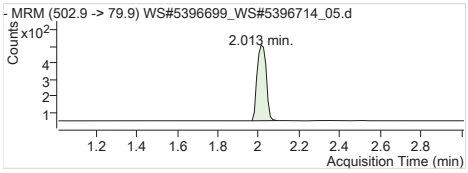



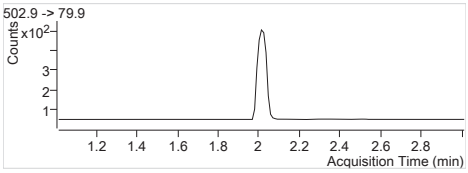

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 106.39 µg/L |
| Area ratio: | 0.29898 |
| Sample type: | Calibration |



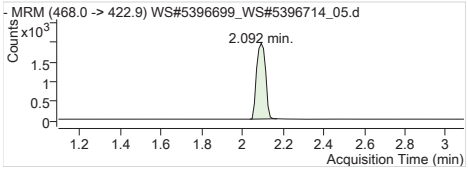



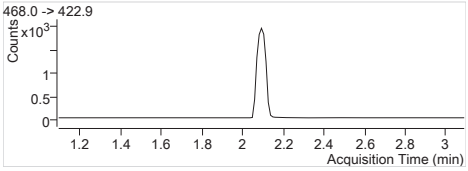

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.959 (1.948) |
| Calc. conc. | 102.04 µg/L |
| Area ratio: | 0.27220 |
| Sample type: | Calibration |



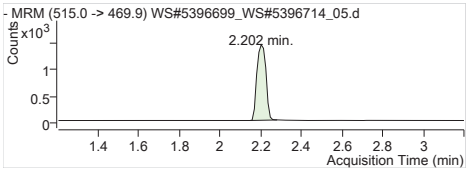



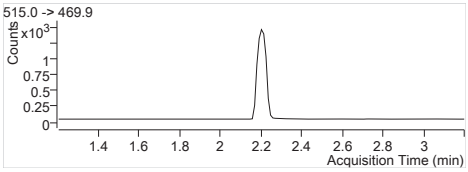

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 101.25 µg/L |
| Area ratio: | 0.06243 |
| Sample type: | Calibration |



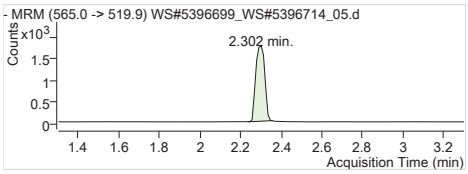



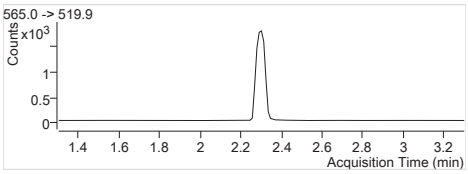

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 103.78 µg/L |
| Area ratio: | 0.25831 |
| Sample type: | Calibration |



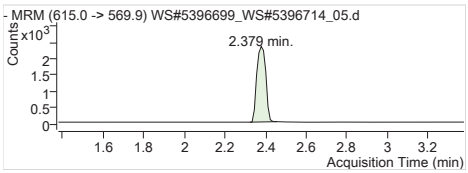



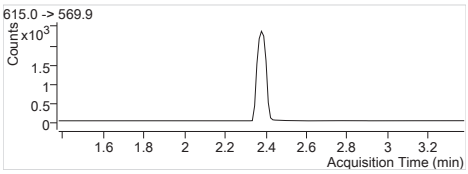

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 105.90 µg/L
Area ratio: 0.19229
Sample type: Calibration



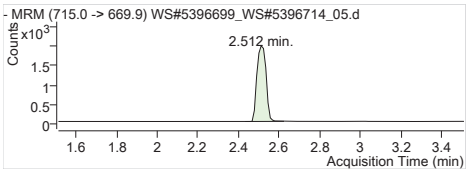



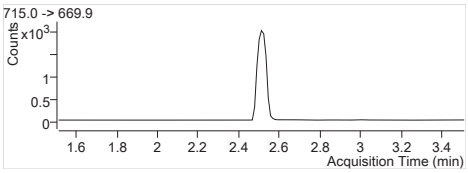

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 102.10 µg/L
Area ratio: 0.24005
Sample type: Calibration



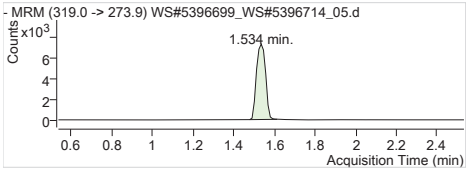



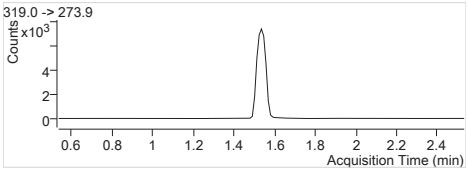

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 103.43 µg/L
Area ratio: 0.31653
Sample type: Calibration



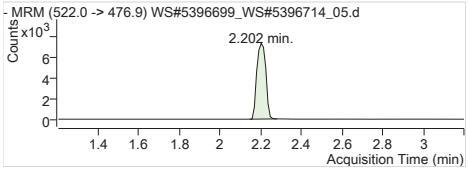



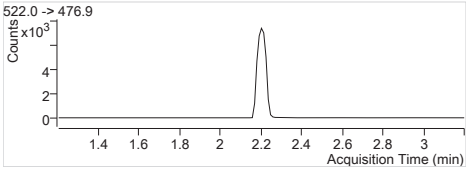

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 101.08 µg/L
Area ratio: 0.27343
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 93.35 µg/L
Area ratio: 0
Sample type: Calibration



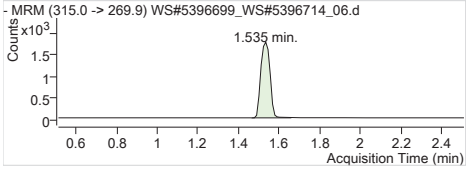

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 92.64 µg/L
Area ratio: 0
Sample type: Calibration

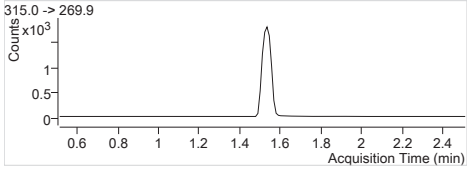
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 5** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_06.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A6 |
| **Acq. Date** | 2018/02/15 4:35:35 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

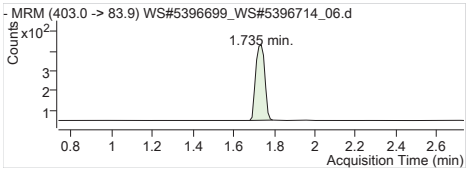
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5494 | 1.53 | 1 µg/L | | |
| MPFHxS | 1199 | 1.74 | 1 µg/L | | |
| MPFHpA | 6527 | 1.78 | 1 µg/L | | |
| MPFOA | 6247 | 1.96 | 1 µg/L | | |
| MPFOS | 1361 | 2.01 | 1 µg/L | | |
| MPFNA | 5549 | 2.09 | 1 µg/L | | |
| MPFDA | 4136 | 2.20 | 1 µg/L | | |
| MPFUnA | 5543 | 2.30 | 1 µg/L | | |
| MPFDoA | 7252 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6584 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 23972 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 22966 | 2.20 | 1 µg/L | | |

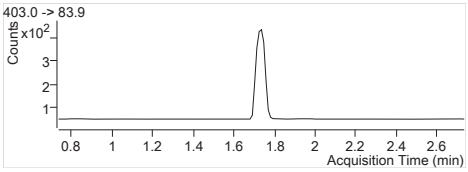
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 23344 | 1.20 | 25.00 | 27.86 µg/L | 111.46 |
| PFHxA 1 | 82811 | 1.53 | 25.00 | 27.62 µg/L | 110.48 |
| PFHxS 1 | 22723 | 1.74 | 25.00 | 27.90 µg/L | 111.59 |
| PFHpA 1 | 103083 | 1.78 | 25.00 | 27.10 µg/L | 108.42 |
| PFOA 1 | 104689 | 1.96 | 25.00 | 26.94 µg/L | 107.77 |
| PFOS 1 | 21090 | 2.01 | 25.00 | 28.34 µg/L | 113.34 |
| PFNA 1 | 86783 | 2.09 | 25.00 | 27.71 µg/L | 110.84 |
| PFDA 1 | 84831 | 2.20 | 25.00 | 27.97 µg/L | 111.90 |
| PFUnA 1 | 87768 | 2.30 | 25.00 | 26.45 µg/L | 105.81 |
| PFDoA 1 | 114607 | 2.38 | 25.00 | 27.40 µg/L | 109.62 |
| PFTrDA 1 | 117011 | 2.46 | 25.00 | 26.43 µg/L | 105.70 |
| PFTeDA 1 | 94425 | 2.51 | 25.00 | 26.83 µg/L | 107.34 |
| 13C2-PFHxA | 5440 | 1.53 | 100.00 | 96.35 µg/L | 96.35 |
| 18O2-PFHxS | 1199 | 1.74 | 100.00 | 91.10 µg/L | 91.10 |
| 13C4-PFHpA | 6527 | 1.78 | 100.00 | 96.89 µg/L | 96.89 |
| 13C4-PFOA | 6247 | 1.96 | 100.00 | 97.69 µg/L | 97.69 |
| 13C4-PFOS | 1361 | 2.01 | 100.00 | 92.08 µg/L | 92.08 |
| 13C5-PFNA | 5549 | 2.09 | 100.00 | 93.00 µg/L | 93.00 |
| 13C2-PFDA | 4106 | 2.20 | 100.00 | 98.46 µg/L | 98.46 |
| 13C2-PFUnA | 5543 | 2.30 | 100.00 | 102.66 µg/L | 102.66 |
| 13C2-PFDoA | 7252 | 2.38 | 100.00 | 103.18 µg/L | 103.18 |
| 13C2-PFTeDA | 6630 | 2.51 | 100.00 | 106.72 µg/L | 106.72 |
| 13C6-PFHxA | 23972 | 1.53 | 100.00 | 97.76 µg/L | 97.76 |
| 13C9-PFDA | 22966 | 2.20 | 100.00 | 94.33 µg/L | 94.33 |



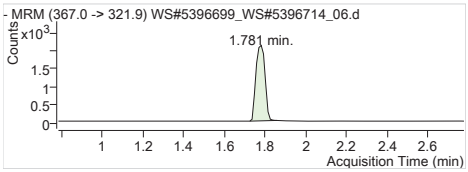



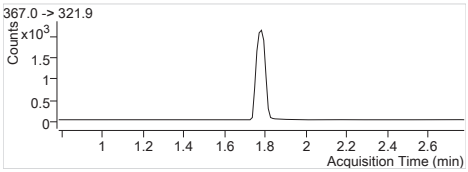

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Calibration |



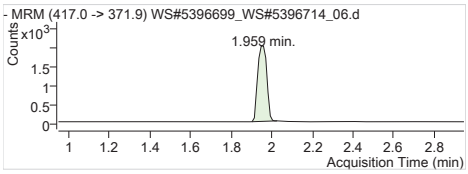



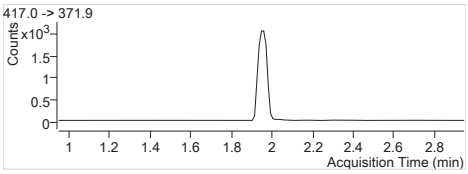

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: Calibration



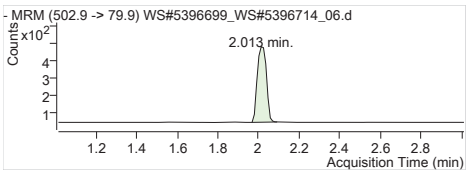



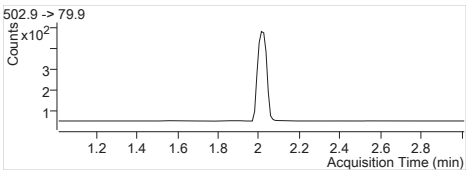

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Calibration



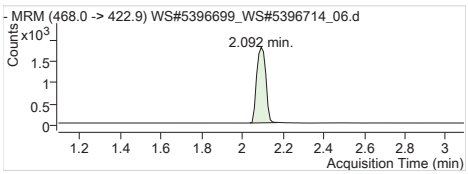



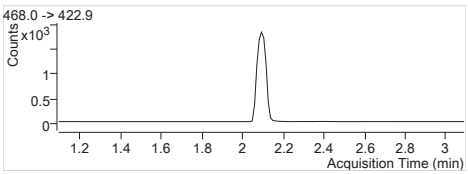

**MPFOA** Internal Standard
RT (Exp. RT): 1.959 (1.948)
Concentration: 1 µg/L
Sample type: Calibration



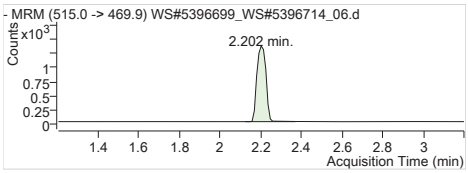



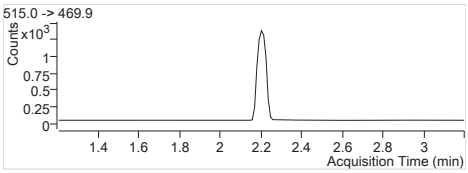

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Calibration



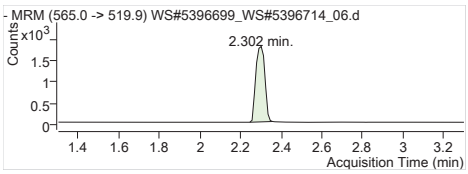



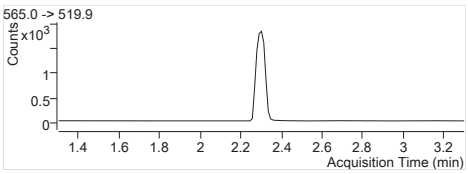

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Calibration



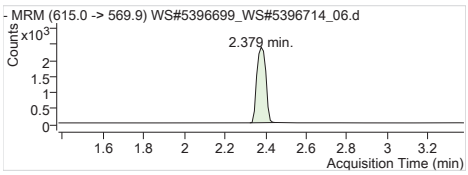



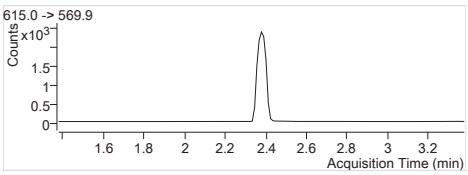

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Calibration



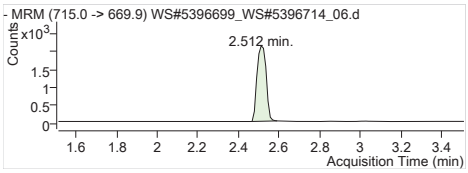



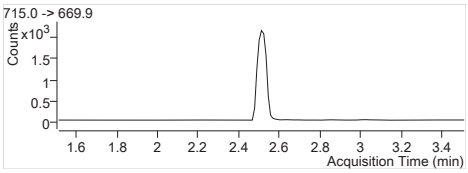

**MPFUnA** Internal Standard
RT (Exp. RT): 2.302 (2.302)
Concentration: 1 µg/L
Sample type: Calibration



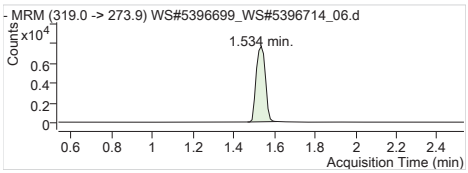



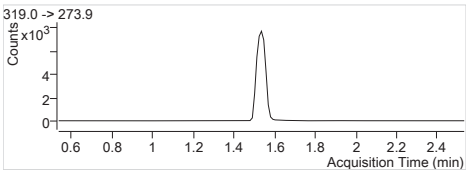

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Calibration



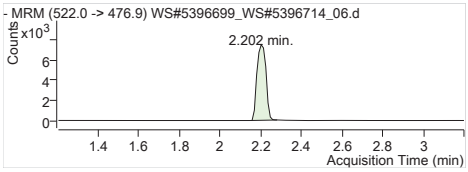



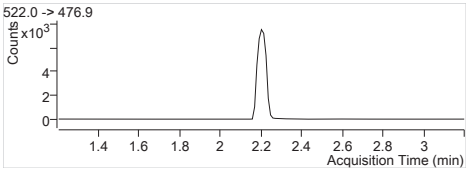

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Calibration



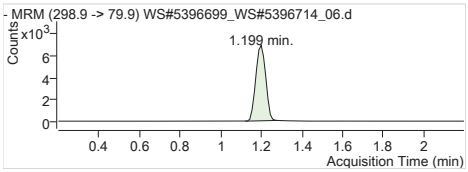



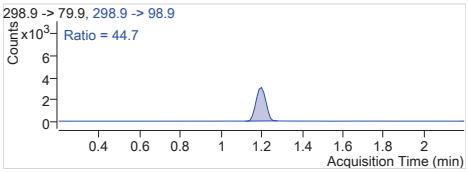

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Calibration



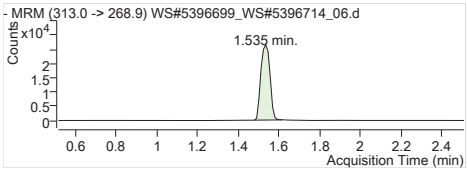



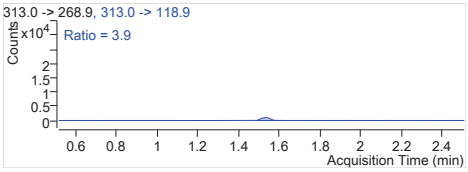

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Calibration



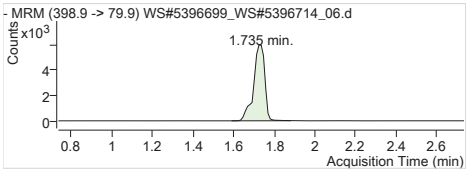



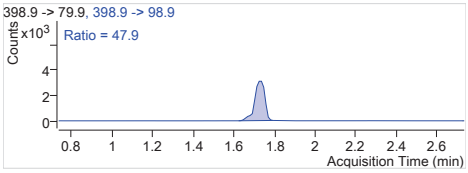

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.199 (1.199)
Calc. conc. 27.86 µg/L
Area ratio: 19.46956
Sample type: Calibration



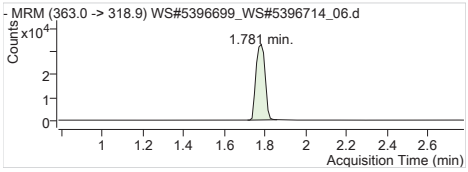



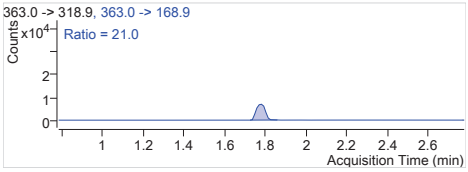

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 27.62 µg/L
Area ratio: 15.07299
Sample type: Calibration



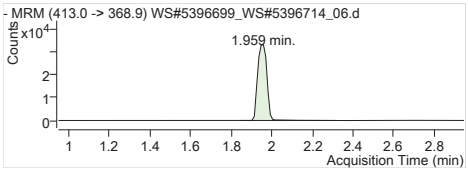



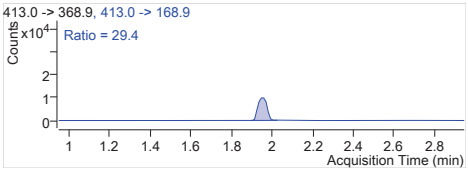

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.735 (1.735)
Calc. conc. 27.90 µg/L
Area ratio: 18.95163
Sample type: Calibration



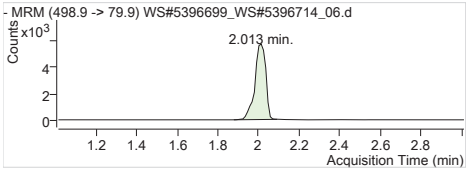



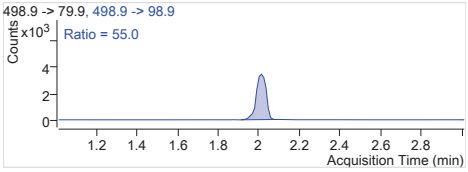

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 27.10 µg/L
Area ratio: 15.79332
Sample type: Calibration



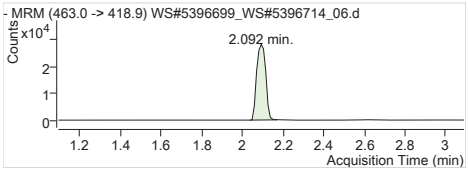



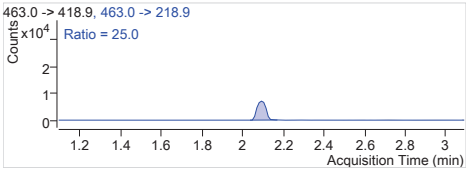

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.959 (1.948)
Calc. conc. 26.94 µg/L
Area ratio: 16.75828
Sample type: Calibration



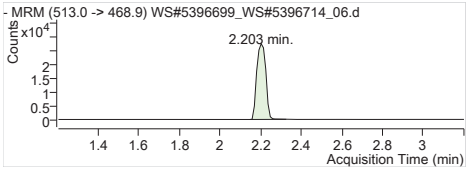



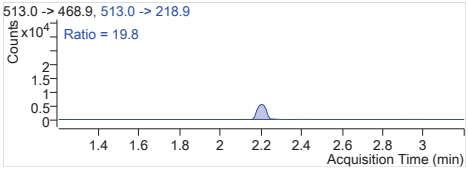

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 28.34 µg/L
Area ratio: 15.49596
Sample type: Calibration



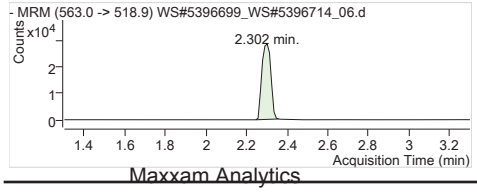



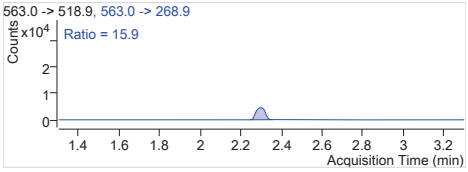

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 27.71 µg/L
Area ratio: 15.63939
Sample type: Calibration



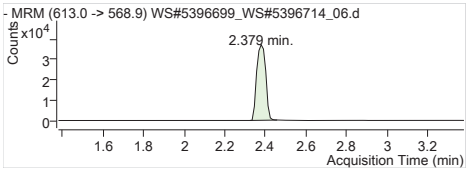



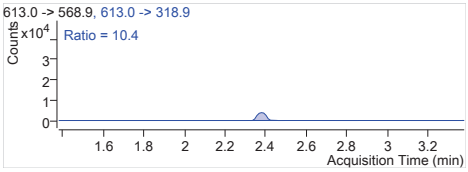

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 27.97 µg/L
Area ratio: 20.51040
Sample type: Calibration



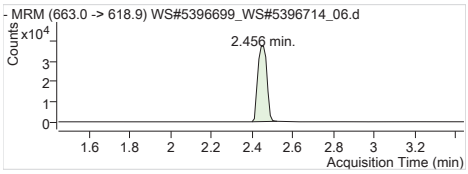



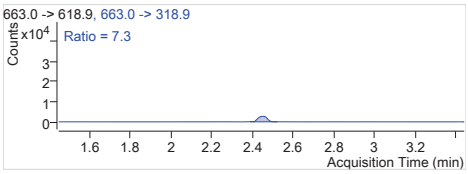

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 26.45 µg/L
Area ratio: 15.83402
Sample type: Calibration



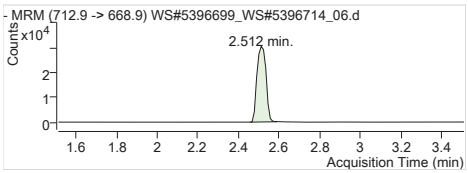



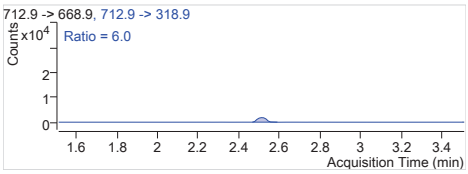

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.379 (2.379) |
| Calc. conc. | 27.40 µg/L |
| Area ratio: | 15.80350 |
| Sample type: | Calibration |



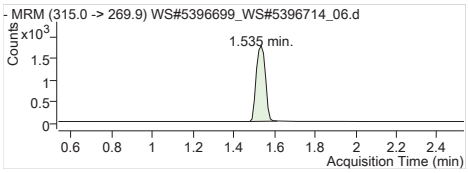



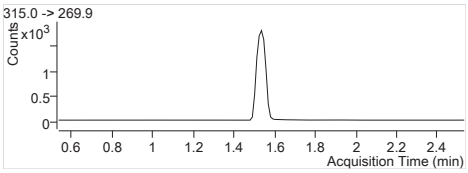

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.456 (2.445) |
| Calc. conc. | 26.43 µg/L |
| Area ratio: | 17.77202 |
| Sample type: | Calibration |



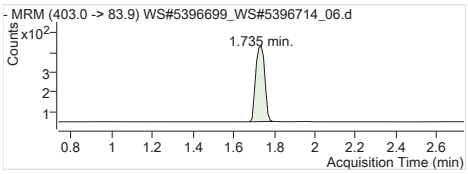



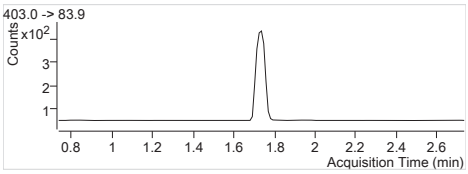

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.512 (2.512) |
| Calc. conc. | 26.83 µg/L |
| Area ratio: | 14.34159 |
| Sample type: | Calibration |



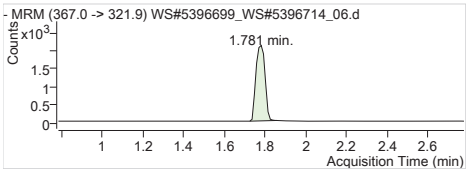



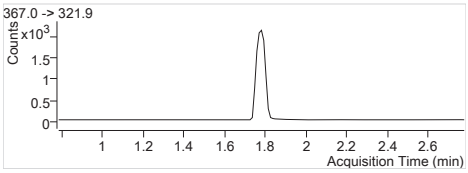

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 96.35 µg/L |
| Area ratio: | 0.22693 |
| Sample type: | Calibration |



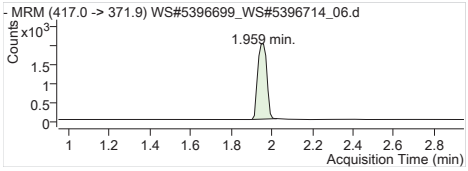



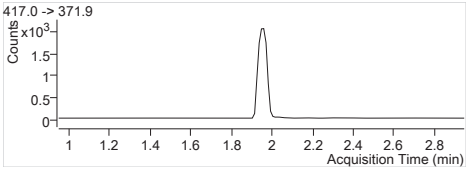

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 91.10 µg/L |
| Area ratio: | 0.05002 |
| Sample type: | Calibration |



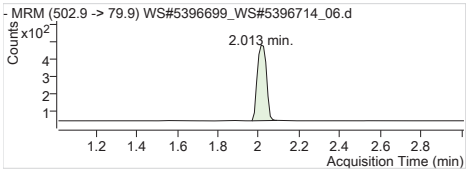



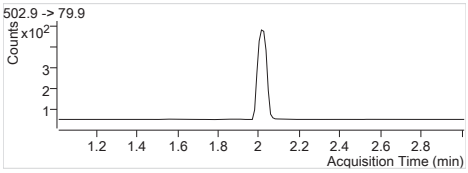

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 96.89 µg/L |
| Area ratio: | 0.27228 |
| Sample type: | Calibration |



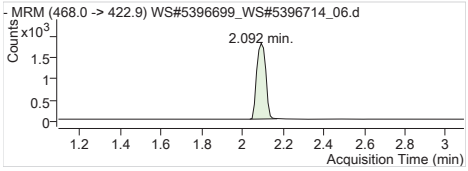



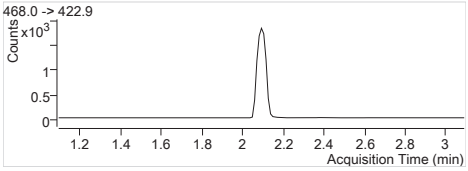

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.959 (1.948) |
| Calc. conc. | 97.69 µg/L |
| Area ratio: | 0.26060 |
| Sample type: | Calibration |



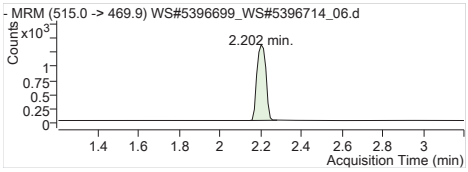



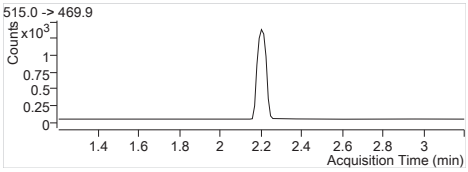

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 92.08 µg/L |
| Area ratio: | 0.05677 |
| Sample type: | Calibration |



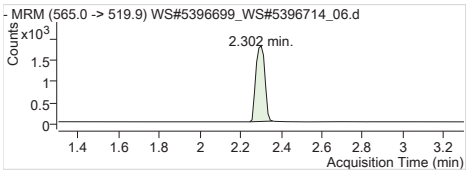



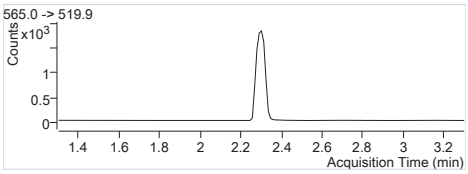

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 93.00 µg/L |
| Area ratio: | 0.23148 |
| Sample type: | Calibration |



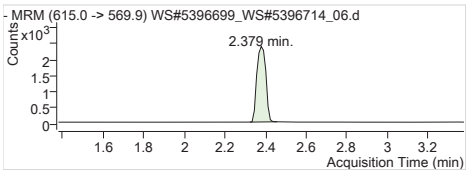



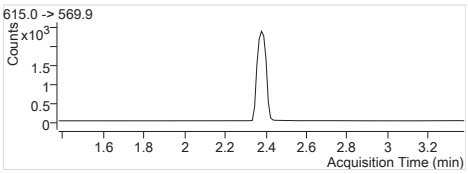

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 98.46 µg/L
Area ratio: 0.17879
Sample type: Calibration



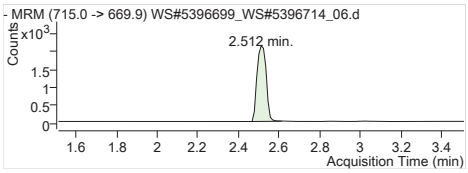



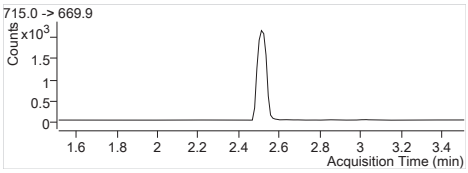

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 102.66 µg/L
Area ratio: 0.24136
Sample type: Calibration



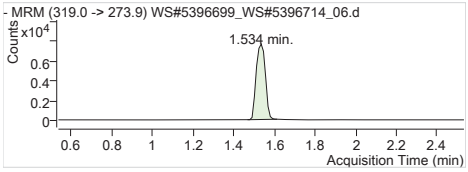



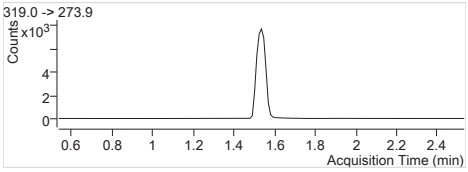

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 103.18 µg/L
Area ratio: 0.31577
Sample type: Calibration



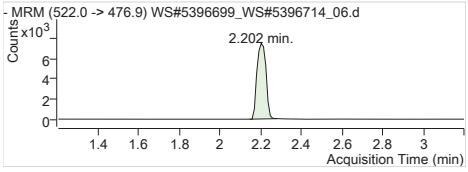



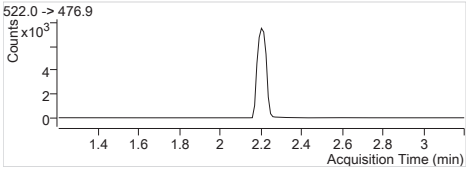

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 106.72 µg/L
Area ratio: 0.28869
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 97.76 µg/L
Area ratio: 0
Sample type: Calibration



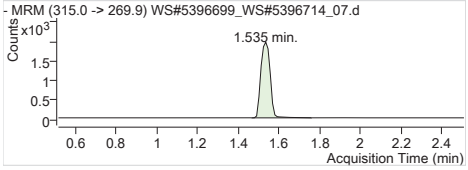

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 94.33 µg/L
Area ratio: 0
Sample type: Calibration

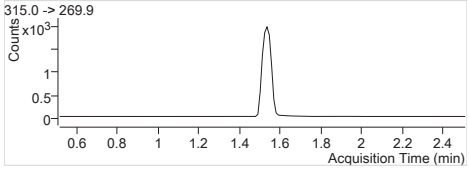
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **STD 6** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_07.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A7 |
| **Acq. Date** | 2018/02/15 4:40:31 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

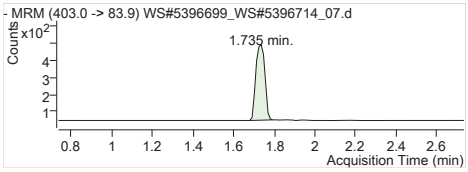
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6169 | 1.53 | 1 µg/L | | |
| MPFHxS | 1366 | 1.74 | 1 µg/L | | |
| MPFHpA | 7207 | 1.78 | 1 µg/L | | |
| MPFOA | 7008 | 1.95 | 1 µg/L | | |
| MPFOS | 1591 | 2.01 | 1 µg/L | | |
| MPFNA | 6289 | 2.09 | 1 µg/L | | |
| MPFDA | 4977 | 2.20 | 1 µg/L | | |
| MPFUnA | 5856 | 2.30 | 1 µg/L | | |
| MPFDoA | 8151 | 2.38 | 1 µg/L | | |
| MPFTeDA | 7156 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 23959 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 24246 | 2.20 | 1 µg/L | | |

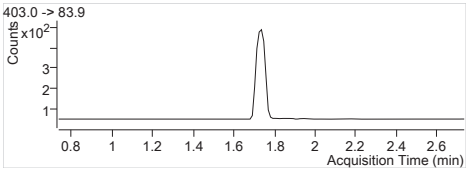
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 39072 | 1.20 | 41.70 | 40.75 µg/L | 97.71 |
| PFHxA 1 | 136428 | 1.53 | 41.70 | 40.34 µg/L | 96.73 |
| PFHxS 1 | 37995 | 1.74 | 41.70 | 40.77 µg/L | 97.77 |
| PFHpA 1 | 172246 | 1.78 | 41.70 | 40.88 µg/L | 98.04 |
| PFOA 1 | 177302 | 1.95 | 41.70 | 40.54 µg/L | 97.22 |
| PFOS 1 | 34737 | 2.01 | 41.70 | 39.79 µg/L | 95.42 |
| PFNA 1 | 145867 | 2.09 | 41.70 | 40.88 µg/L | 98.04 |
| PFDA 1 | 142114 | 2.20 | 41.70 | 38.88 µg/L | 93.25 |
| PFUnA 1 | 144868 | 2.30 | 41.70 | 41.18 µg/L | 98.75 |
| PFDoA 1 | 187876 | 2.38 | 41.70 | 39.86 µg/L | 95.58 |
| PFTrDA 1 | 195943 | 2.44 | 41.70 | 40.58 µg/L | 97.31 |
| PFTeDA 1 | 154772 | 2.51 | 41.70 | 40.35 µg/L | 96.76 |
| 13C2-PFHxA | 6033 | 1.53 | 100.00 | 106.91 µg/L | 106.91 |
| 18O2-PFHxS | 1366 | 1.74 | 100.00 | 103.84 µg/L | 103.84 |
| 13C4-PFHpA | 7207 | 1.78 | 100.00 | 107.04 µg/L | 107.04 |
| 13C4-PFOA | 7008 | 1.95 | 100.00 | 109.65 µg/L | 109.65 |
| 13C4-PFOS | 1591 | 2.01 | 100.00 | 107.70 µg/L | 107.70 |
| 13C5-PFNA | 6289 | 2.09 | 100.00 | 105.46 µg/L | 105.46 |
| 13C2-PFDA | 4964 | 2.20 | 100.00 | 112.75 µg/L | 112.75 |
| 13C2-PFUnA | 5856 | 2.30 | 100.00 | 102.73 µg/L | 102.73 |
| 13C2-PFDoA | 8151 | 2.38 | 100.00 | 109.85 µg/L | 109.85 |
| 13C2-PFTeDA | 7237 | 2.51 | 100.00 | 110.34 µg/L | 110.34 |
| 13C6-PFHxA | 23959 | 1.53 | 100.00 | 97.71 µg/L | 97.71 |
| 13C9-PFDA | 24246 | 2.20 | 100.00 | 99.59 µg/L | 99.59 |



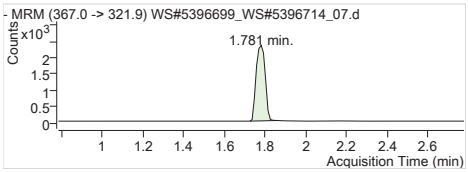



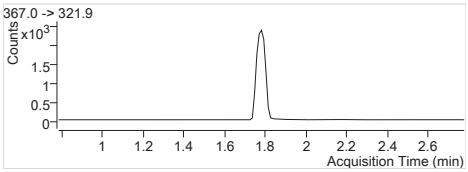

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | Calibration |



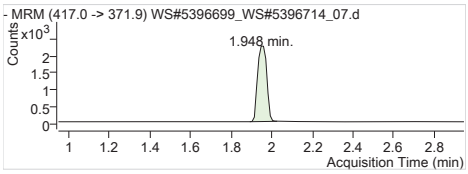



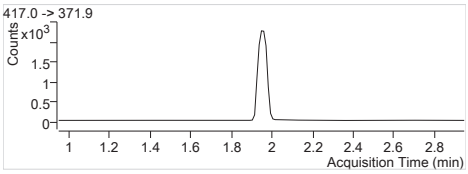

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: Calibration



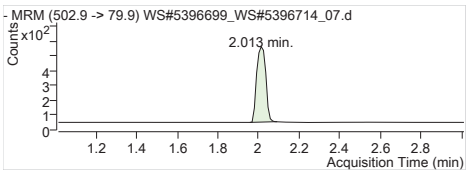



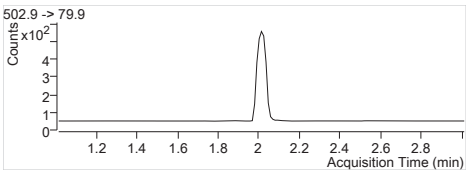

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: Calibration



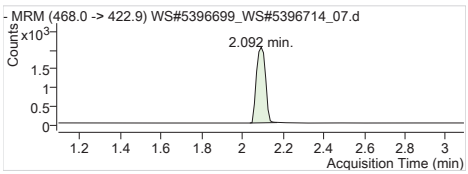



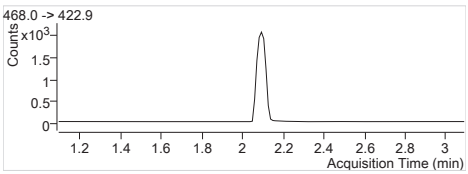

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: Calibration



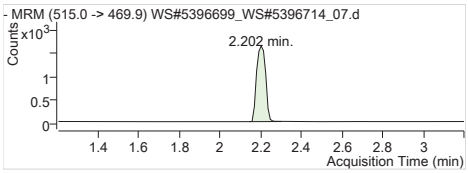



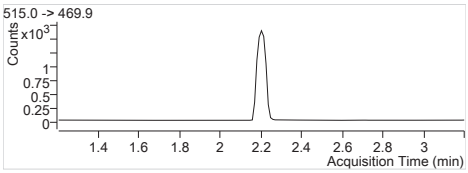

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: Calibration



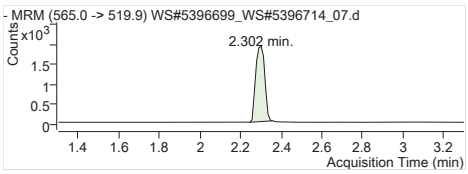



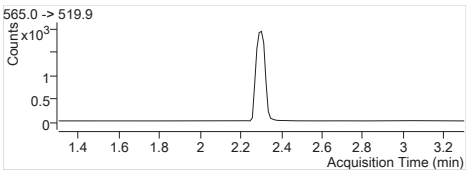

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: Calibration



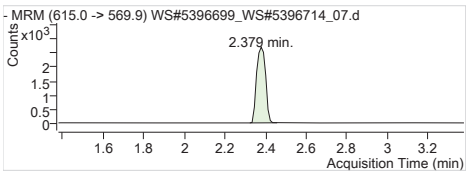



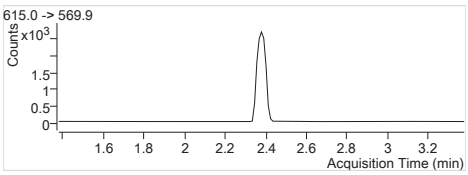

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Calibration



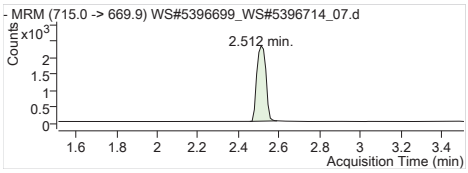



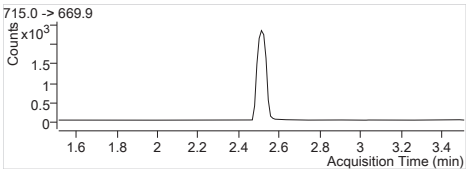

**MPFUnA** Internal Standard
RT (Exp. RT): 2.302 (2.302)
Concentration: 1 µg/L
Sample type: Calibration



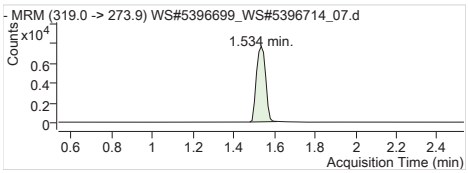



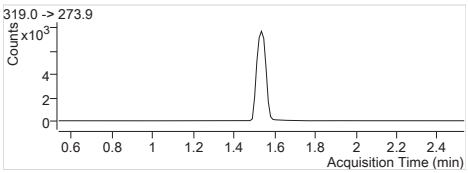

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: Calibration



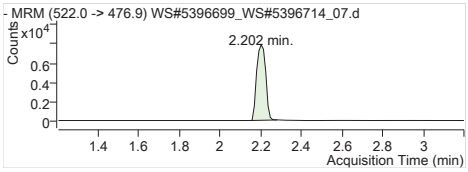



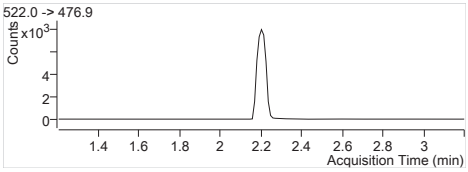

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: Calibration



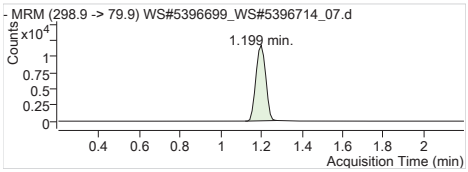



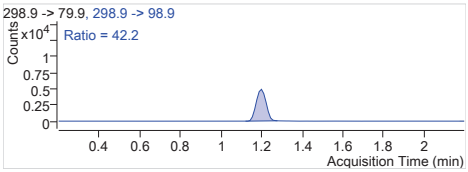

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: Calibration



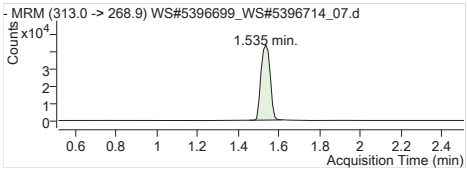



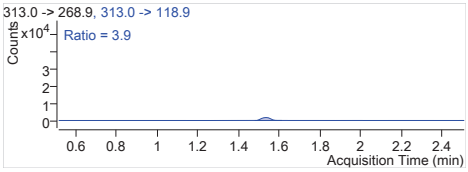

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: Calibration



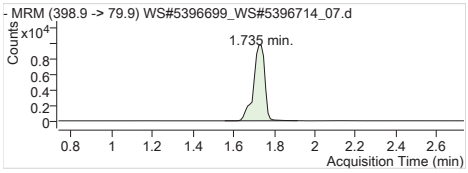



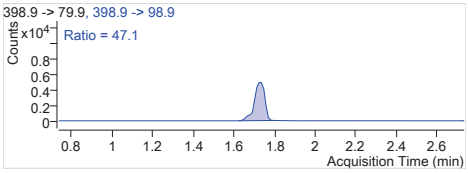

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.199 (1.199)
Calc. conc. 40.75 µg/L
Area ratio: 28.60322
Sample type: Calibration



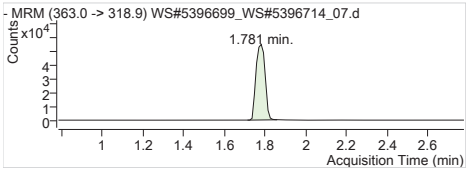



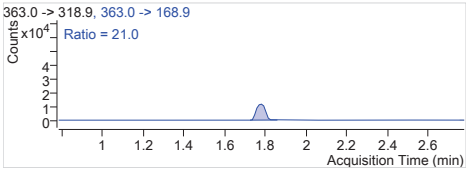

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 40.34 µg/L
Area ratio: 22.11509
Sample type: Calibration



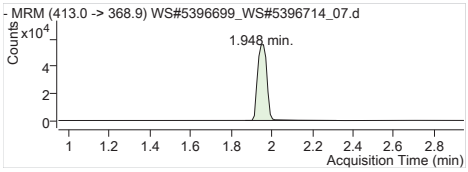



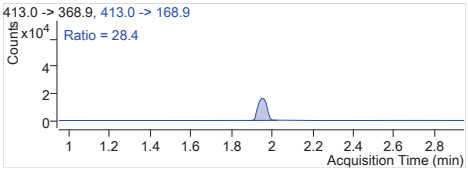

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.735 (1.735)
Calc. conc. 40.77 µg/L
Area ratio: 27.81479
Sample type: Calibration



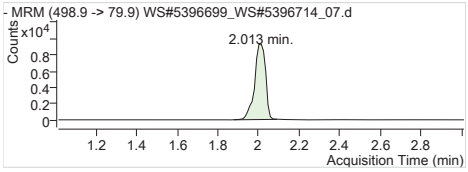



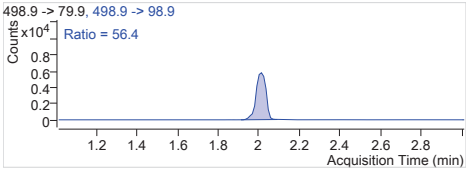

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 40.88 µg/L
Area ratio: 23.89982
Sample type: Calibration



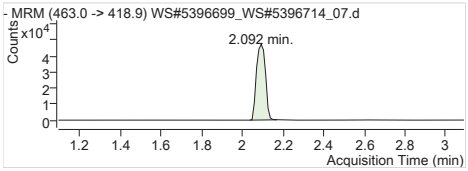



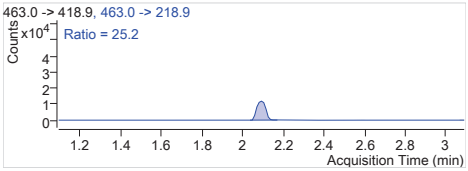

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.948 (1.948)
Calc. conc. 40.54 µg/L
Area ratio: 25.29994
Sample type: Calibration



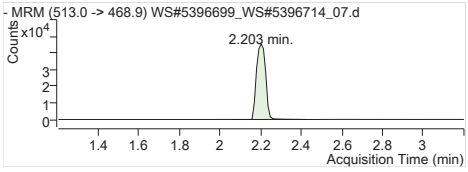



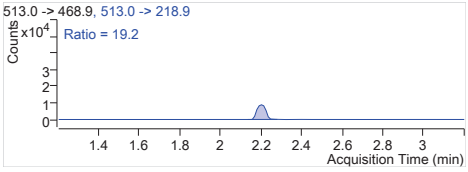

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 39.79 µg/L
Area ratio: 21.83344
Sample type: Calibration



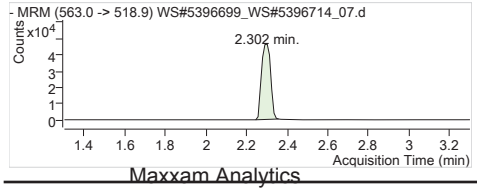



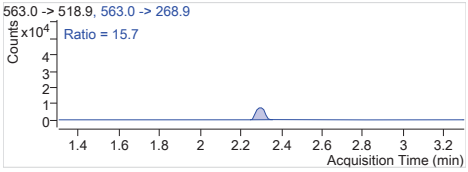

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 40.88 µg/L
Area ratio: 23.19399
Sample type: Calibration



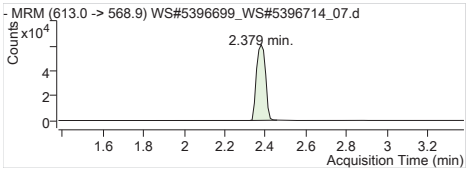



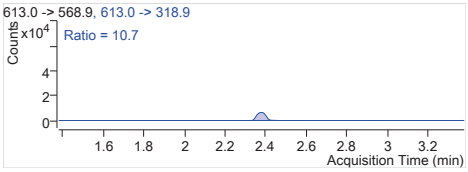

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 38.88 µg/L
Area ratio: 28.55415
Sample type: Calibration



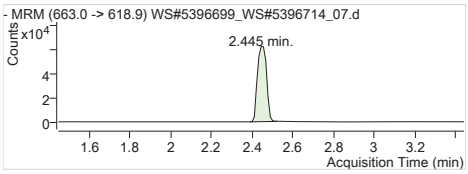



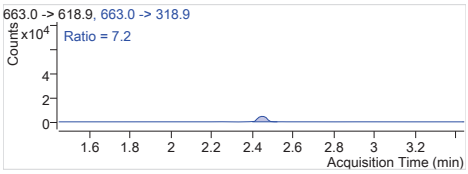

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 41.18 µg/L
Area ratio: 24.73839
Sample type: Calibration



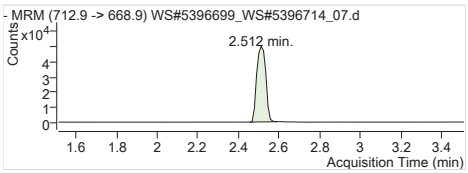



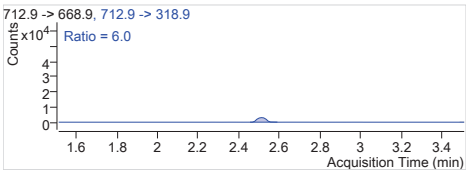

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.379 (2.379) |
| Calc. conc. | 39.86 µg/L |
| Area ratio: | 23.04944 |
| Sample type: | Calibration |



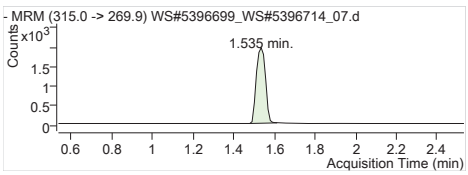



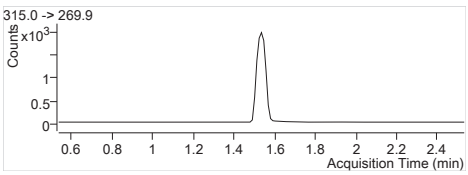

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.445 (2.445) |
| Calc. conc. | 40.58 µg/L |
| Area ratio: | 27.38164 |
| Sample type: | Calibration |



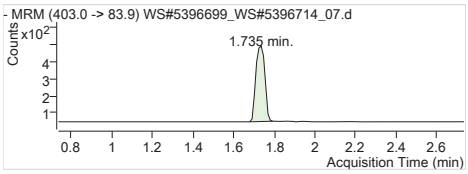



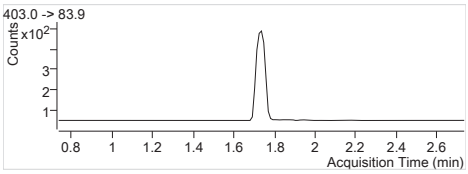

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.512 (2.512) |
| Calc. conc. | 40.35 µg/L |
| Area ratio: | 21.62828 |
| Sample type: | Calibration |



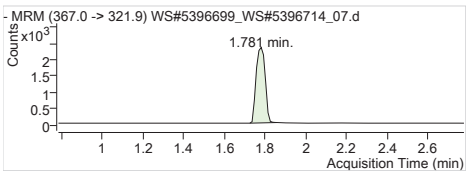



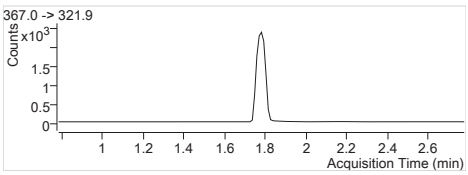

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 106.91 µg/L |
| Area ratio: | 0.25181 |
| Sample type: | Calibration |



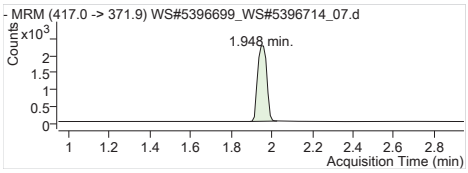



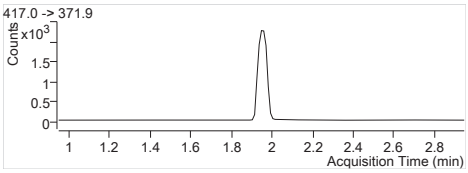

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 103.84 µg/L |
| Area ratio: | 0.05701 |
| Sample type: | Calibration |



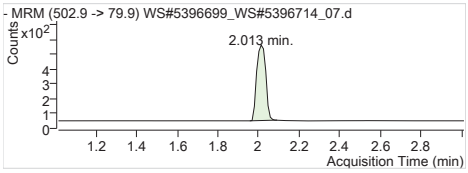



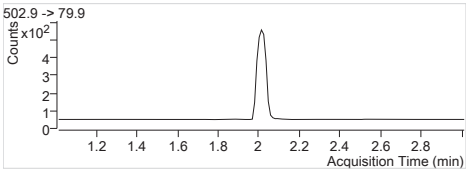

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 107.04 µg/L |
| Area ratio: | 0.30081 |
| Sample type: | Calibration |



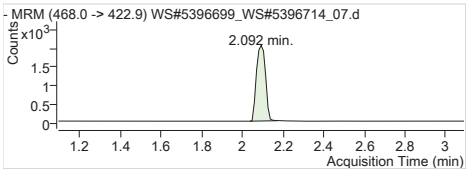



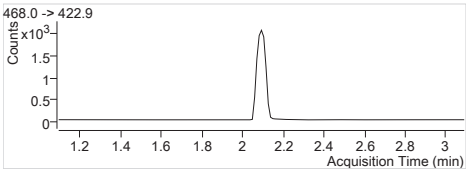

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.948 (1.948) |
| Calc. conc. | 109.65 µg/L |
| Area ratio: | 0.29250 |
| Sample type: | Calibration |



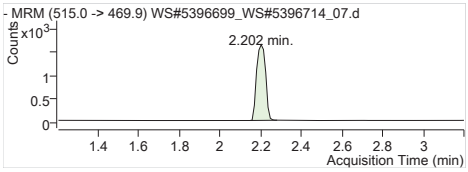



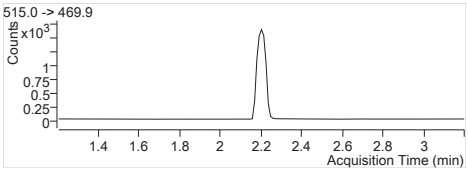

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 107.70 µg/L |
| Area ratio: | 0.06641 |
| Sample type: | Calibration |



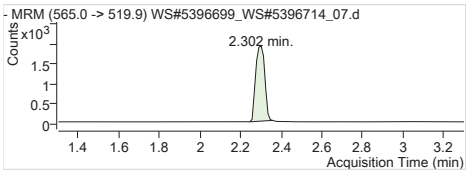



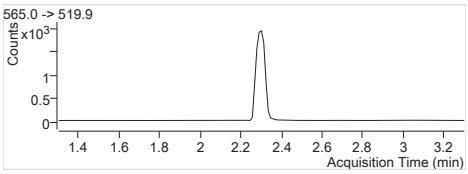

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 105.46 µg/L |
| Area ratio: | 0.26249 |
| Sample type: | Calibration |



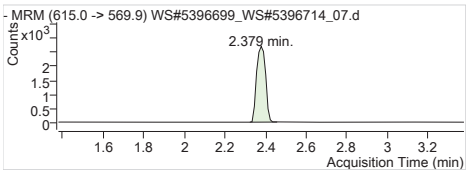



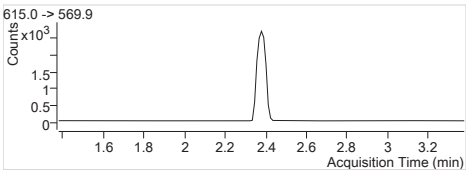

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 112.75 µg/L
Area ratio: 0.20473
Sample type: Calibration



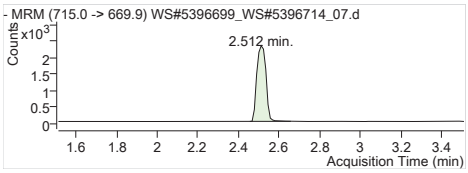



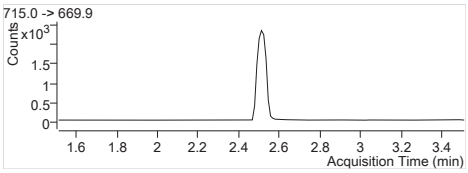

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 102.73 µg/L
Area ratio: 0.24152
Sample type: Calibration



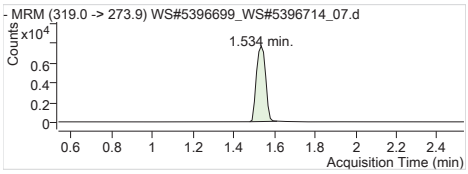



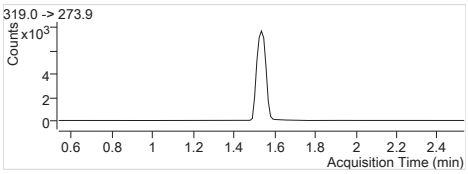

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 109.85 µg/L
Area ratio: 0.33618
Sample type: Calibration



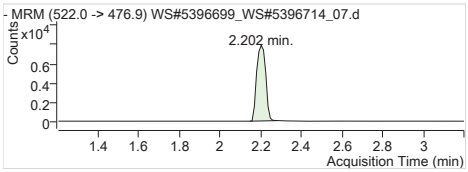



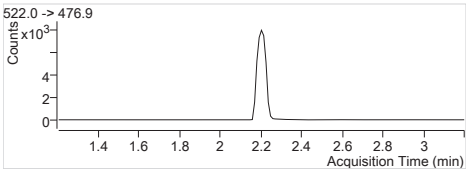

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 110.34 µg/L
Area ratio: 0.29848
Sample type: Calibration




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 97.71 µg/L
Area ratio: 0
Sample type: Calibration



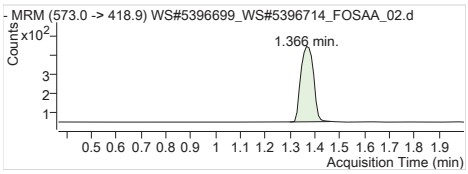



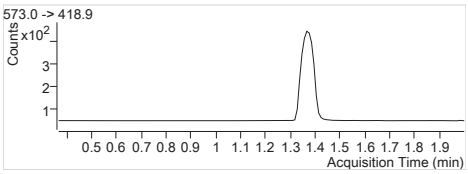

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 99.59 µg/L
Area ratio: 0
Sample type: Calibration

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **STD 1** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_02.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A2 |
| **Acq. Date** | 2018/02/15 10:39:10 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

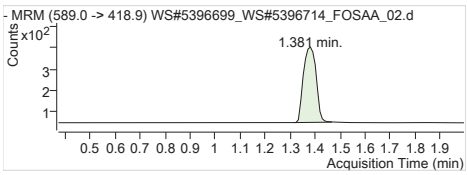
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1410 | 1.37 | 1 µg/L | | |
| D5-EtFOSAA IS | 1243 | 1.38 | 1 µg/L | | |
| 13C9-PFDA IS | 27678 | 1.14 | 1 µg/L | | |

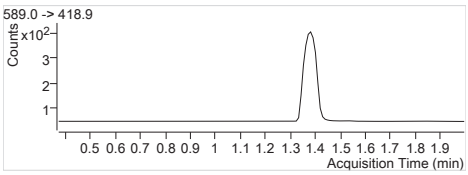
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 476 | 1.37 | 0.83 | 0.92 µg/L | 111.25 |
| EtFOSAA 1 | 472 | 1.37 | 0.83 | 0.94 µg/L | 113.39 |
| D3-MeFOSAA | 1420 | 1.37 | 100.00 | 93.19 µg/L | 93.19 |
| D5-EtFOSAA | 1250 | 1.38 | 100.00 | 94.21 µg/L | 94.21 |
| 13C9-PFDA | 27108 | 1.14 | 100.00 | 102.08 µg/L | 102.08 |



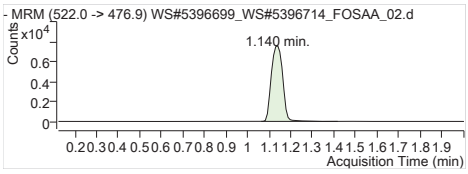



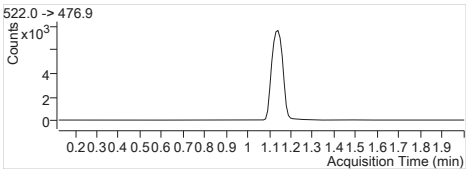

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.366 (1.366)
Concentration: 1 µg/L
Sample type: Calibration



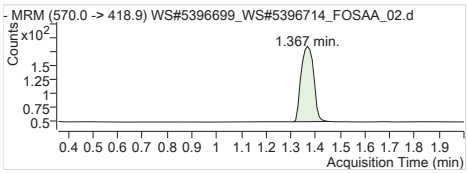



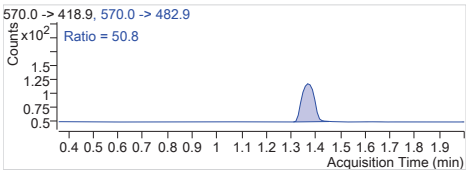

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.381 (1.371)
Concentration: 1 µg/L
Sample type: Calibration



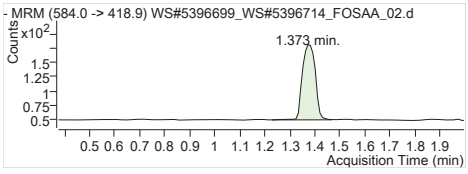



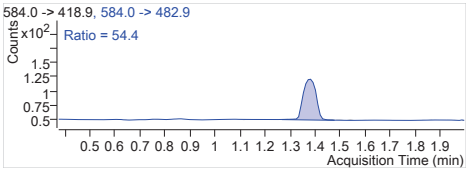

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.140 (1.121)
Concentration: 1 µg/L
Sample type: Calibration



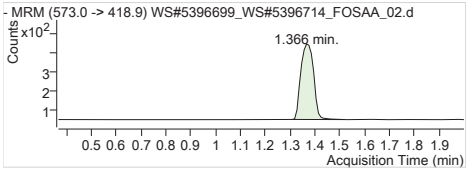



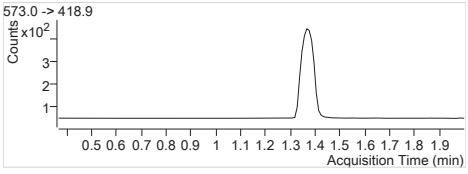

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.367 (1.358)
Calc. conc. 0.92 µg/L
Area ratio: 0.33759
Sample type: Calibration



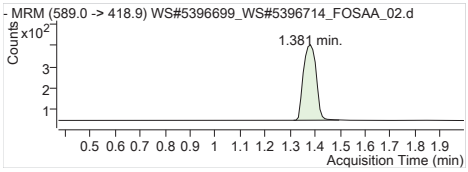



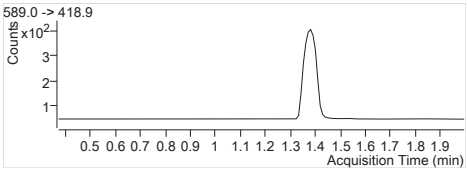

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.373 (1.373)
Calc. conc. 0.94 µg/L
Area ratio: 0.37973
Sample type: Calibration



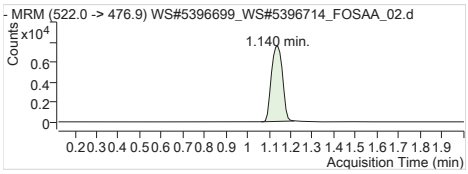



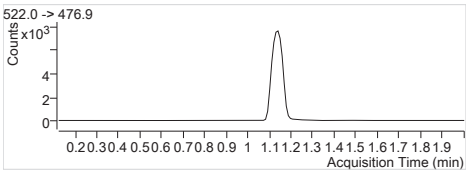

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.366 (1.366)
Calc. conc. 93.19 µg/L
Area ratio: 0.05130
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.381 (1.371) |
| Calc. conc. | 94.21 µg/L |
| Area ratio: | 0.04516 |
| Sample type: | Calibration |



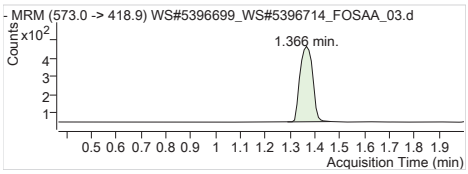



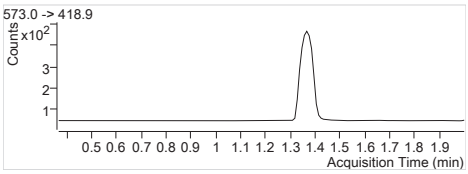

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.140 (1.121) |
| Calc. conc. | 102.08 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **STD 2** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_03.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A3 |
| **Acq. Date** | 2018/02/15 10:41:35 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

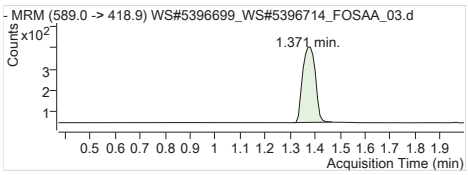
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1468 | 1.37 | 1 µg/L | | |
| D5-EtFOSAA IS | 1257 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 27671 | 1.13 | 1 µg/L | | |

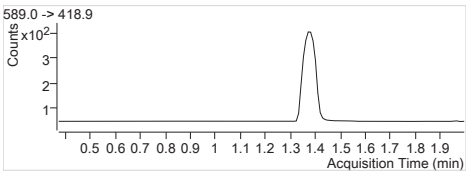
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 1031 | 1.37 | 1.70 | 1.64 µg/L | 96.54 |
| EtFOSAA 1 | 1008 | 1.37 | 1.70 | 1.65 µg/L | 96.95 |
| D3-MeFOSAA | 1474 | 1.37 | 100.00 | 96.76 µg/L | 96.76 |
| D5-EtFOSAA | 1264 | 1.37 | 100.00 | 95.29 µg/L | 95.29 |
| 13C9-PFDA | 27294 | 1.13 | 100.00 | 102.78 µg/L | 102.78 |



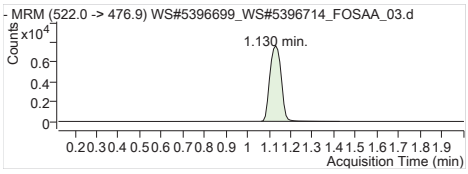



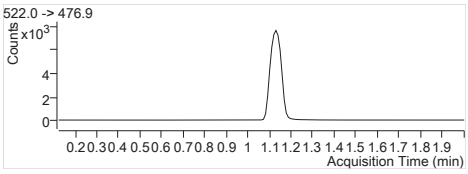

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.366 (1.366)
Concentration: 1 µg/L
Sample type: Calibration



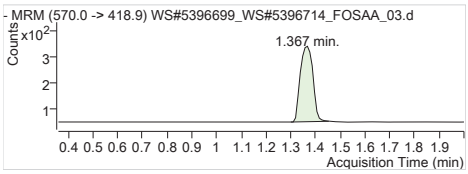



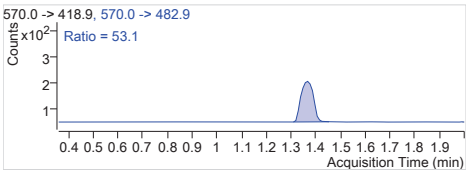

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: Calibration



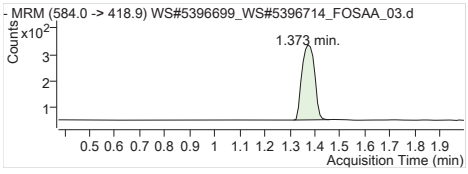



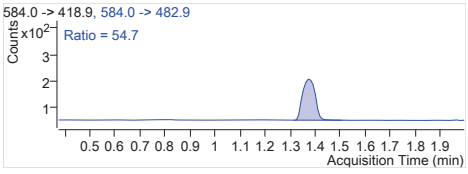

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.130 (1.121)
Concentration: 1 µg/L
Sample type: Calibration



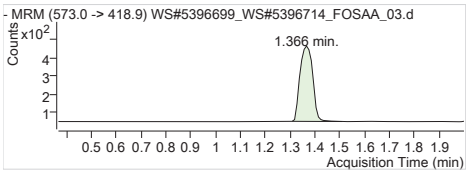



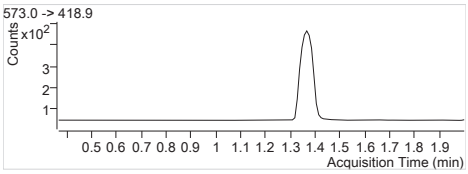

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.367 (1.358)
Calc. conc. 1.64 µg/L
Area ratio: 0.70232
Sample type: Calibration



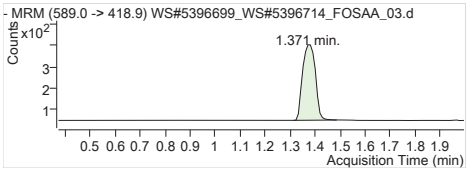



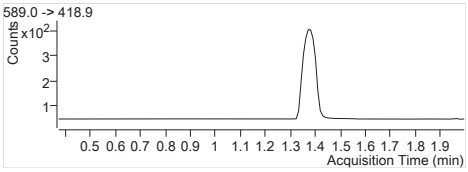

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.373 (1.373)
Calc. conc. 1.65 µg/L
Area ratio: 0.80191
Sample type: Calibration



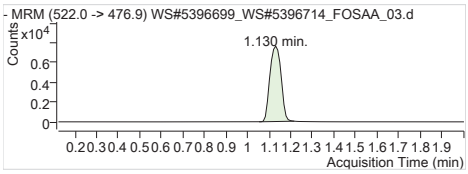



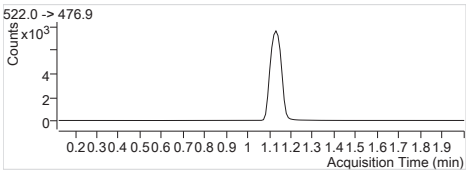

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.366 (1.366)
Calc. conc. 96.76 µg/L
Area ratio: 0.05327
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 95.29 µg/L |
| Area ratio: | 0.04568 |
| Sample type: | Calibration |



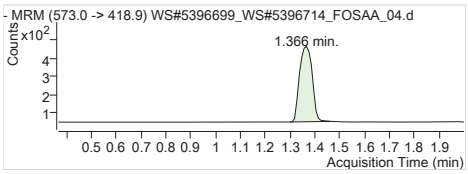



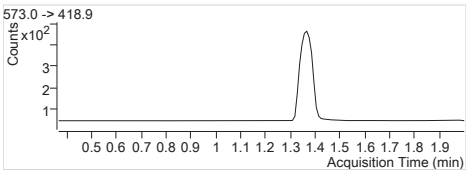

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.130 (1.121) |
| Calc. conc. | 102.78 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **STD 3** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_04.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A4 |
| **Acq. Date** | 2018/02/15 10:44:00 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

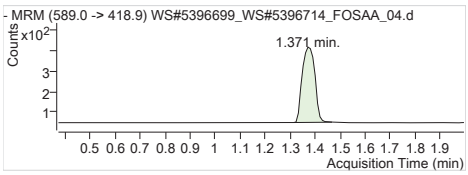
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1459 | 1.37 | 1 µg/L | | |
| D5-EtFOSAA IS | 1290 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 27255 | 1.12 | 1 µg/L | | |

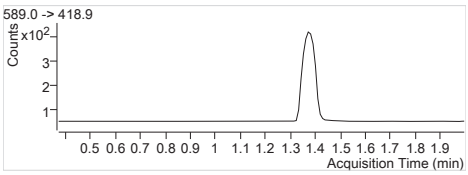
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 3138 | 1.37 | 5.00 | 4.49 µg/L | 89.84 |
| EtFOSAA 1 | 3049 | 1.37 | 5.00 | 4.26 µg/L | 85.27 |
| D3-MeFOSAA | 1484 | 1.37 | 100.00 | 98.91 µg/L | 98.91 |
| D5-EtFOSAA | 1307 | 1.37 | 100.00 | 100.03 µg/L | 100.03 |
| 13C9-PFDA | 26793 | 1.12 | 100.00 | 100.89 µg/L | 100.89 |



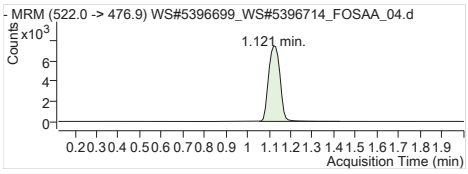



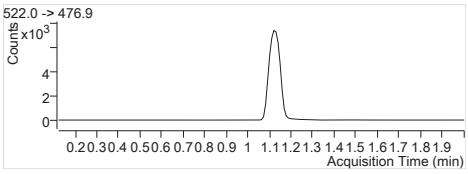

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.366 (1.366)
Concentration: 1 µg/L
Sample type: Calibration



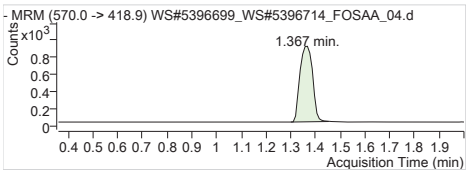



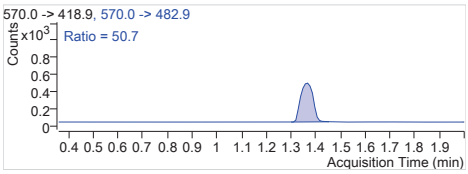

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: Calibration



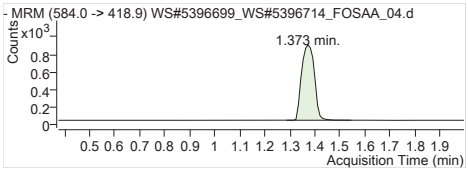



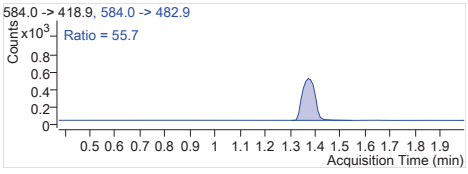

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.121 (1.121)
Concentration: 1 µg/L
Sample type: Calibration



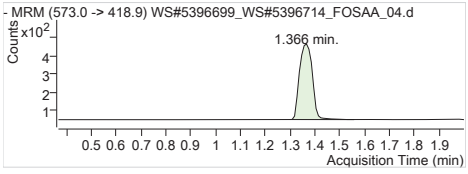



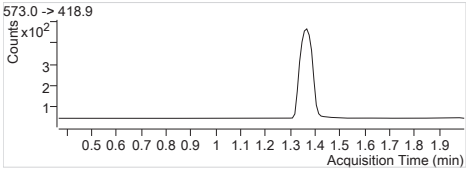

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.367 (1.358)
Calc. conc. 4.49 µg/L
Area ratio: 2.15079
Sample type: Calibration



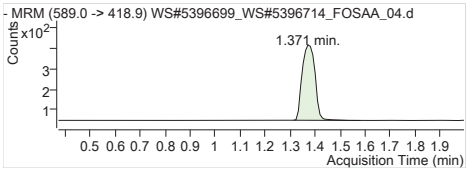



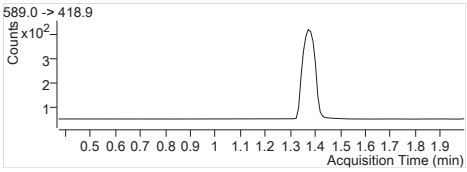

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.373 (1.373)
Calc. conc. 4.26 µg/L
Area ratio: 2.36357
Sample type: Calibration



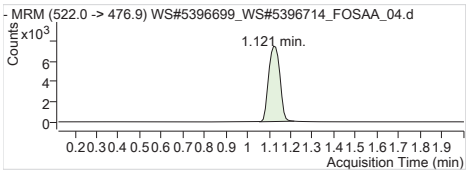



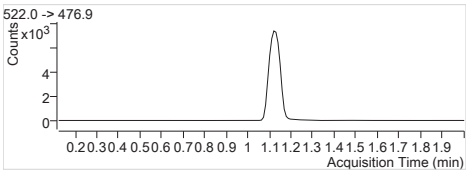

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.366 (1.366)
Calc. conc. 98.91 µg/L
Area ratio: 0.05445
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 100.03 µg/L |
| Area ratio: | 0.04795 |
| Sample type: | Calibration |



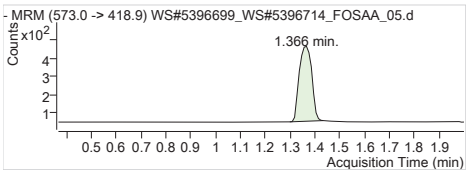



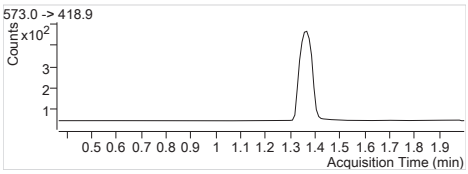

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.121 (1.121) |
| Calc. conc. | 100.89 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **STD 4** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_05.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/15 10:46:25 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

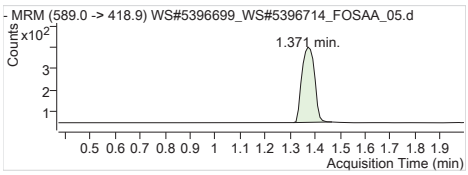
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1448 | 1.37 | 1 µg/L | | |
| D5-EtFOSAA IS | 1237 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 25796 | 1.12 | 1 µg/L | | |

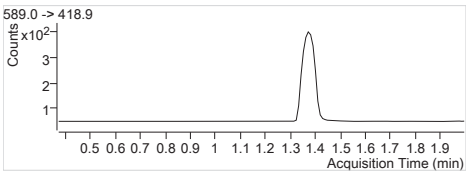
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 8714 | 1.36 | 12.50 | 12.10 µg/L | 96.83 |
| EtFOSAA 1 | 8968 | 1.37 | 12.50 | 12.45 µg/L | 99.57 |
| D3-MeFOSAA | 1484 | 1.37 | 100.00 | 104.50 µg/L | 104.50 |
| D5-EtFOSAA | 1257 | 1.37 | 100.00 | 101.65 µg/L | 101.65 |
| 13C9-PFDA | 25303 | 1.12 | 100.00 | 95.28 µg/L | 95.28 |



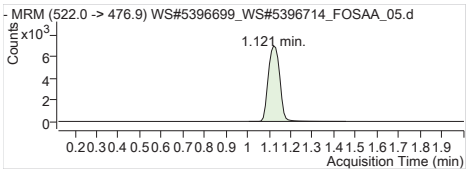



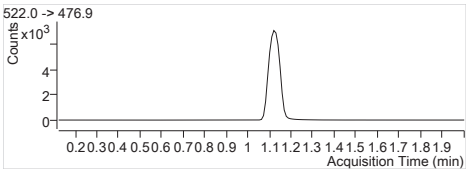

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.366 (1.366)
Concentration: 1 µg/L
Sample type: Calibration



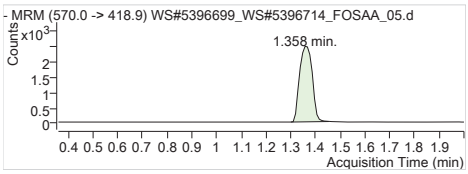



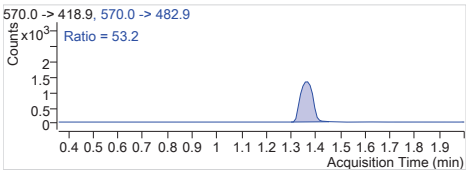

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: Calibration



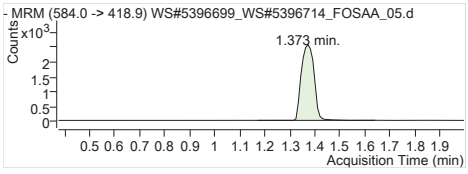



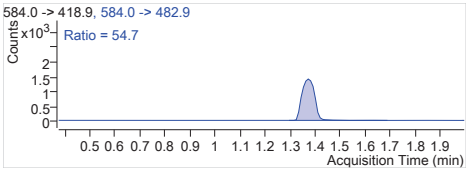

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.121 (1.121)
Concentration: 1 µg/L
Sample type: Calibration



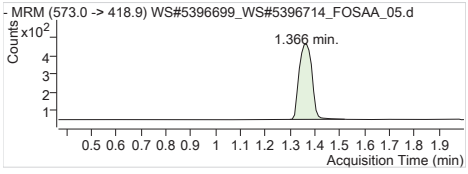



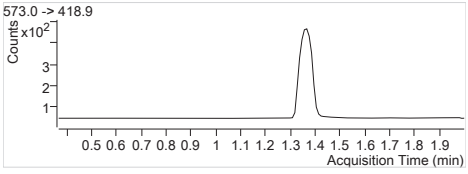

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.358 (1.358)
Calc. conc. 12.10 µg/L
Area ratio: 6.01796
Sample type: Calibration



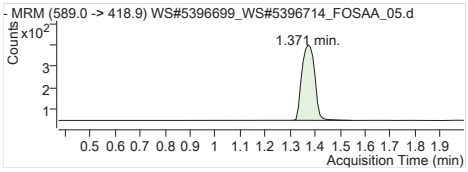



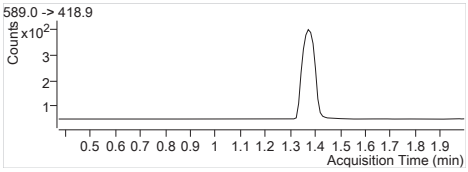

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.373 (1.373)
Calc. conc. 12.45 µg/L
Area ratio: 7.24980
Sample type: Calibration



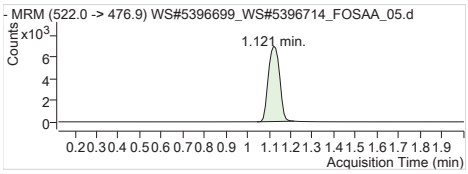



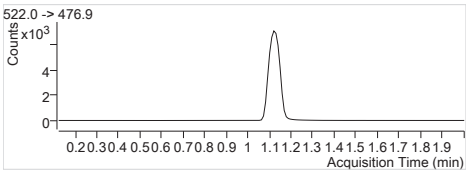

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.366 (1.366)
Calc. conc. 104.50 µg/L
Area ratio: 0.05753
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 101.65 µg/L |
| Area ratio: | 0.04873 |
| Sample type: | Calibration |



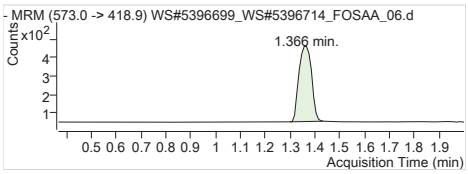



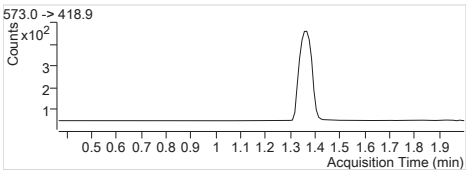

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.121 (1.121) |
| Calc. conc. | 95.28 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **STD 5** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_06.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A6 |
| **Acq. Date** | 2018/02/15 10:48:50 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

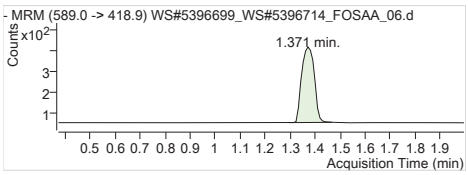
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1457 | 1.37 | 1 µg/L | | |
| D5-EtFOSAA IS | 1294 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 26388 | 1.12 | 1 µg/L | | |

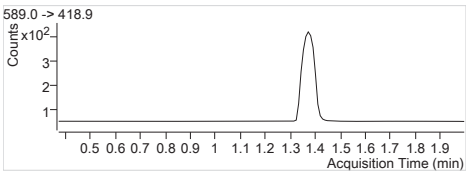
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 19911 | 1.36 | 25.00 | 27.16 µg/L | 108.62 |
| EtFOSAA 1 | 20560 | 1.37 | 25.00 | 26.91 µg/L | 107.65 |
| D3-MeFOSAA | 1483 | 1.37 | 100.00 | 102.09 µg/L | 102.09 |
| D5-EtFOSAA | 1302 | 1.37 | 100.00 | 102.92 µg/L | 102.92 |
| 13C9-PFDA | 25904 | 1.12 | 100.00 | 97.55 µg/L | 97.55 |



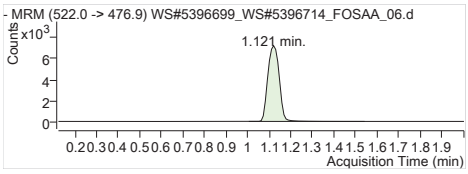



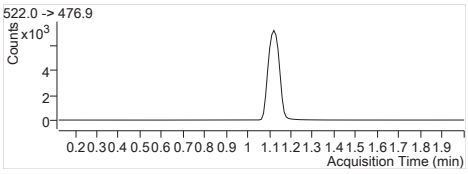

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.366 (1.366)
Concentration: 1 µg/L
Sample type: Calibration



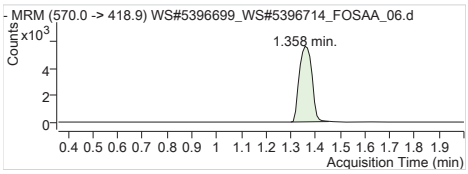



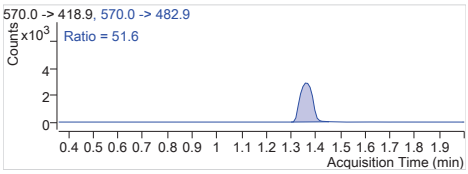

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: Calibration



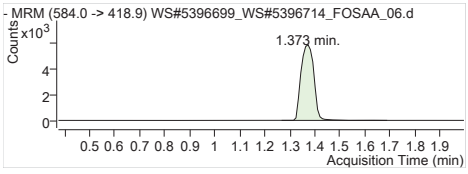



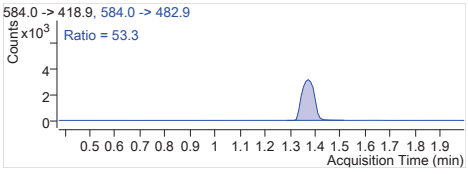

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.121 (1.121)
Concentration: 1 µg/L
Sample type: Calibration



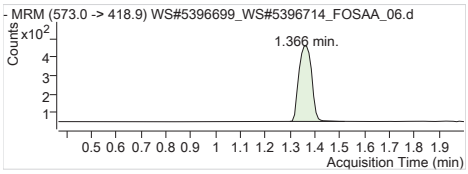



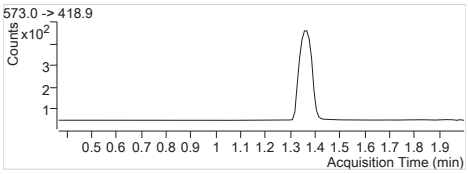

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.358 (1.358)
Calc. conc. 27.16 µg/L
Area ratio: 13.66575
Sample type: Calibration



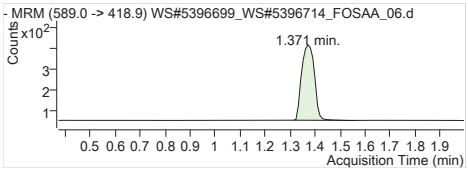



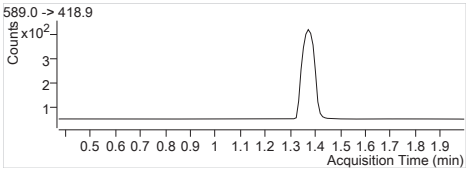

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.373 (1.373)
Calc. conc. 26.91 µg/L
Area ratio: 15.88872
Sample type: Calibration



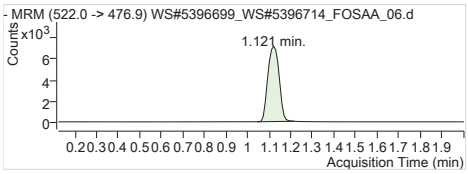



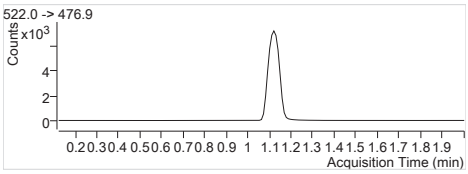

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.366 (1.366)
Calc. conc. 102.09 µg/L
Area ratio: 0.05620
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 102.92 µg/L |
| Area ratio: | 0.04934 |
| Sample type: | Calibration |



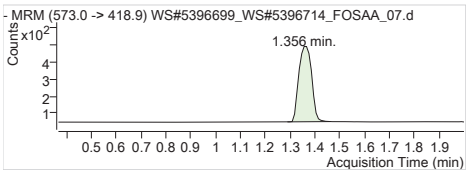



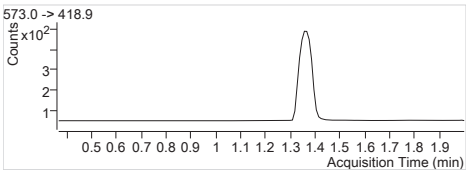

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.121 (1.121) |
| Calc. conc. | 97.55 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **STD 6** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_07.d | **Operator** | |
| **Sample Type** | Cal | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A7 |
| **Acq. Date** | 2018/02/15 10:51:15 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

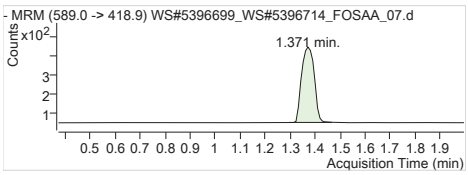
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1574 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1388 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 27400 | 1.12 | 1 µg/L | | |

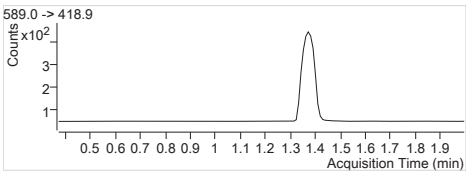
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 32114 | 1.36 | 41.70 | 40.41 µg/L | 96.92 |
| EtFOSAA 1 | 33330 | 1.37 | 41.70 | 40.52 µg/L | 97.17 |
| D3-MeFOSAA | 1577 | 1.36 | 100.00 | 104.55 µg/L | 104.55 |
| D5-EtFOSAA | 1391 | 1.37 | 100.00 | 105.90 µg/L | 105.90 |
| 13C9-PFDA | 26931 | 1.12 | 100.00 | 101.41 µg/L | 101.41 |



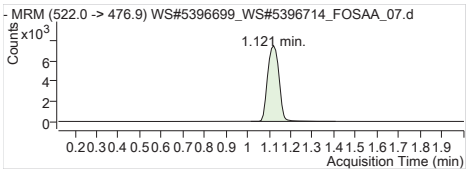



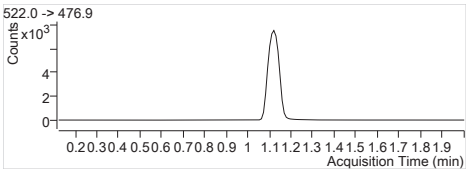

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: Calibration



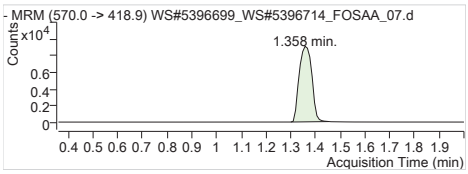



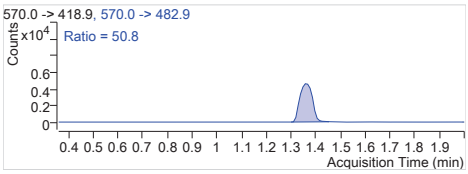

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: Calibration



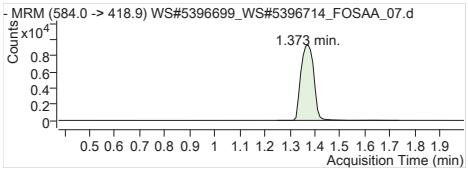



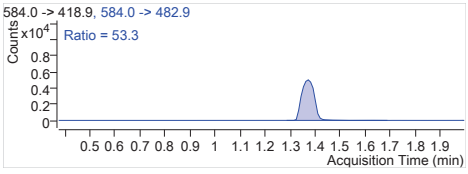

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.121 (1.121)
Concentration: 1 µg/L
Sample type: Calibration



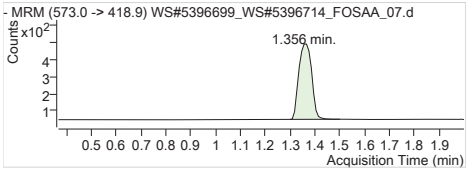



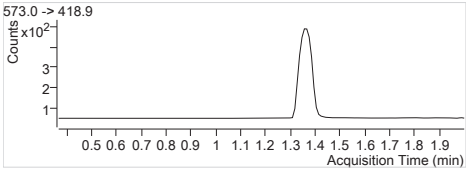

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.358 (1.358)
Calc. conc. 40.41 µg/L
Area ratio: 20.40280
Sample type: Calibration



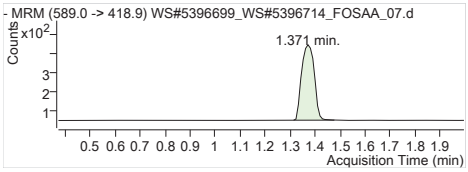



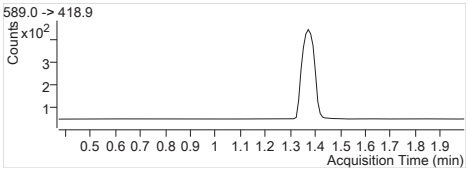

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.373 (1.373)
Calc. conc. 40.52 µg/L
Area ratio: 24.01297
Sample type: Calibration



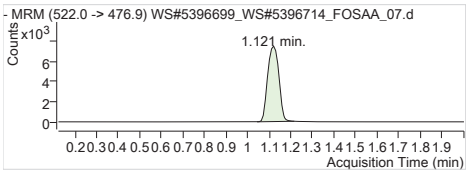



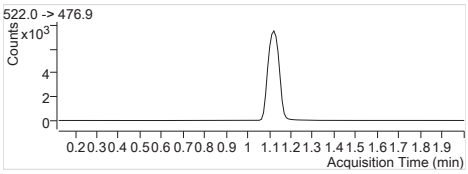

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 104.55 µg/L
Area ratio: 0.05755
Sample type: Calibration




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 105.90 µg/L |
| Area ratio: | 0.05077 |
| Sample type: | Calibration |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.121 (1.121) |
| Calc. conc. | 101.41 µg/L |
| Area ratio: | 0 |
| Sample type: | Calibration |

# Quantitation Results

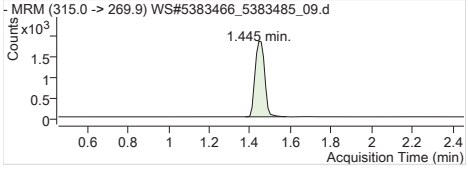
Agilent Technologies

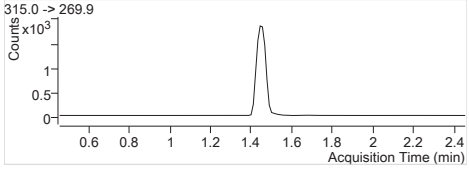
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ICV** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_09.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A9 |
| **Acq. Date** | 2018/02/06 6:46:20 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

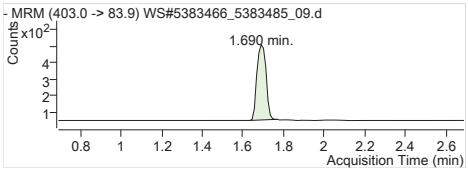
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5913 | 1.44 | 1 µg/L | | |
| MPFHxS | 1432 | 1.69 | 1 µg/L | | |
| MPFHpA | 8107 | 1.71 | 1 µg/L | | |
| MPFOA | 7826 | 1.89 | 1 µg/L | | |
| MPFOS | 1819 | 1.99 | 1 µg/L | | |
| MPFNA | 8593 | 2.04 | 1 µg/L | | |
| MPFDA | 7168 | 2.15 | 1 µg/L | | |
| MPFUnA | 7767 | 2.25 | 1 µg/L | | |
| MPFDoA | 10681 | 2.33 | 1 µg/L | | |
| MPFTeDA | 11576 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 28001 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 33648 | 2.15 | 1 µg/L | | |

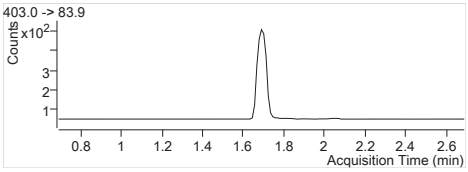
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 14343 | 1.11 | 20.80 | 22.81 µg/L | 109.66 |
| PFHxA 1 | 48319 | 1.46 | 20.80 | 20.49 µg/L | 98.51 |
| PFHxS 1 | 13637 | 1.69 | 20.80 | 21.55 µg/L | 103.59 |
| PFHpA 1 | 63700 | 1.71 | 20.80 | 18.83 µg/L | 90.54 |
| PFOA 1 | 72431 | 1.89 | 20.80 | 21.86 µg/L | 105.12 |
| PFOS 1 | 13253 | 1.98 | 20.80 | 21.21 µg/L | 101.95 |
| PFNA 1 | 61956 | 2.04 | 20.80 | 19.33 µg/L | 92.92 |
| PFDA 1 | 64629 | 2.15 | 20.80 | 19.18 µg/L | 92.23 |
| PFUnA 1 | 75265 | 2.25 | 20.80 | 22.88 µg/L | 110.02 |
| PFDoA 1 | 91414 | 2.33 | 20.80 | 20.94 µg/L | 100.69 |
| PFTrDA 1 | 105639 | 2.41 | 20.80 | 22.07 µg/L | 106.10 |
| PFTeDA 1 | 84131 | 2.48 | 20.80 | 21.11 µg/L | 101.49 |
| 13C2-PFHxA | 5913 | 1.44 | 100.00 | 89.13 µg/L | 89.13 |
| 18O2-PFHxS | 1432 | 1.69 | 100.00 | 88.01 µg/L | 88.01 |
| 13C4-PFHpA | 8107 | 1.71 | 100.00 | 99.10 µg/L | 99.10 |
| 13C4-PFOA | 7826 | 1.89 | 100.00 | 89.04 µg/L | 89.04 |
| 13C4-PFOS | 1819 | 1.99 | 100.00 | 94.12 µg/L | 94.12 |
| 13C5-PFNA | 8538 | 2.04 | 100.00 | 98.59 µg/L | 98.59 |
| 13C2-PFDA | 7010 | 2.15 | 100.00 | 103.82 µg/L | 103.82 |
| 13C2-PFUnA | 7767 | 2.25 | 100.00 | 95.43 µg/L | 95.43 |
| 13C2-PFDoA | 10681 | 2.33 | 100.00 | 98.61 µg/L | 98.61 |
| 13C2-PFTeDA | 11907 | 2.48 | 100.00 | 96.48 µg/L | 96.48 |
| 13C6-PFHxA | 28001 | 1.46 | 100.00 | 98.49 µg/L | 98.49 |
| 13C9-PFDA | 33648 | 2.15 | 100.00 | 94.06 µg/L | 94.06 |



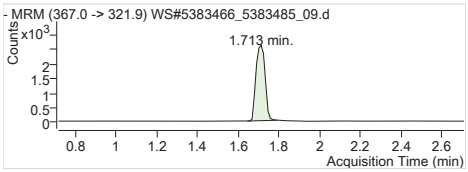



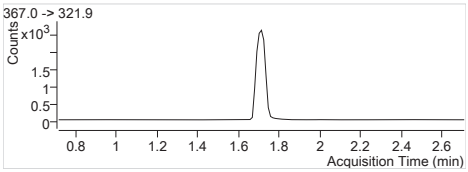

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.445 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | QC |



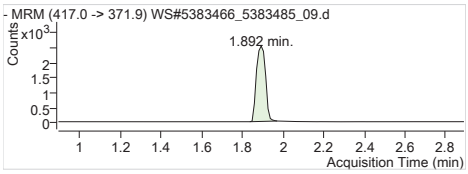



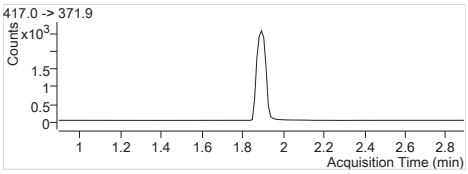

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: QC



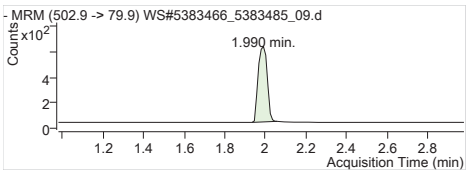



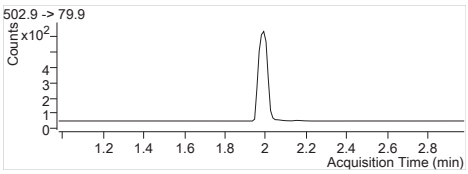

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: QC



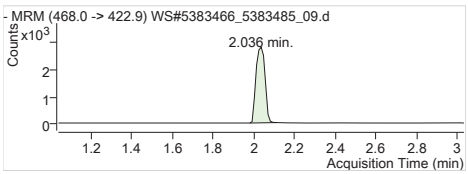



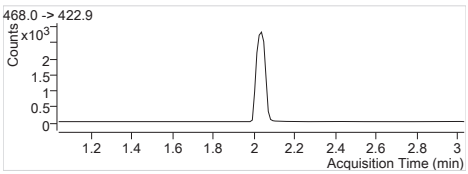

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: QC



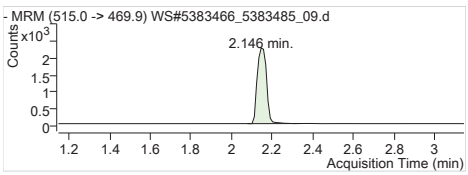



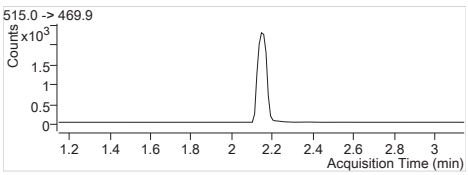

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: QC



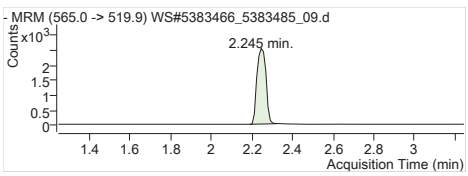



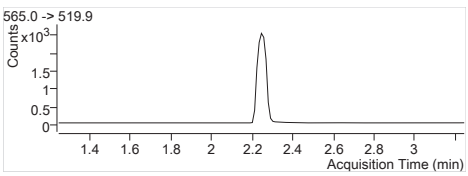

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: QC



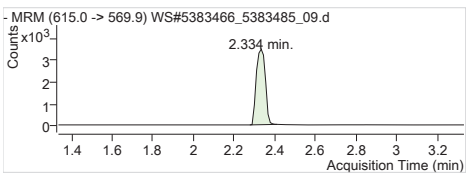



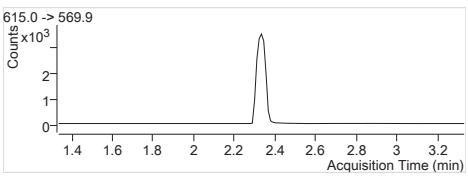

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: QC



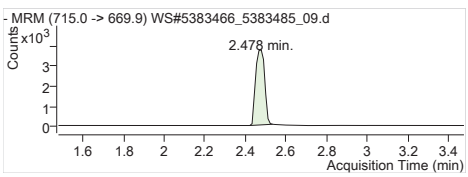



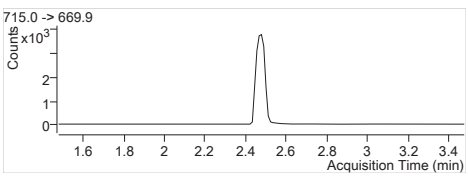

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: QC



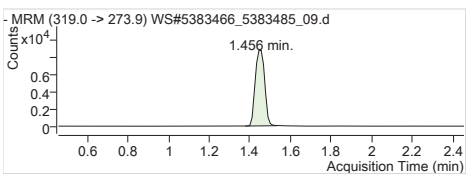



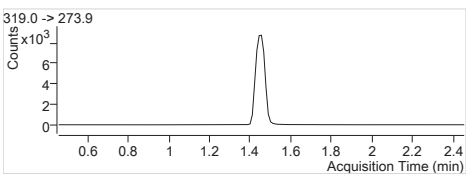

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: QC



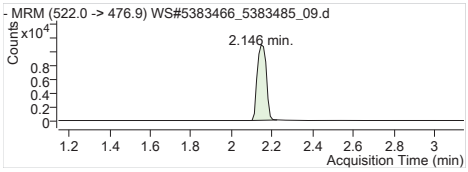



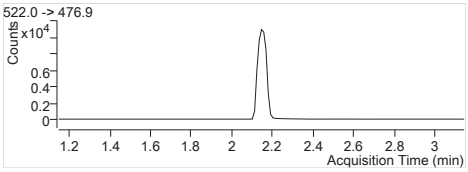

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: QC



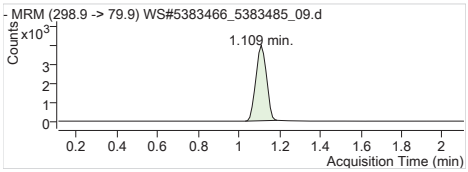



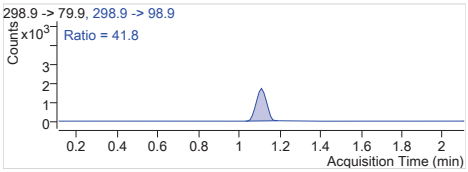

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: QC



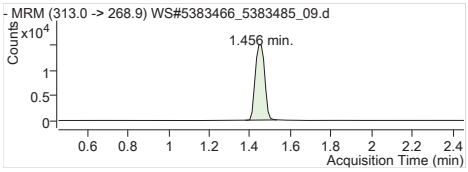



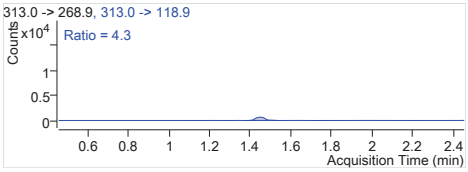

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: QC



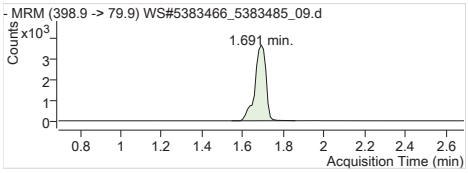



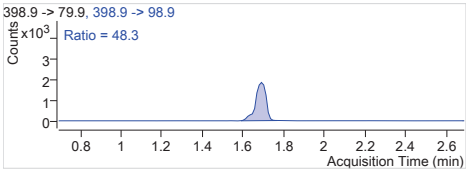

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 22.81 µg/L
Area ratio: 10.01606
Sample type: QC



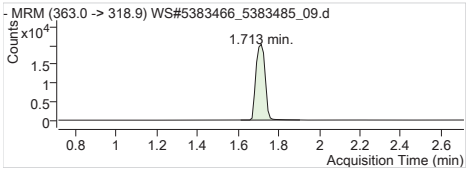



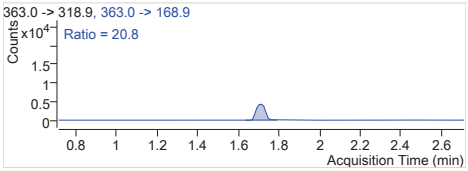

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 20.49 µg/L
Area ratio: 8.17166
Sample type: QC



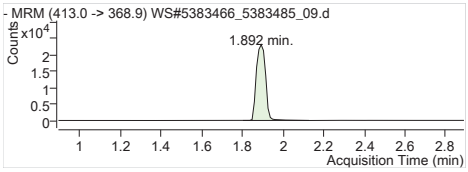



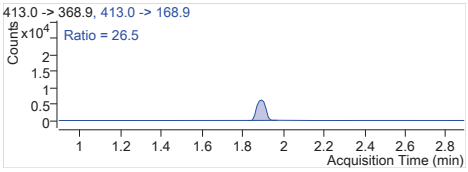

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 21.55 µg/L
Area ratio: 9.52304
Sample type: QC



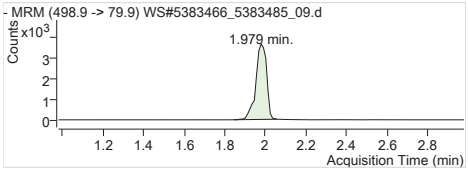



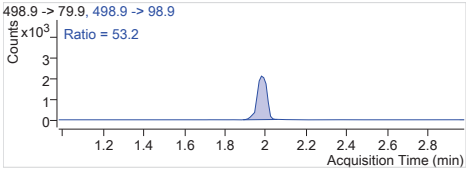

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 18.83 µg/L
Area ratio: 7.85741
Sample type: QC



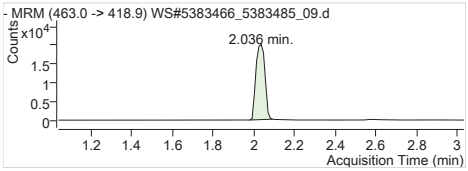



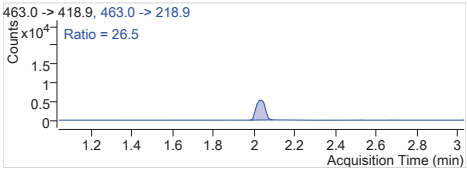

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 21.86 µg/L
Area ratio: 9.25518
Sample type: QC



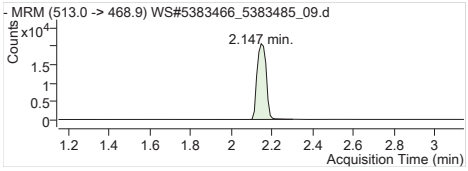



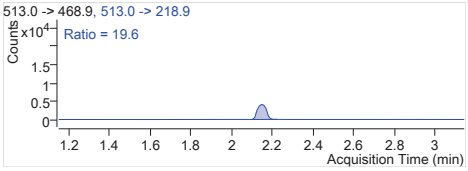

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 21.21 µg/L
Area ratio: 7.28587
Sample type: QC



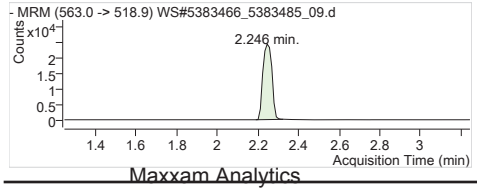



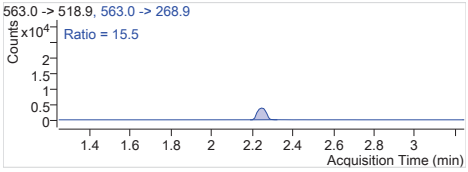

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 19.33 µg/L
Area ratio: 7.21005
Sample type: QC



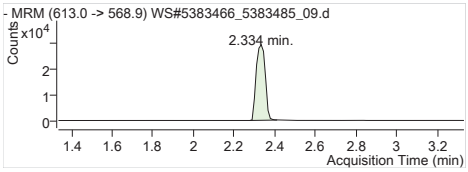



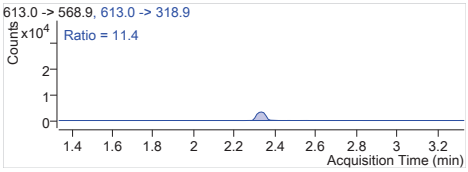

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.147)
Calc. conc. 19.18 µg/L
Area ratio: 9.01632
Sample type: QC



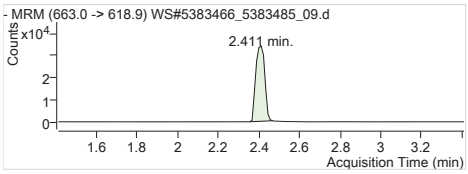



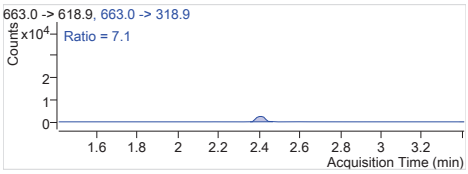

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 22.88 µg/L
Area ratio: 9.69036
Sample type: QC



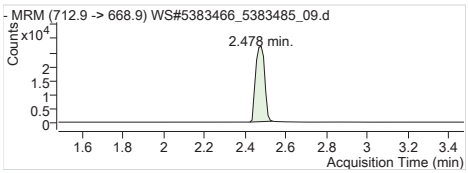



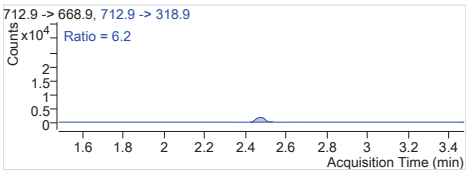

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.334 (2.334) |
| Calc. conc. | 20.94 µg/L |
| Area ratio: | 8.55856 |
| Sample type: | QC |



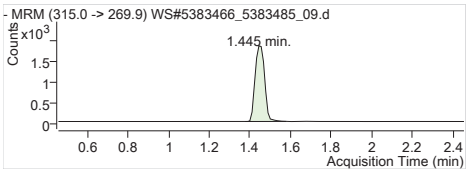



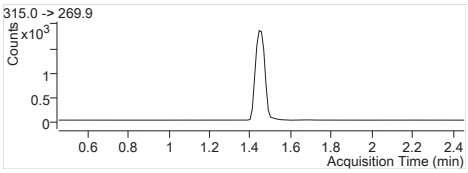

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.411 (2.411) |
| Calc. conc. | 22.07 µg/L |
| Area ratio: | 9.12569 |
| Sample type: | QC |



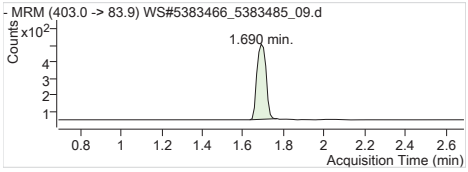



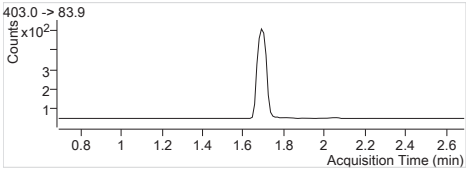

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.478 (2.478) |
| Calc. conc. | 21.11 µg/L |
| Area ratio: | 7.26771 |
| Sample type: | QC |



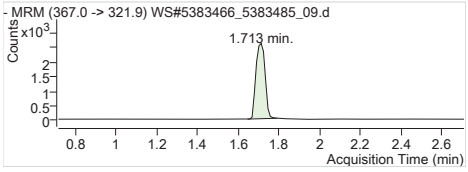



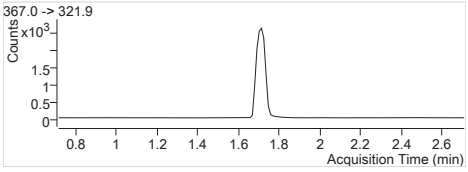

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.445 (1.456) |
| Calc. conc. | 89.13 µg/L |
| Area ratio: | 0.21117 |
| Sample type: | QC |



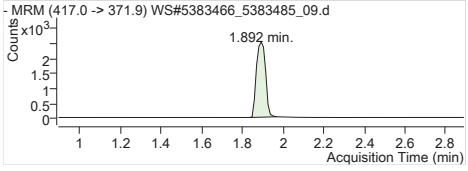



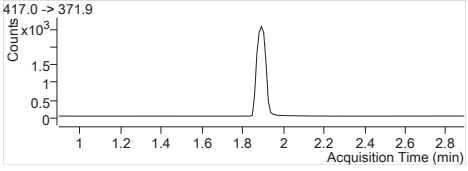

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 88.01 µg/L |
| Area ratio: | 0.05114 |
| Sample type: | QC |



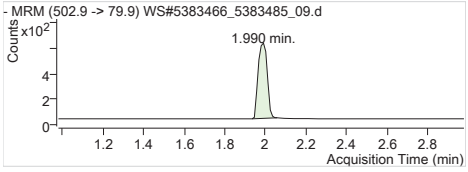



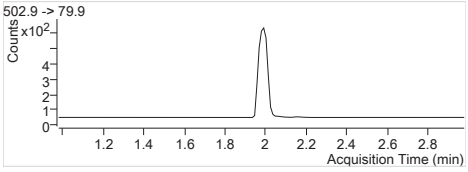

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.713 (1.713) |
| Calc. conc. | 99.10 µg/L |
| Area ratio: | 0.28953 |
| Sample type: | QC |



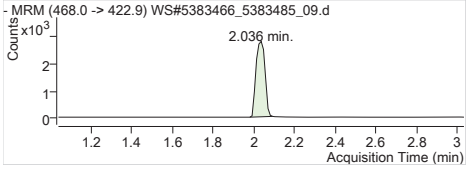



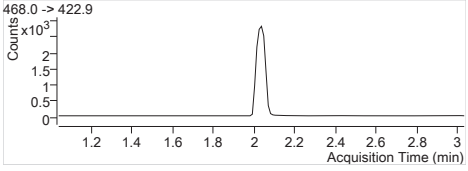

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.892 (1.892) |
| Calc. conc. | 89.04 µg/L |
| Area ratio: | 0.27949 |
| Sample type: | QC |



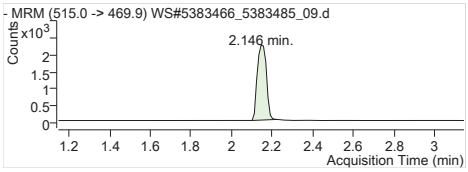



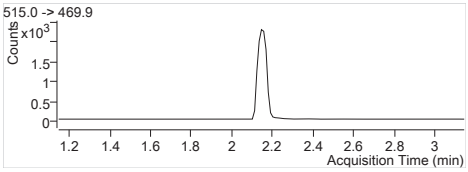

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.990 (1.979) |
| Calc. conc. | 94.12 µg/L |
| Area ratio: | 0.06496 |
| Sample type: | QC |



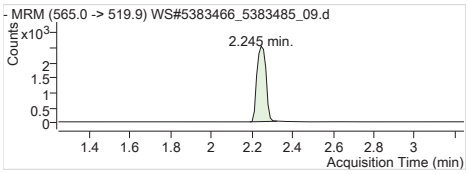



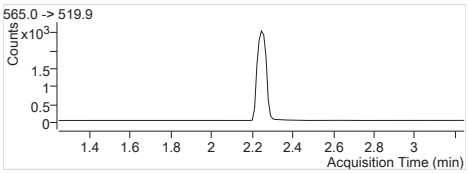

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.036 (2.036) |
| Calc. conc. | 98.59 µg/L |
| Area ratio: | 0.30492 |
| Sample type: | QC |



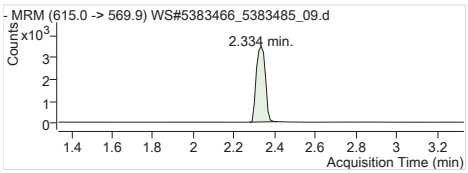



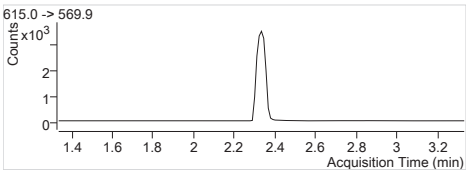

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 103.82 µg/L
Area ratio: 0.20833
Sample type: QC



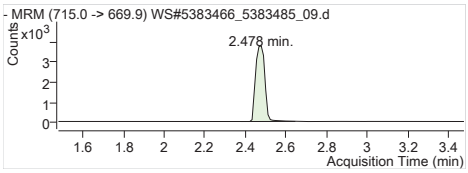



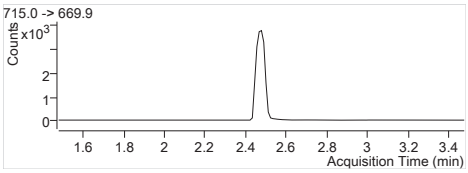

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 95.43 µg/L
Area ratio: 0.23083
Sample type: QC



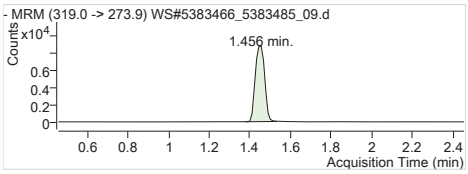



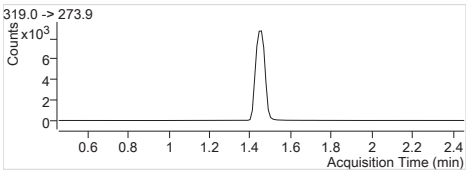

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 98.61 µg/L
Area ratio: 0.31743
Sample type: QC



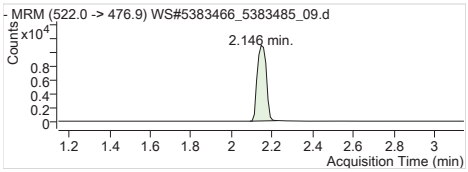



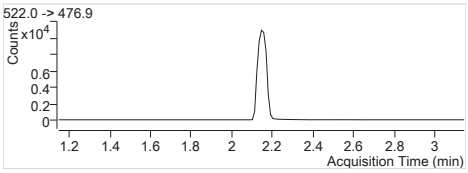

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 96.48 µg/L
Area ratio: 0.35387
Sample type: QC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 98.49 µg/L
Area ratio: 0
Sample type: QC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 94.06 µg/L
Area ratio: 0
Sample type: QC

# Quantitation Results

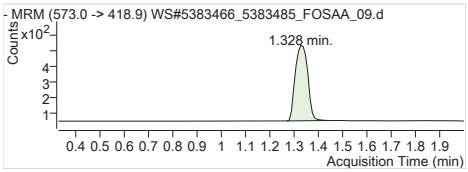
Agilent Technologies

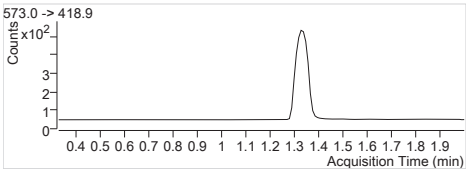
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ICV** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_09.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A9 |
| **Acq. Date** | 2018/02/06 12:44:58 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

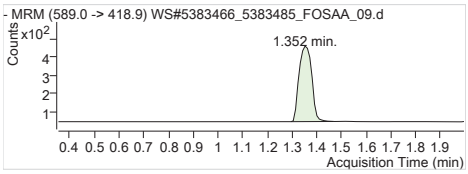
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1727 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1456 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 27223 | 0.96 | 1 µg/L | | |

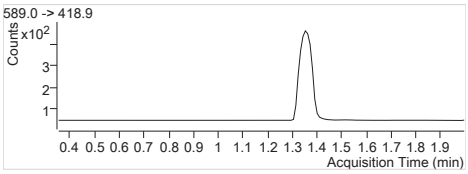
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 12867 | 1.33 | 20.80 | 20.60 µg/L | 99.02 |
| EtFOSAA 1 | 13233 | 1.35 | 20.80 | 21.45 µg/L | 103.12 |
| D3-MeFOSAA | 1727 | 1.33 | 100.00 | 96.57 µg/L | 96.57 |
| D5-EtFOSAA | 1456 | 1.35 | 100.00 | 94.50 µg/L | 94.50 |
| 13C9-PFDA | 27331 | 0.96 | 100.00 | 96.95 µg/L | 96.95 |



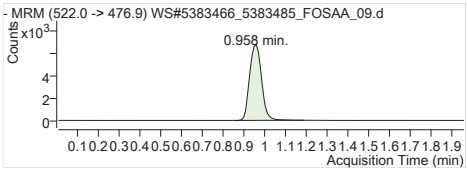



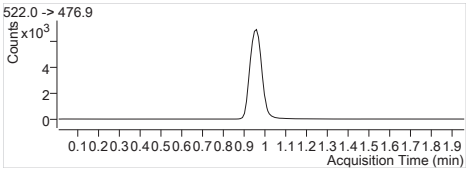

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: QC



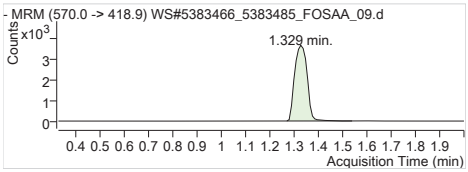



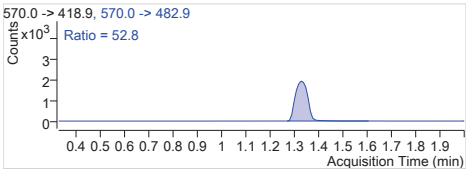

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: QC



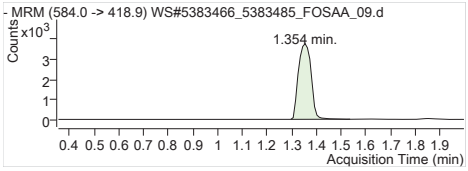



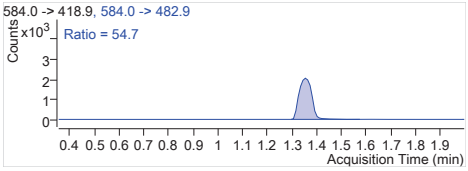

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.958 (0.958)
Concentration: 1 µg/L
Sample type: QC



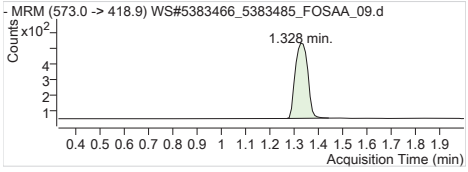



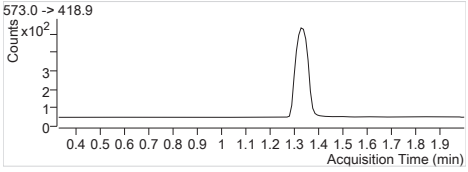

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 20.60 µg/L
Area ratio: 7.45049
Sample type: QC



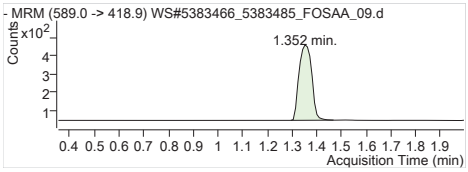



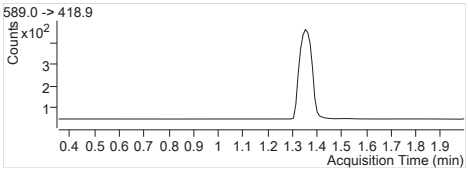

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 21.45 µg/L
Area ratio: 9.08860
Sample type: QC



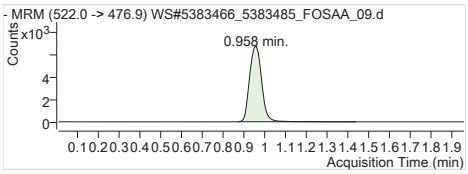



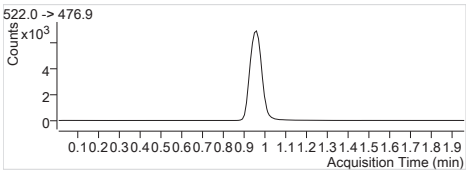

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 96.57 µg/L
Area ratio: 0.06344
Sample type: QC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 94.50 µg/L |
| Area ratio: | 0.05348 |
| Sample type: | QC |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.958 (0.958) |
| Calc. conc. | 96.95 µg/L |
| Area ratio: | 0 |
| Sample type: | QC |

# Quantitation Results

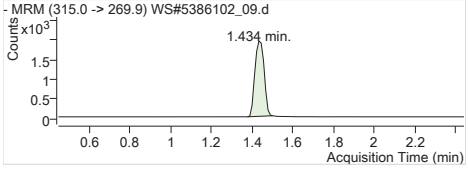
Agilent Technologies

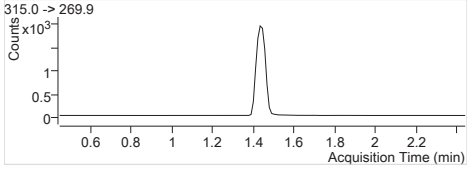
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ICV** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_09.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D6 |
| **Acq. Date** | 2018/02/08 3:46:20 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

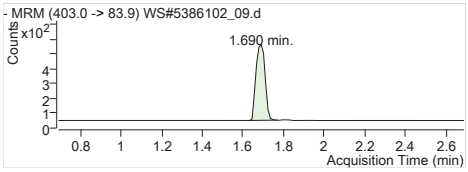
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6048 | 1.43 | 1 µg/L | | |
| MPFHxS | 1614 | 1.69 | 1 µg/L | | |
| MPFHpA | 8500 | 1.70 | 1 µg/L | | |
| MPFOA | 8705 | 1.88 | 1 µg/L | | |
| MPFOS | 1904 | 1.98 | 1 µg/L | | |
| MPFNA | 8980 | 2.02 | 1 µg/L | | |
| MPFDA | 7107 | 2.14 | 1 µg/L | | |
| MPFUnA | 8669 | 2.23 | 1 µg/L | | |
| MPFDoA | 10810 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12959 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 32370 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 43532 | 2.13 | 1 µg/L | | |

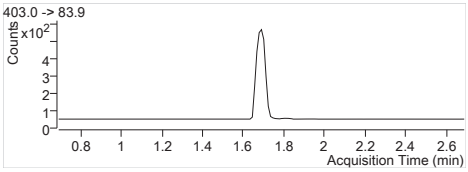
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 14439 | 1.10 | 20.80 | 21.09 µg/L | 101.40 |
| PFHxA 1 | 53482 | 1.43 | 20.80 | 21.79 µg/L | 104.75 |
| PFHxS 1 | 13939 | 1.69 | 20.80 | 20.84 µg/L | 100.21 |
| PFHpA 1 | 66922 | 1.70 | 20.80 | 19.87 µg/L | 95.55 |
| PFOA 1 | 76407 | 1.88 | 20.80 | 21.04 µg/L | 101.17 |
| PFOS 1 | 14029 | 1.98 | 20.80 | 20.05 µg/L | 96.38 |
| PFNA 1 | 67620 | 2.03 | 20.80 | 20.62 µg/L | 99.14 |
| PFDA 1 | 71762 | 2.14 | 20.80 | 20.87 µg/L | 100.33 |
| PFUnA 1 | 80595 | 2.23 | 20.80 | 19.85 µg/L | 95.41 |
| PFDoA 1 | 94359 | 2.32 | 20.80 | 20.98 µg/L | 100.88 |
| PFTrDA 1 | 115761 | 2.40 | 20.80 | 21.62 µg/L | 103.95 |
| PFTeDA 1 | 93875 | 2.47 | 20.80 | 20.77 µg/L | 99.84 |
| 13C2-PFHxA | 6048 | 1.43 | 100.00 | 96.15 µg/L | 96.15 |
| 18O2-PFHxS | 1614 | 1.69 | 100.00 | 100.29 µg/L | 100.29 |
| 13C4-PFHpA | 8500 | 1.70 | 100.00 | 103.19 µg/L | 103.19 |
| 13C4-PFOA | 8705 | 1.88 | 100.00 | 100.17 µg/L | 100.17 |
| 13C4-PFOS | 1904 | 1.98 | 100.00 | 97.15 µg/L | 97.15 |
| 13C5-PFNA | 8980 | 2.02 | 100.00 | 103.53 µg/L | 103.53 |
| 13C2-PFDA | 7008 | 2.14 | 100.00 | 94.58 µg/L | 94.58 |
| 13C2-PFUnA | 8669 | 2.23 | 100.00 | 98.66 µg/L | 98.66 |
| 13C2-PFDoA | 10810 | 2.32 | 100.00 | 88.62 µg/L | 88.62 |
| 13C2-PFTeDA | 13163 | 2.47 | 100.00 | 94.60 µg/L | 94.60 |
| 13C6-PFHxA | 32370 | 1.43 | 100.00 | 102.04 µg/L | 102.04 |
| 13C9-PFDA | 43532 | 2.13 | 100.00 | 107.34 µg/L | 107.34 |



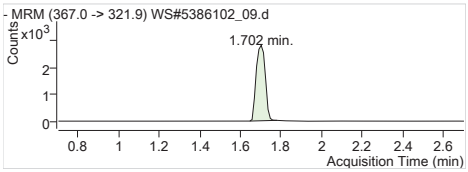



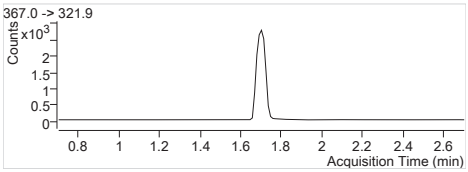

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.445) |
| Concentration: | 1 µg/L |
| Sample type: | QC |



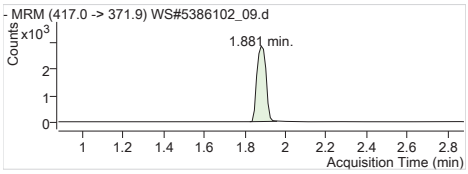



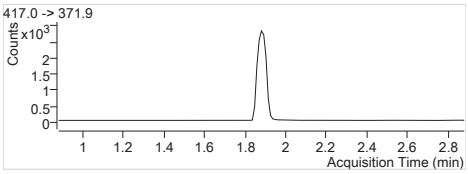

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: QC



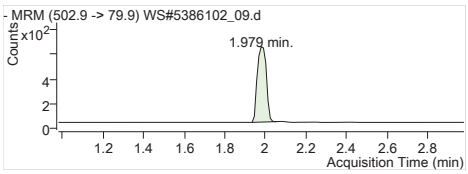



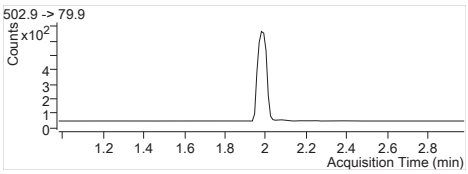

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: QC



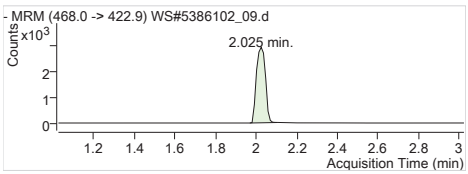



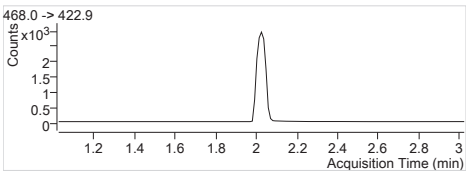

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: QC



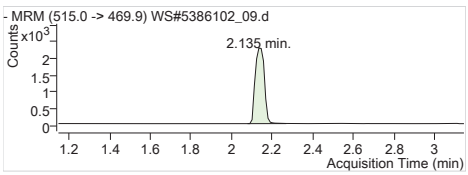



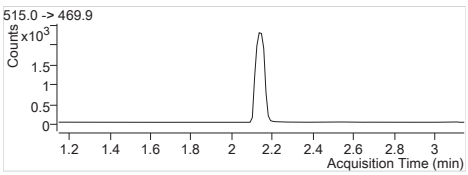

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: QC



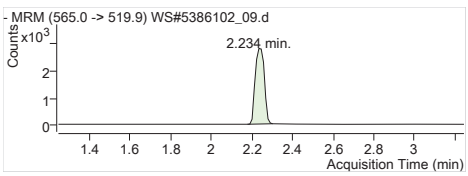



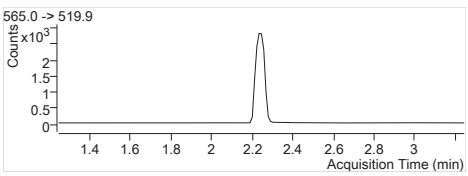

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: QC



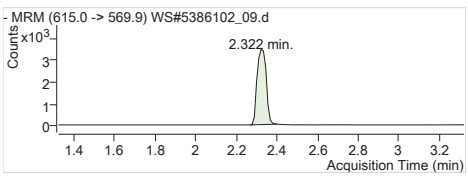



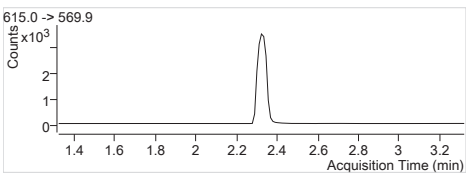

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: QC



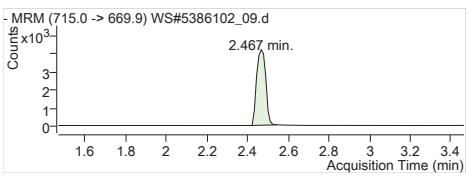



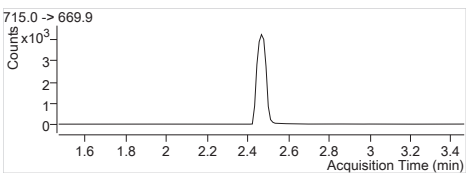

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.245)
Concentration: 1 µg/L
Sample type: QC



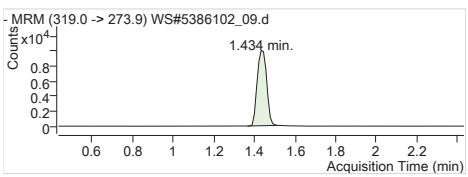



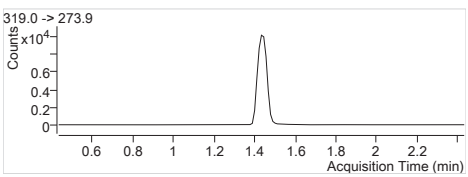

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: QC



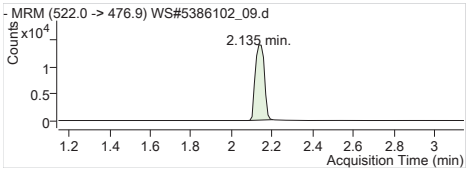



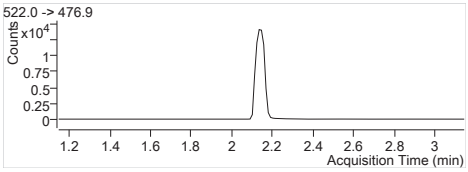

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: QC



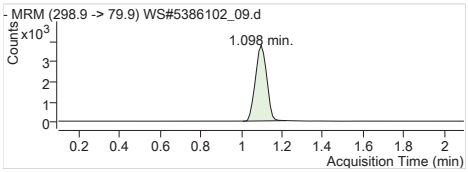



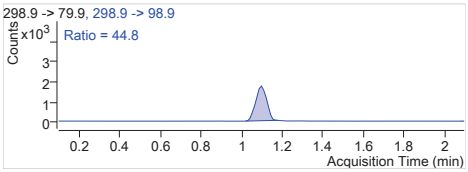

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: QC



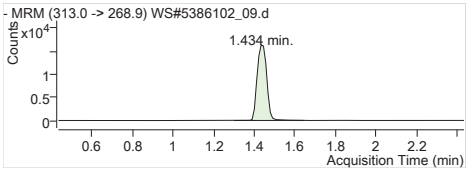



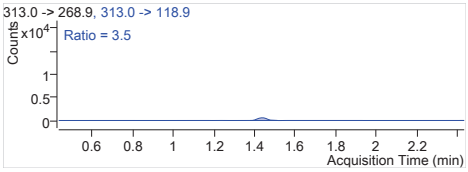

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: QC



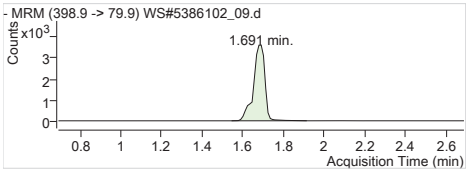



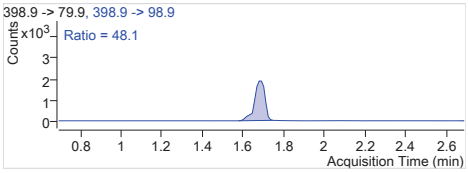

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.098 (1.098)
Calc. conc. 21.09 µg/L
Area ratio: 8.94610
Sample type: QC



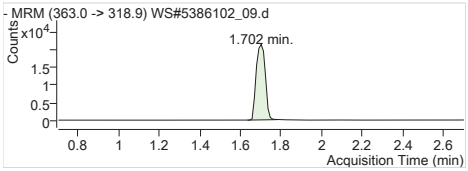



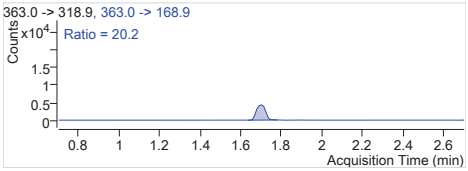

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 21.79 µg/L
Area ratio: 8.84292
Sample type: QC



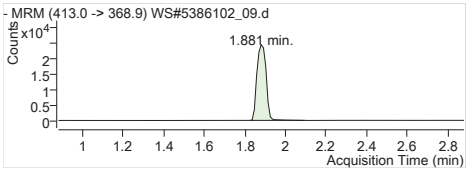



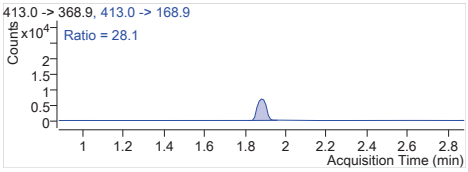

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 20.84 µg/L
Area ratio: 8.63631
Sample type: QC



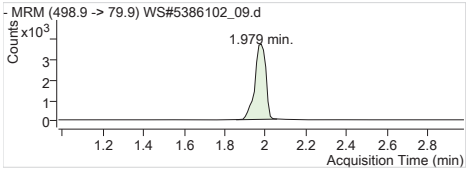



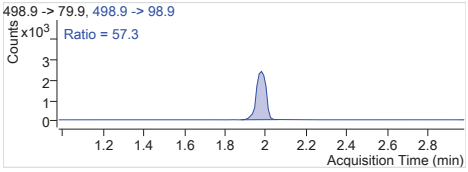

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 19.87 µg/L
Area ratio: 7.87318
Sample type: QC



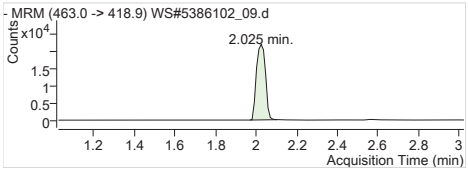



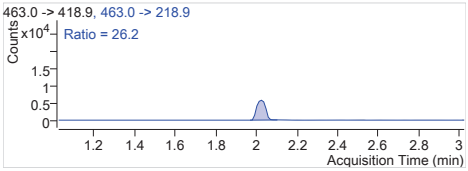

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 21.04 µg/L
Area ratio: 8.77737
Sample type: QC



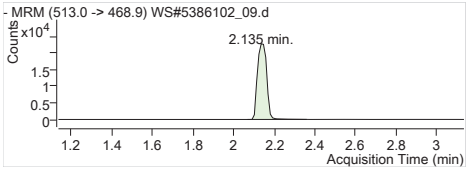



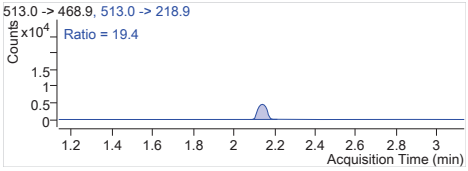

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 20.05 µg/L
Area ratio: 7.36817
Sample type: QC



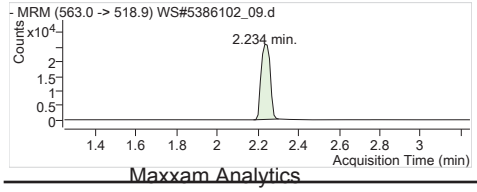



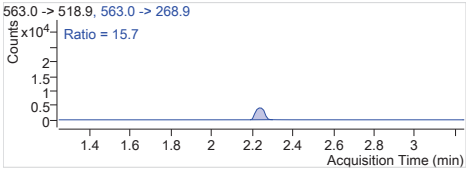

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 20.62 µg/L
Area ratio: 7.53007
Sample type: QC



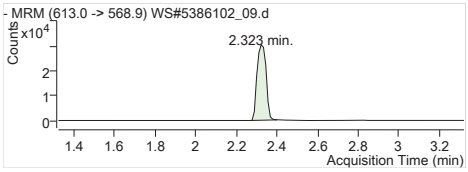



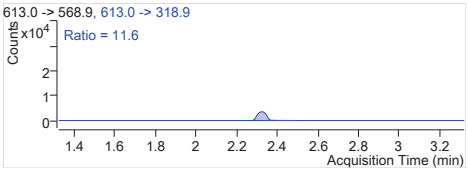

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 20.87 µg/L
Area ratio: 10.09737
Sample type: QC



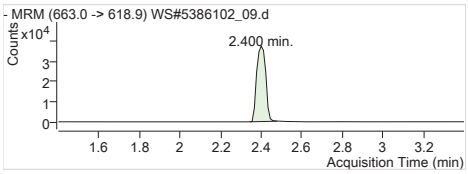



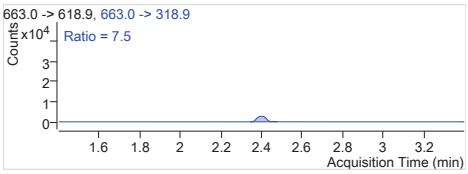

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.246)
Calc. conc. 19.85 µg/L
Area ratio: 9.29692
Sample type: QC



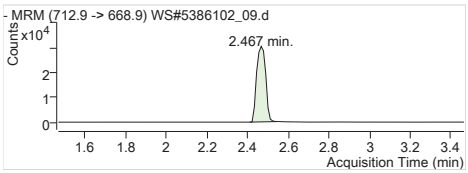



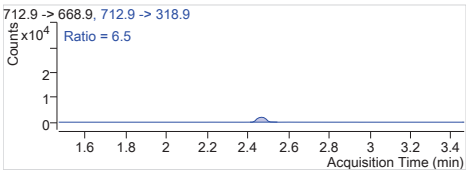

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 20.98 µg/L
Area ratio: 8.72886
Sample type: QC



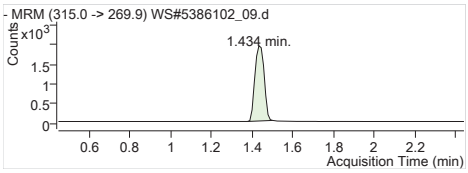



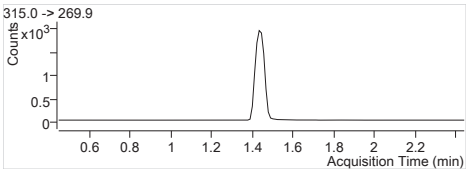

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 21.62 µg/L
Area ratio: 8.93287
Sample type: QC



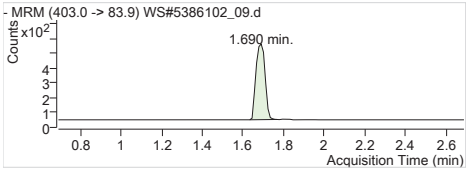



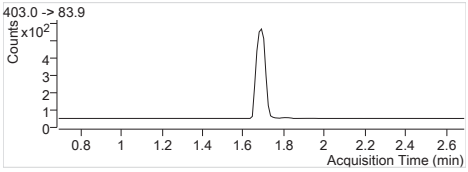

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 20.77 µg/L
Area ratio: 7.24400
Sample type: QC



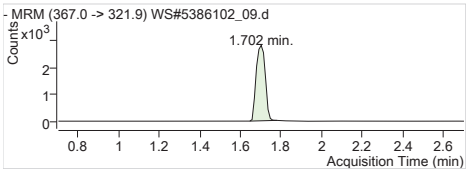



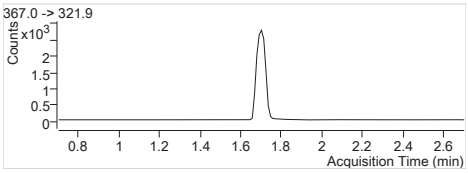

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 96.15 µg/L
Area ratio: 0.18684
Sample type: QC



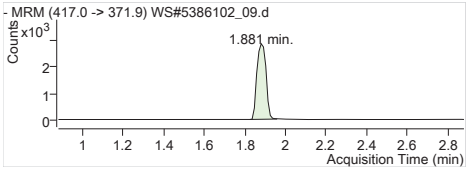



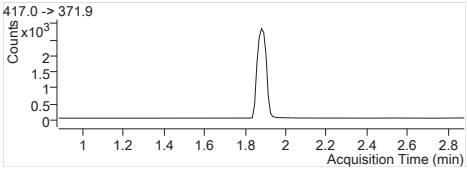

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 100.29 µg/L
Area ratio: 0.04986
Sample type: QC



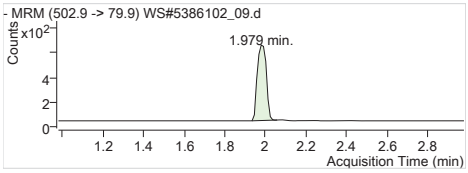



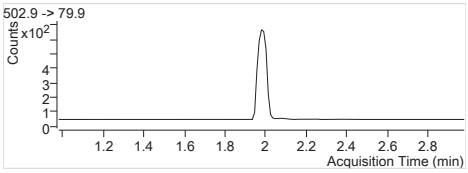

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 103.19 µg/L
Area ratio: 0.26259
Sample type: QC



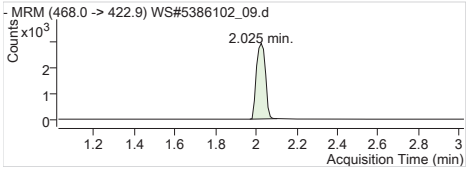



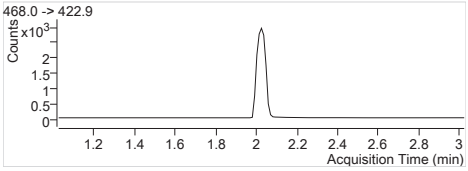

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 100.17 µg/L
Area ratio: 0.26892
Sample type: QC



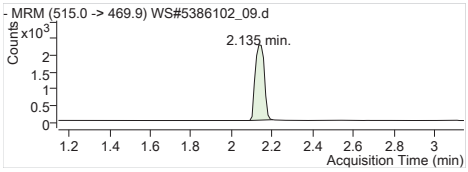



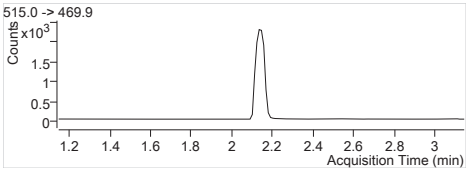

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 97.15 µg/L
Area ratio: 0.05882
Sample type: QC



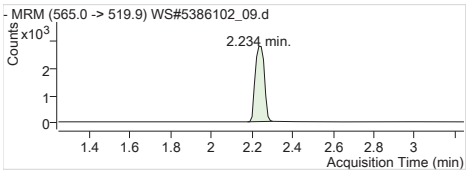



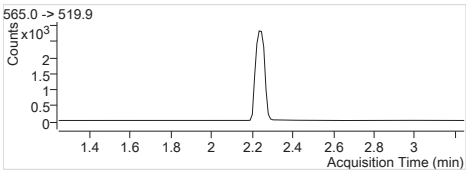

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 103.53 µg/L
Area ratio: 0.27742
Sample type: QC



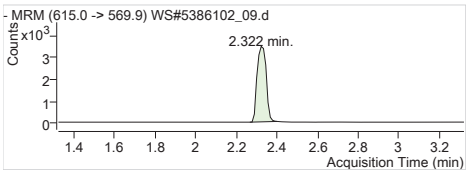



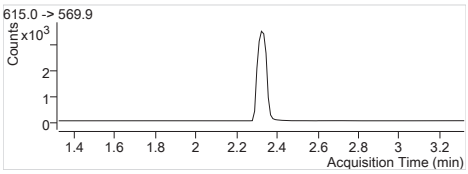

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 94.58 µg/L
Area ratio: 0.16099
Sample type: QC



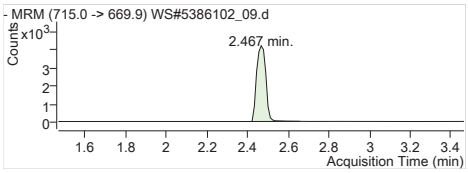



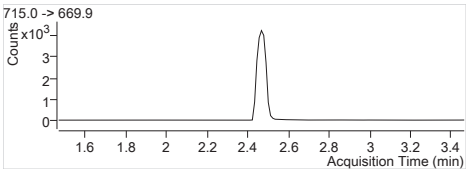

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.245)
Calc. conc. 98.66 µg/L
Area ratio: 0.19914
Sample type: QC



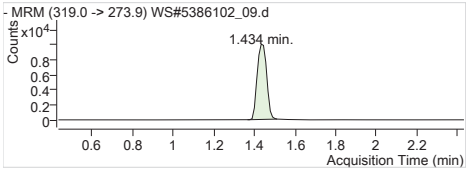



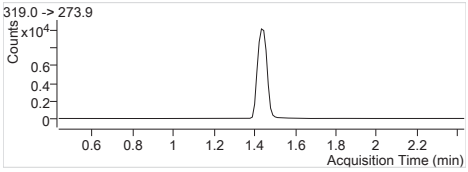

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 88.62 µg/L
Area ratio: 0.24832
Sample type: QC



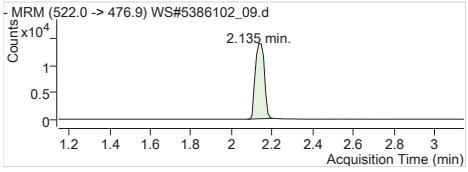



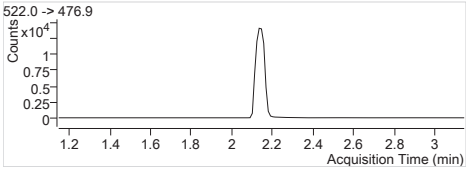

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 94.60 µg/L
Area ratio: 0.30238
Sample type: QC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 102.04 µg/L
Area ratio: 0
Sample type: QC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 107.34 µg/L
Area ratio: 0
Sample type: QC

# Quantitation Results

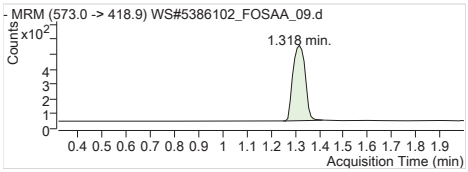
Agilent Technologies

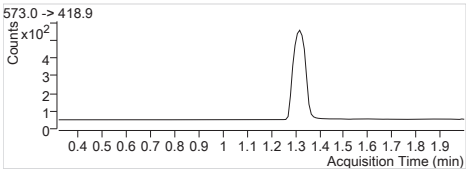
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ICV** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_09.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-D6 |
| **Acq. Date** | 2018/02/08 9:53:14 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

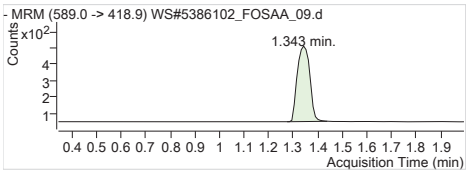
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1796 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1637 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 36367 | 0.92 | 1 µg/L | | |

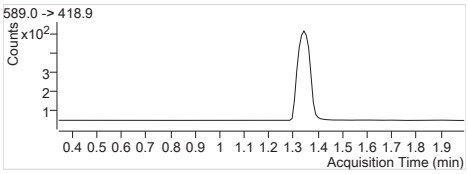
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 13815 | 1.32 | 20.80 | 21.68 µg/L | 104.23 |
| EtFOSAA 1 | 14632 | 1.34 | 20.80 | 21.20 µg/L | 101.90 |
| D3-MeFOSAA | 1808 | 1.32 | 100.00 | 93.43 µg/L | 93.43 |
| D5-EtFOSAA | 1641 | 1.34 | 100.00 | 97.73 µg/L | 97.73 |
| 13C9-PFDA | 35298 | 0.92 | 100.00 | 105.66 µg/L | 105.66 |



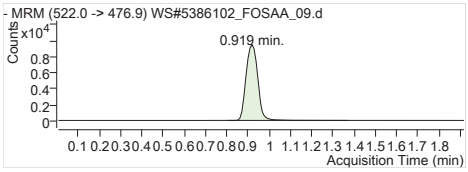



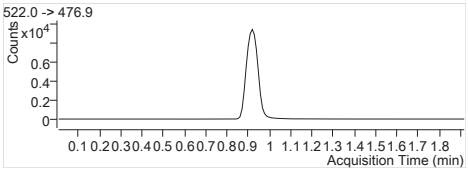

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: QC



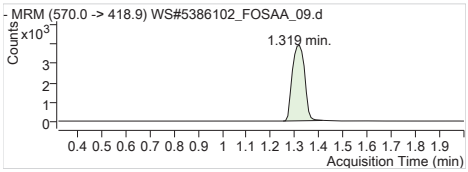



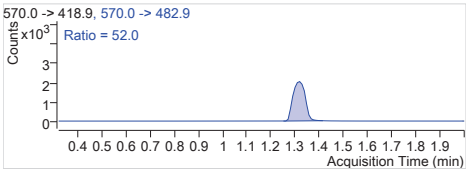

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: QC



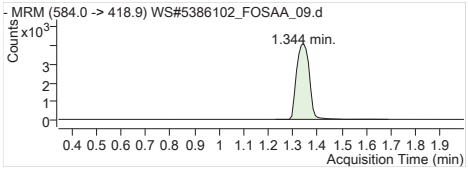



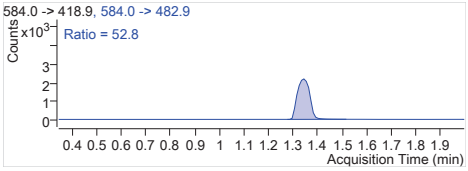

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.919 (0.919)
Concentration: 1 µg/L
Sample type: QC



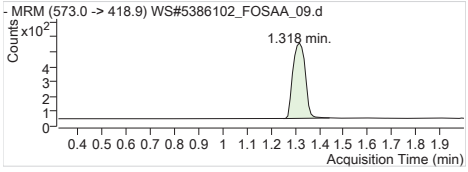



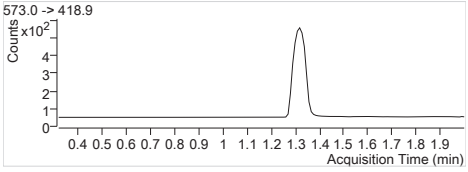

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.319 (1.319)
Calc. conc. 21.68 µg/L
Area ratio: 7.69209
Sample type: QC



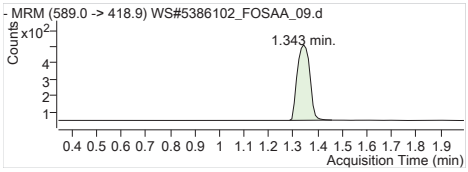



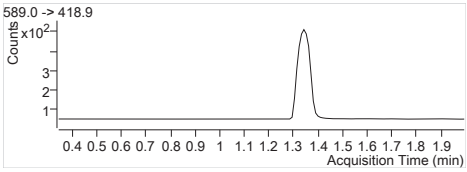

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 21.20 µg/L
Area ratio: 8.93830
Sample type: QC



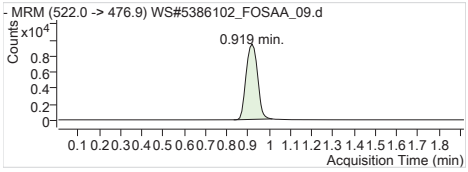



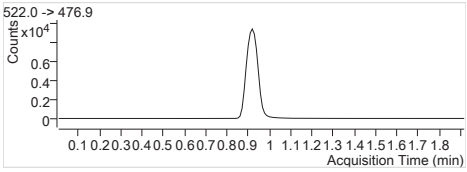

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 93.43 µg/L
Area ratio: 0.04972
Sample type: QC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 97.73 µg/L |
| Area ratio: | 0.04512 |
| Sample type: | QC |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.919 (0.919) |
| Calc. conc. | 105.66 µg/L |
| Area ratio: | 0 |
| Sample type: | QC |

# Quantitation Results

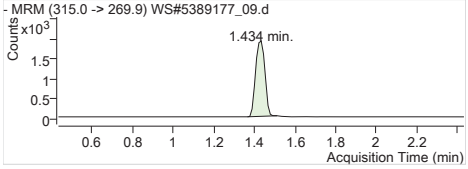
Agilent Technologies

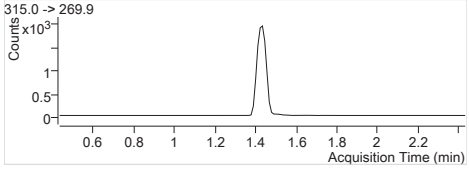
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ICV** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_09.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A9 |
| **Acq. Date** | 2018/02/09 12:36:53 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

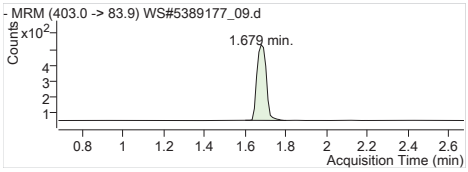
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6052 | 1.43 | 1 µg/L | | |
| MPFHxS | 1539 | 1.68 | 1 µg/L | | |
| MPFHpA | 8410 | 1.69 | 1 µg/L | | |
| MPFOA | 8752 | 1.88 | 1 µg/L | | |
| MPFOS | 1961 | 1.98 | 1 µg/L | | |
| MPFNA | 8850 | 2.01 | 1 µg/L | | |
| MPFDA | 7780 | 2.14 | 1 µg/L | | |
| MPFUnA | 8382 | 2.23 | 1 µg/L | | |
| MPFDoA | 11205 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13067 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 22492 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 30514 | 2.13 | 1 µg/L | | |

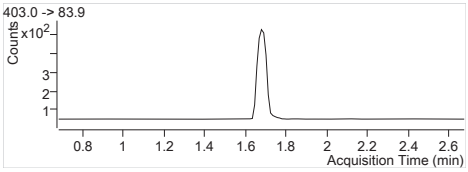
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 15737 | 1.09 | 20.80 | 22.21 µg/L | 106.80 |
| PFHxA 1 | 52710 | 1.43 | 20.80 | 20.99 µg/L | 100.94 |
| PFHxS 1 | 14656 | 1.68 | 20.80 | 21.22 µg/L | 102.01 |
| PFHpA 1 | 70648 | 1.69 | 20.80 | 20.32 µg/L | 97.69 |
| PFOA 1 | 79777 | 1.88 | 20.80 | 21.42 µg/L | 102.97 |
| PFOS 1 | 14655 | 1.97 | 20.80 | 19.70 µg/L | 94.71 |
| PFNA 1 | 70308 | 2.01 | 20.80 | 20.99 µg/L | 100.90 |
| PFDA 1 | 75227 | 2.14 | 20.80 | 20.09 µg/L | 96.59 |
| PFUnA 1 | 85693 | 2.23 | 20.80 | 23.05 µg/L | 110.83 |
| PFDoA 1 | 102052 | 2.32 | 20.80 | 20.85 µg/L | 100.22 |
| PFTrDA 1 | 118592 | 2.40 | 20.80 | 22.41 µg/L | 107.72 |
| PFTeDA 1 | 98304 | 2.47 | 20.80 | 21.26 µg/L | 102.23 |
| 13C2-PFHxA | 6052 | 1.43 | 100.00 | 95.97 µg/L | 95.97 |
| 18O2-PFHxS | 1539 | 1.68 | 100.00 | 94.73 µg/L | 94.73 |
| 13C4-PFHpA | 8410 | 1.69 | 100.00 | 100.27 µg/L | 100.27 |
| 13C4-PFOA | 8752 | 1.88 | 100.00 | 97.52 µg/L | 97.52 |
| 13C4-PFOS | 1961 | 1.98 | 100.00 | 98.44 µg/L | 98.44 |
| 13C5-PFNA | 8851 | 2.01 | 100.00 | 97.83 µg/L | 97.83 |
| 13C2-PFDA | 7651 | 2.14 | 100.00 | 99.55 µg/L | 99.55 |
| 13C2-PFUnA | 8382 | 2.23 | 100.00 | 91.44 µg/L | 91.44 |
| 13C2-PFDoA | 11205 | 2.32 | 100.00 | 92.66 µg/L | 92.66 |
| 13C2-PFTeDA | 13458 | 2.47 | 100.00 | 92.99 µg/L | 92.99 |
| 13C6-PFHxA | 22492 | 1.43 | 100.00 | 105.06 µg/L | 105.06 |
| 13C9-PFDA | 30514 | 2.13 | 100.00 | 106.77 µg/L | 106.77 |



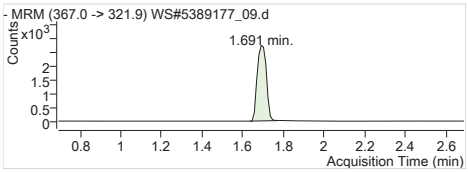



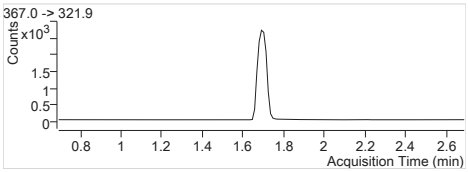

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.434) |
| Concentration: | 1 µg/L |
| Sample type: | QC |



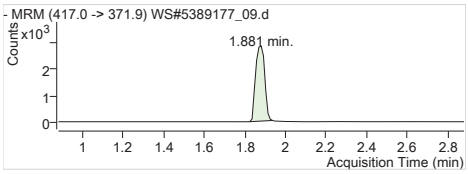



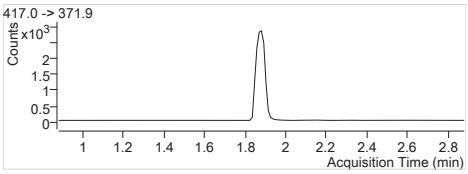

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: QC



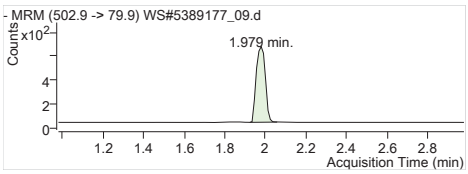



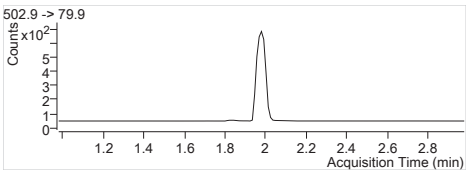

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: QC



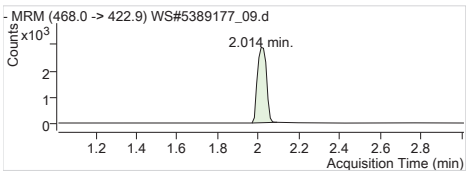



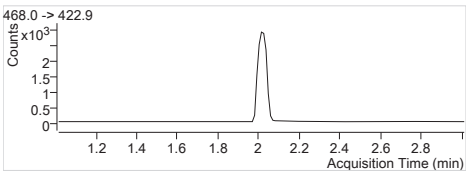

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: QC



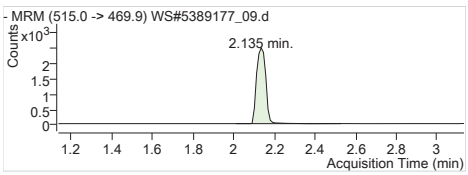



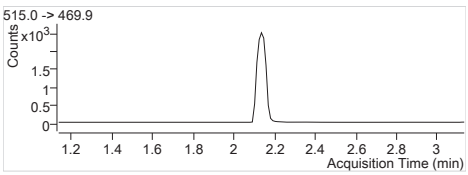

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: QC



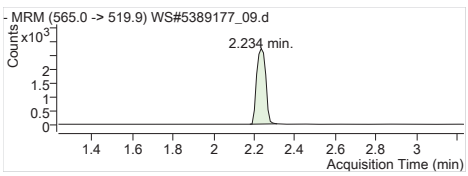



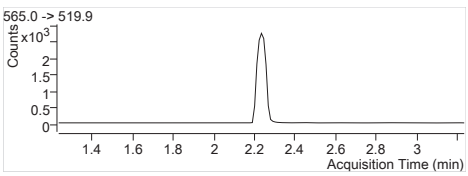

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: QC



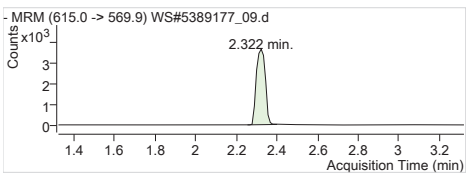



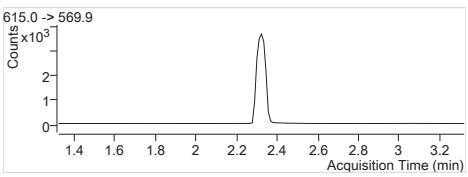

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: QC



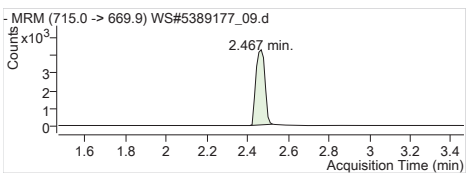



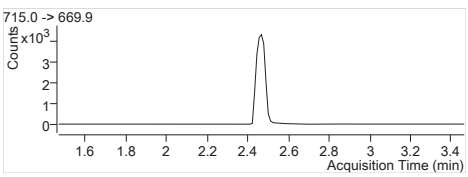

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: QC



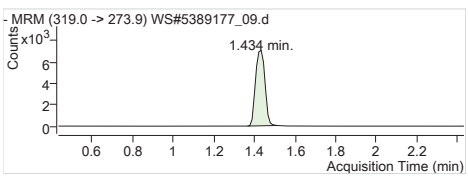



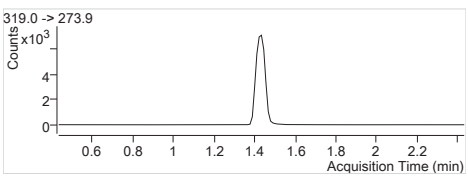

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: QC



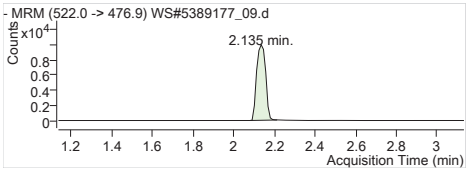



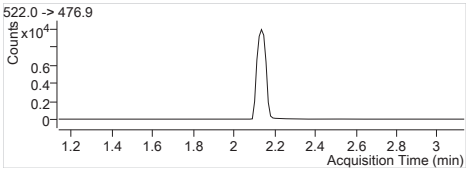

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: QC



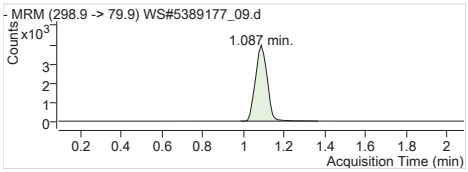



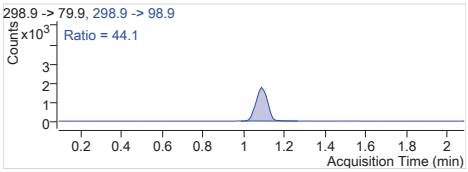

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: QC



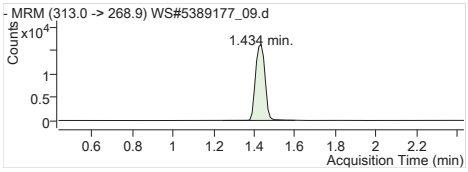



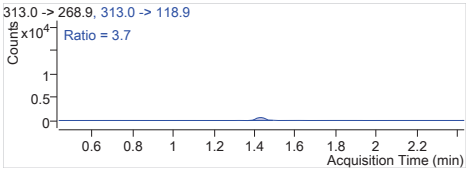

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: QC



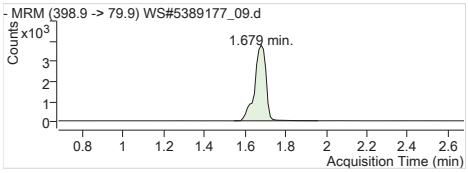



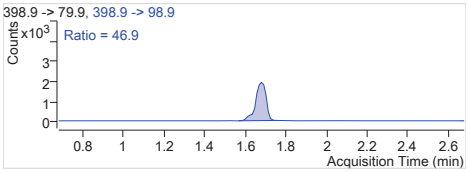

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 22.21 µg/L
Area ratio: 10.22547
Sample type: QC



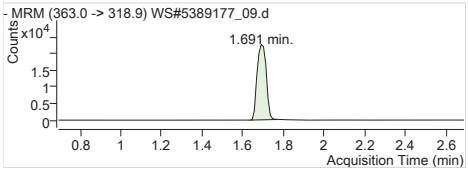



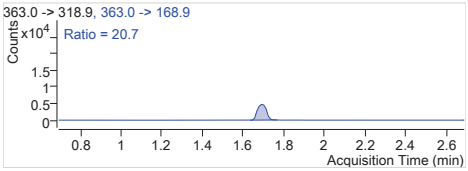

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 20.99 µg/L
Area ratio: 8.70952
Sample type: QC



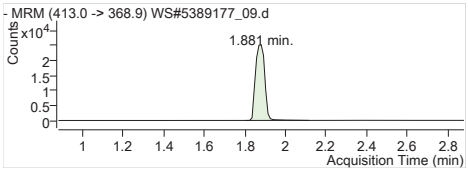



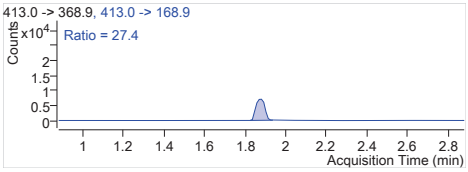

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 21.22 µg/L
Area ratio: 9.52307
Sample type: QC



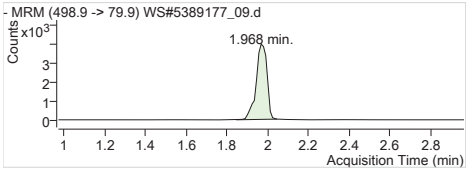



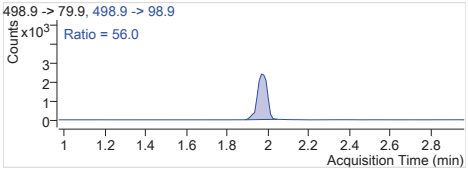

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 20.32 µg/L
Area ratio: 8.40048
Sample type: QC



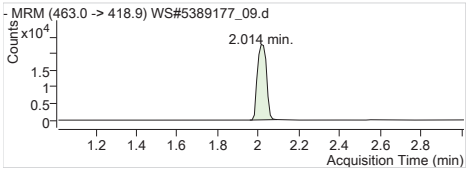



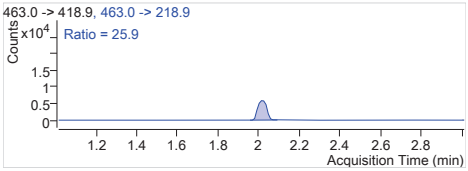

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 21.42 µg/L
Area ratio: 9.11529
Sample type: QC



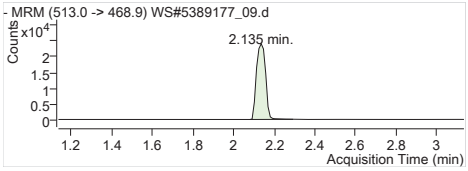



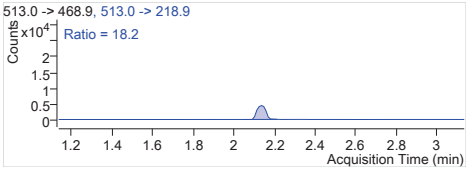

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 19.70 µg/L
Area ratio: 7.47323
Sample type: QC



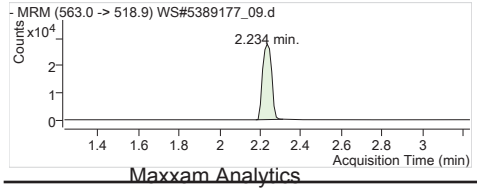



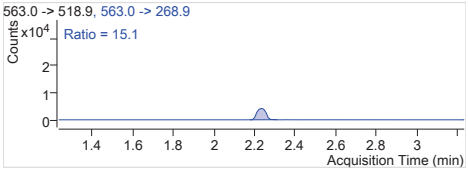

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 20.99 µg/L
Area ratio: 7.94441
Sample type: QC



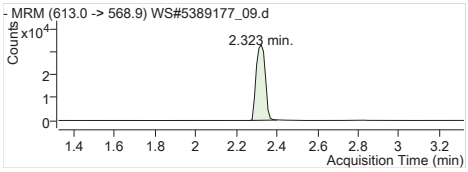



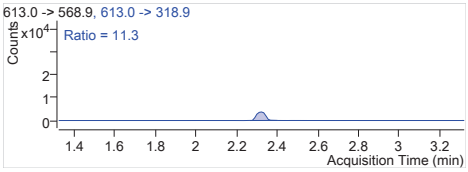

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 20.09 µg/L
Area ratio: 9.66928
Sample type: QC



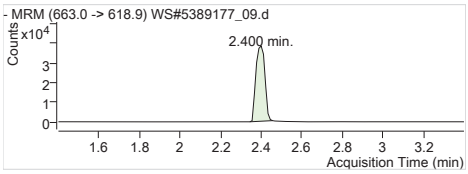



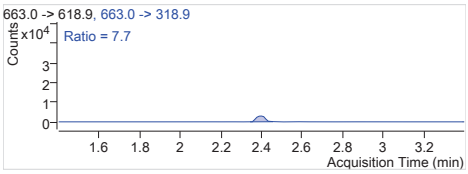

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 23.05 µg/L
Area ratio: 10.22346
Sample type: QC



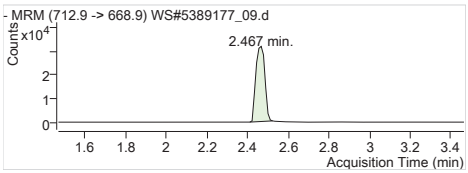



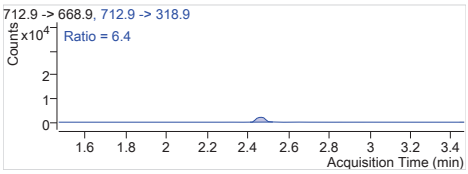

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 20.85 µg/L
Area ratio: 9.10772
Sample type: QC



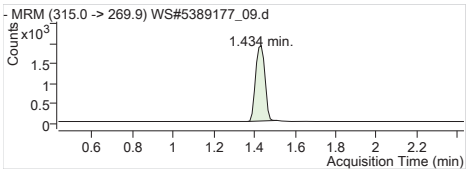



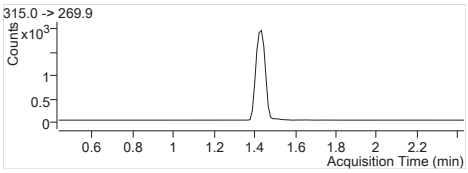

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 22.41 µg/L
Area ratio: 9.07569
Sample type: QC



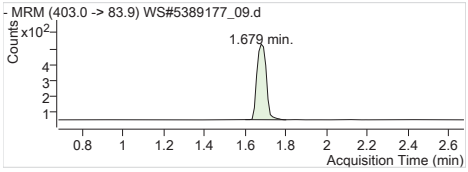



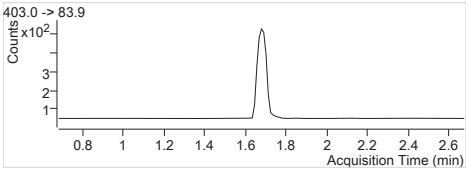

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 21.26 µg/L
Area ratio: 7.52307
Sample type: QC



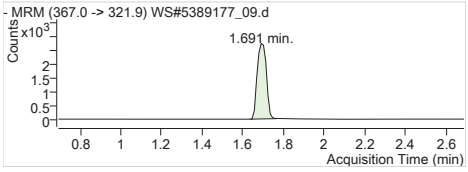



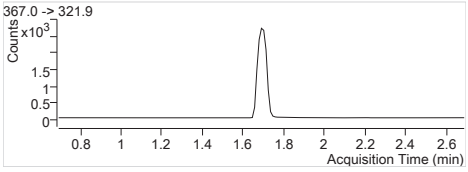

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 95.97 µg/L
Area ratio: 0.26907
Sample type: QC



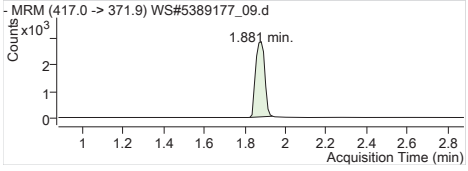



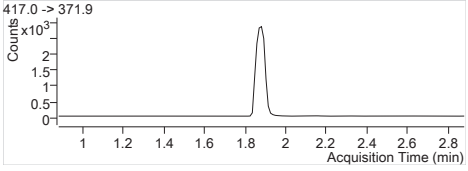

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 94.73 µg/L
Area ratio: 0.06842
Sample type: QC



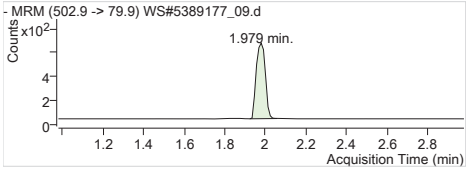



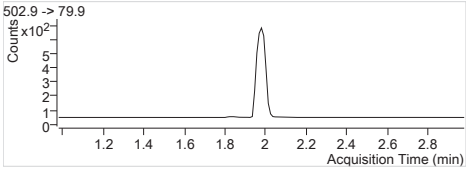

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 100.27 µg/L
Area ratio: 0.37391
Sample type: QC



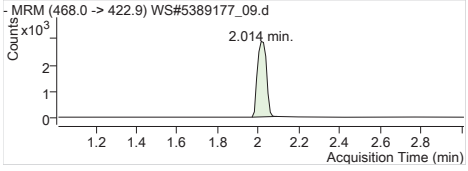



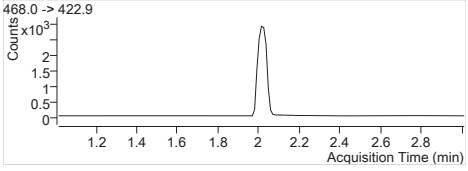

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 97.52 µg/L
Area ratio: 0.38912
Sample type: QC



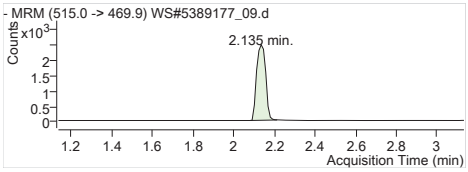



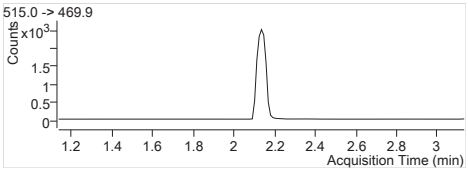

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 98.44 µg/L
Area ratio: 0.08719
Sample type: QC



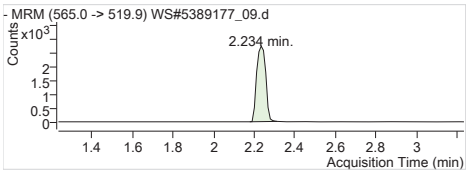



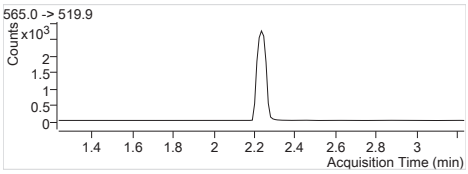

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 97.83 µg/L
Area ratio: 0.39352
Sample type: QC



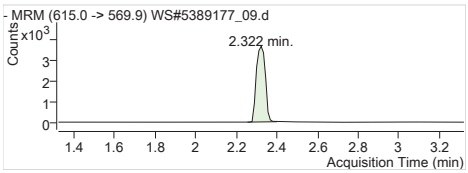



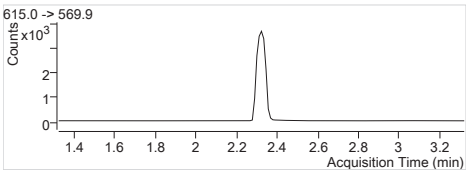

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 99.55 µg/L
Area ratio: 0.25074
Sample type: QC



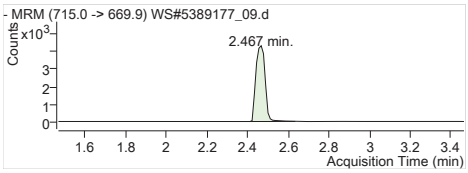



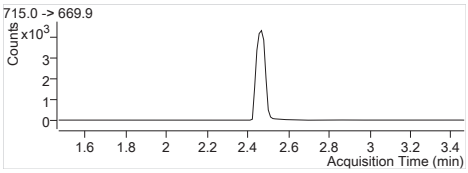

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 91.44 µg/L
Area ratio: 0.27469
Sample type: QC



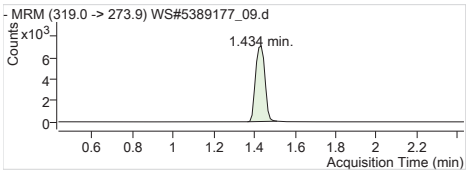



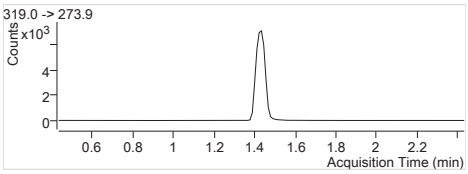

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 92.66 µg/L
Area ratio: 0.36721
Sample type: QC



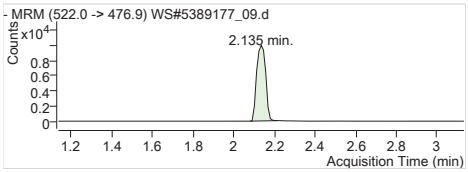



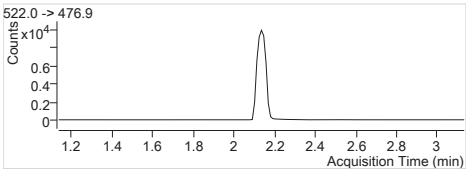

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 92.99 µg/L
Area ratio: 0.44104
Sample type: QC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 105.06 µg/L
Area ratio: 0
Sample type: QC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 106.77 µg/L
Area ratio: 0
Sample type: QC

# Quantitation Results

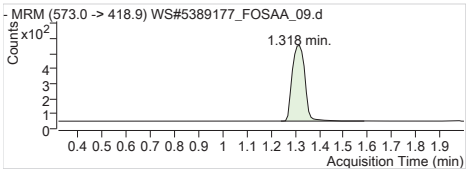
Agilent Technologies

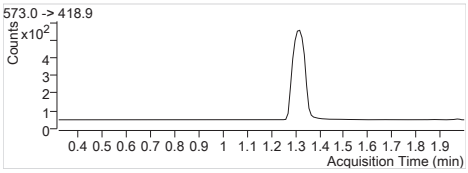
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ICV** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_09.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A9 |
| **Acq. Date** | 2018/02/08 6:20:51 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

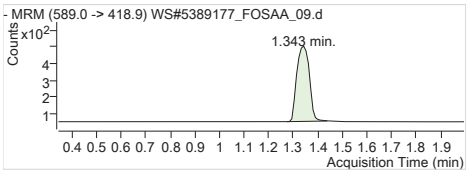
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1851 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1611 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 21894 | 0.91 | 1 µg/L | | |

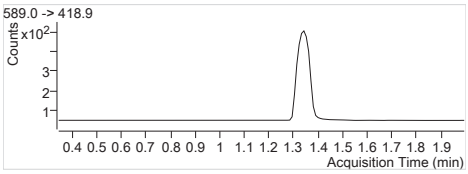
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 13924 | 1.31 | 20.80 | 20.64 µg/L | 99.22 |
| EtFOSAA 1 | 15250 | 1.34 | 20.80 | 22.43 µg/L | 107.82 |
| D3-MeFOSAA | 1829 | 1.32 | 100.00 | 100.28 µg/L | 100.28 |
| D5-EtFOSAA | 1645 | 1.34 | 100.00 | 99.01 µg/L | 99.01 |
| 13C9-PFDA | 21067 | 0.91 | 100.00 | 97.29 µg/L | 97.29 |



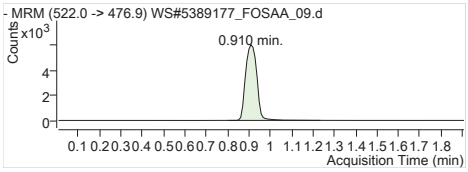



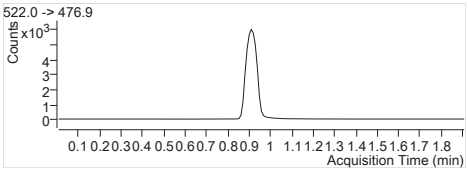

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: QC



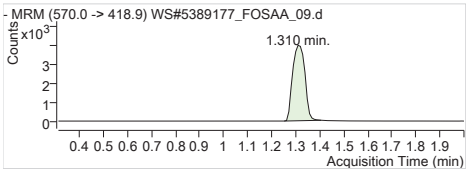



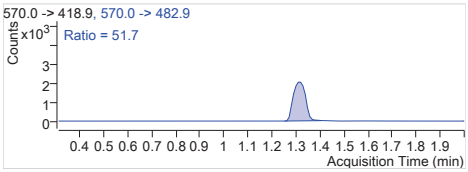

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: QC



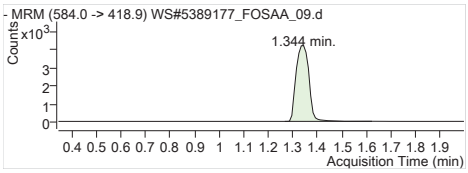



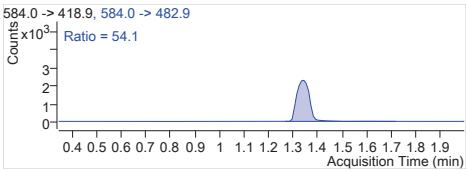

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: QC



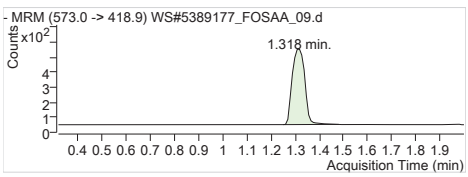



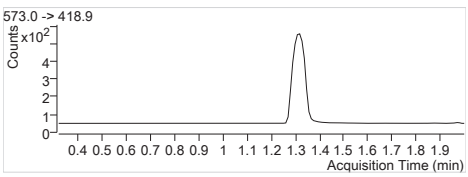

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 20.64 µg/L
Area ratio: 7.52242
Sample type: QC



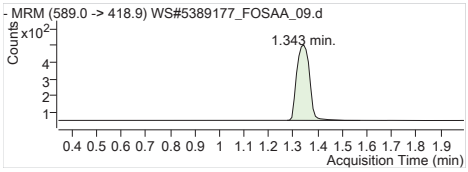



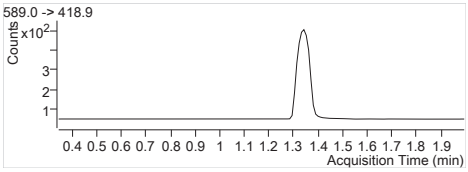

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 22.43 µg/L
Area ratio: 9.46617
Sample type: QC



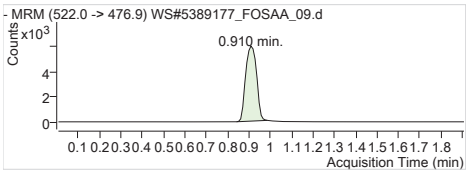



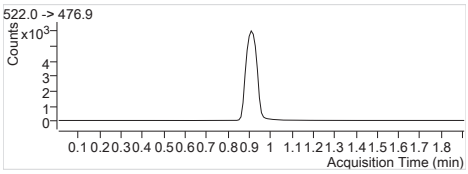

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 100.28 µg/L
Area ratio: 0.08354
Sample type: QC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 99.01 µg/L |
| Area ratio: | 0.07513 |
| Sample type: | QC |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 97.29 µg/L |
| Area ratio: | 0 |
| Sample type: | QC |

# Quantitation Results

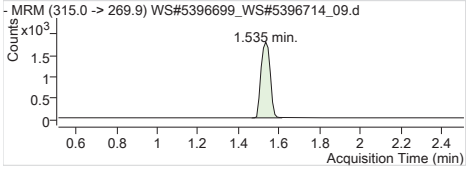
Agilent Technologies

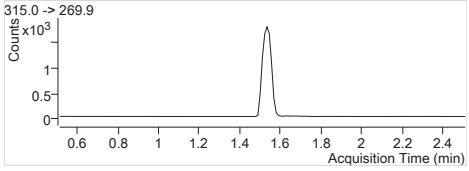
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ICV** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_09.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A9 |
| **Acq. Date** | 2018/02/15 4:50:23 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

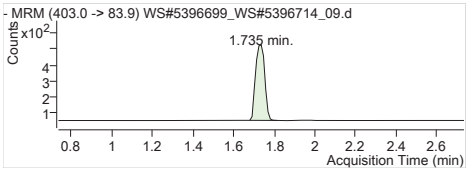
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5529 | 1.53 | 1 µg/L | | |
| MPFHxS | 1505 | 1.74 | 1 µg/L | | |
| MPFHpA | 7411 | 1.78 | 1 µg/L | | |
| MPFOA | 6554 | 1.95 | 1 µg/L | | |
| MPFOS | 1389 | 2.01 | 1 µg/L | | |
| MPFNA | 6226 | 2.09 | 1 µg/L | | |
| MPFDA | 4054 | 2.20 | 1 µg/L | | |
| MPFUnA | 5474 | 2.30 | 1 µg/L | | |
| MPFDoA | 7422 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6580 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 25213 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 25421 | 2.20 | 1 µg/L | | |

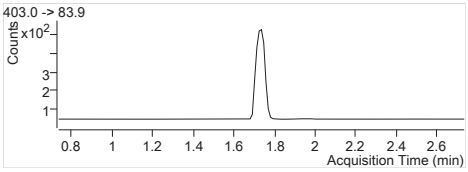
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 17721 | 1.20 | 20.80 | 17.01 µg/L | 81.78 |
| PFHxA 1 | 61706 | 1.53 | 20.80 | 20.55 µg/L | 98.82 |
| PFHxS 1 | 16572 | 1.74 | 20.80 | 16.37 µg/L | 78.68 |
| PFHpA 1 | 78076 | 1.78 | 20.80 | 18.17 µg/L | 87.35 |
| PFOA 1 | 82348 | 1.95 | 20.80 | 20.27 µg/L | 97.44 |
| PFOS 1 | 16060 | 2.01 | 20.80 | 21.23 µg/L | 102.05 |
| PFNA 1 | 64385 | 2.09 | 20.80 | 18.47 µg/L | 88.80 |
| PFDA 1 | 64300 | 2.20 | 20.80 | 21.67 µg/L | 104.17 |
| PFUnA 1 | 66871 | 2.29 | 20.80 | 20.47 µg/L | 98.40 |
| PFDoA 1 | 86416 | 2.38 | 20.80 | 20.26 µg/L | 97.38 |
| PFTrDA 1 | 88056 | 2.44 | 20.80 | 19.96 µg/L | 95.97 |
| PFTeDA 1 | 71404 | 2.51 | 20.80 | 20.36 µg/L | 97.89 |
| 13C2-PFHxA | 5508 | 1.53 | 100.00 | 92.75 µg/L | 92.75 |
| 18O2-PFHxS | 1505 | 1.74 | 100.00 | 108.72 µg/L | 108.72 |
| 13C4-PFHpA | 7411 | 1.78 | 100.00 | 104.60 µg/L | 104.60 |
| 13C4-PFOA | 6554 | 1.95 | 100.00 | 97.44 µg/L | 97.44 |
| 13C4-PFOS | 1389 | 2.01 | 100.00 | 89.35 µg/L | 89.35 |
| 13C5-PFNA | 6226 | 2.09 | 100.00 | 99.21 µg/L | 99.21 |
| 13C2-PFDA | 3987 | 2.20 | 100.00 | 86.37 µg/L | 86.37 |
| 13C2-PFUnA | 5474 | 2.30 | 100.00 | 91.59 µg/L | 91.59 |
| 13C2-PFDoA | 7422 | 2.38 | 100.00 | 95.40 µg/L | 95.40 |
| 13C2-PFTeDA | 6595 | 2.51 | 100.00 | 95.90 µg/L | 95.90 |
| 13C6-PFHxA | 25213 | 1.53 | 100.00 | 102.82 µg/L | 102.82 |
| 13C9-PFDA | 25421 | 2.20 | 100.00 | 104.41 µg/L | 104.41 |



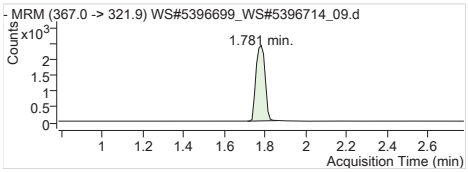



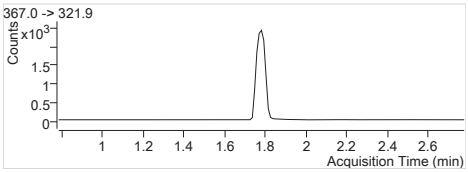

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | QC |



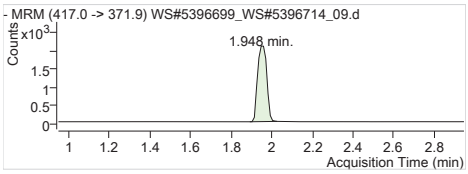



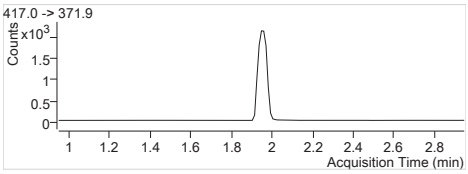

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: QC



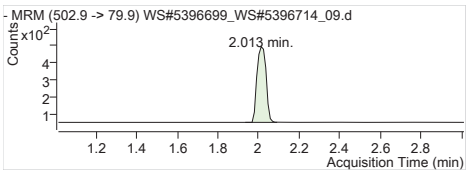



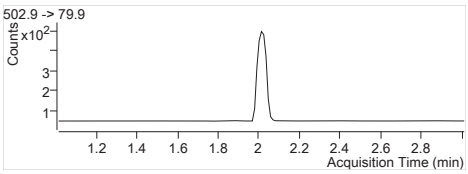

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: QC



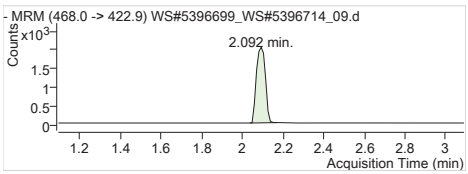



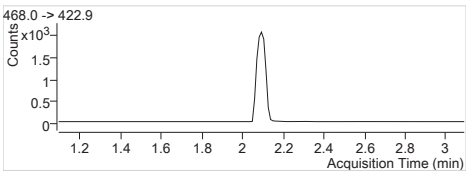

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: QC



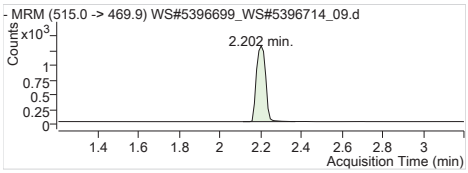



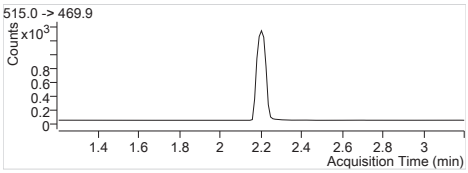

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: QC



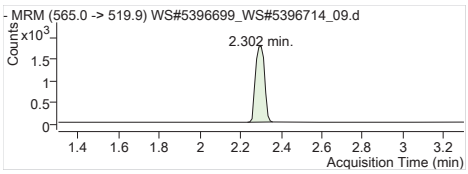



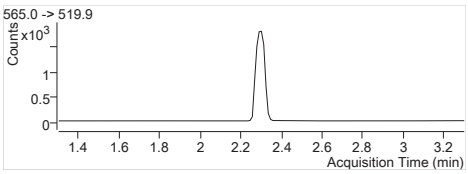

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: QC



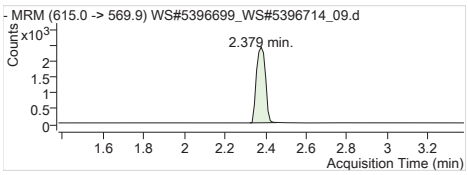



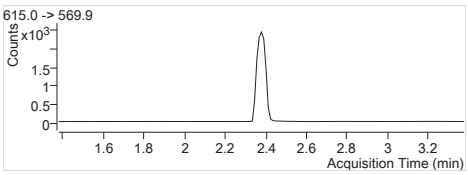

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: QC



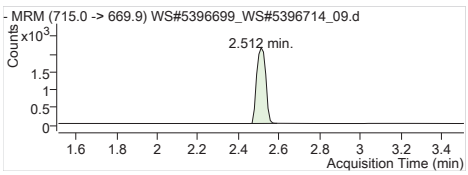



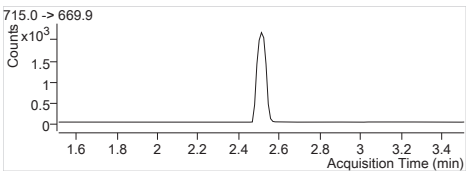

**MPFUnA** Internal Standard
RT (Exp. RT): 2.302 (2.302)
Concentration: 1 µg/L
Sample type: QC



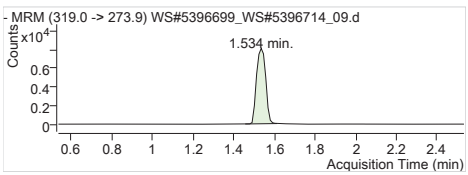



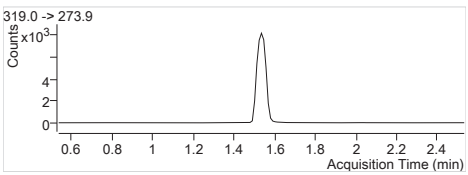

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: QC



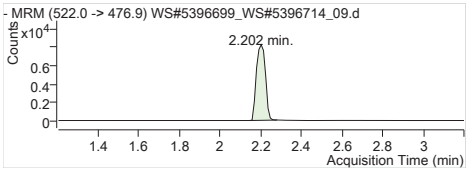



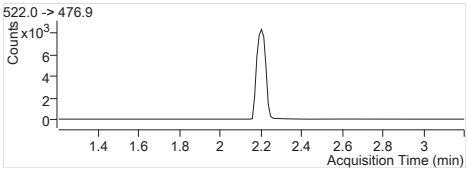

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: QC



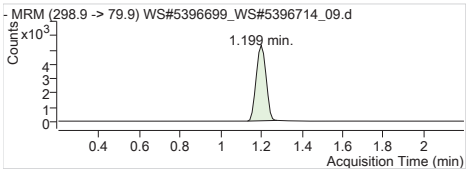



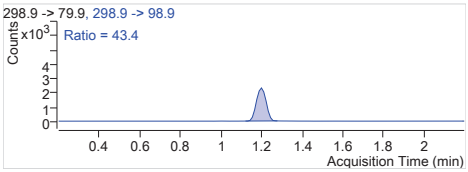

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: QC



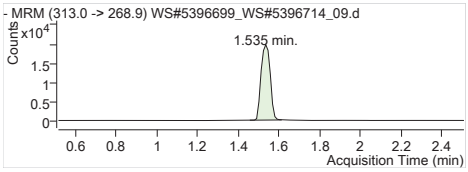



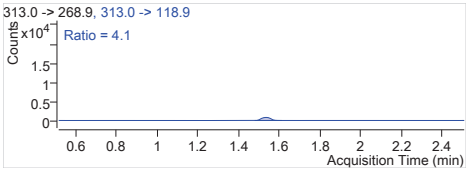

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: QC



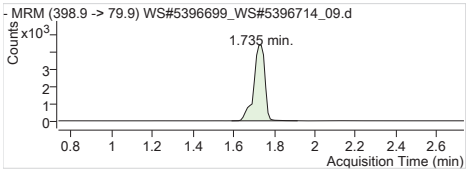



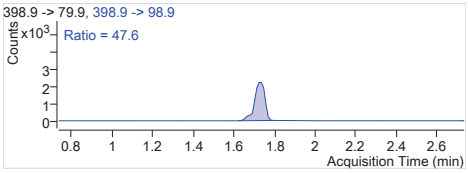

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.199 (1.199)
Calc. conc. 17.01 µg/L
Area ratio: 11.77475
Sample type: QC



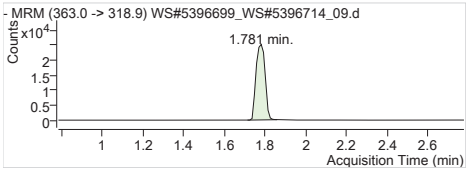



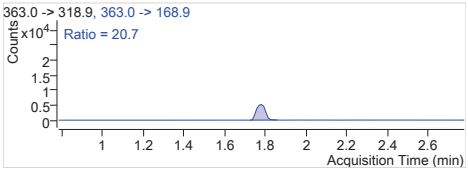

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 20.55 µg/L
Area ratio: 11.16043
Sample type: QC



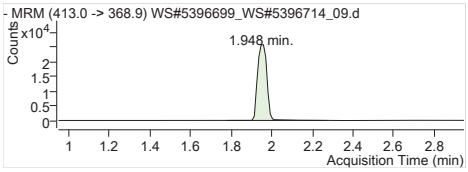



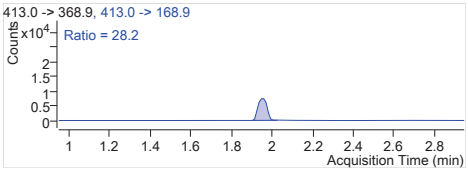

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.735 (1.735)
Calc. conc. 16.37 µg/L
Area ratio: 11.01130
Sample type: QC



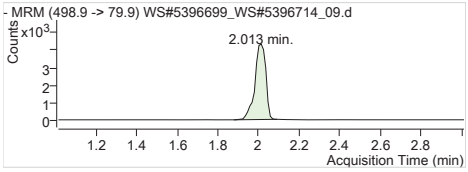



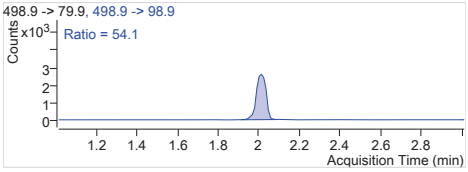

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 18.17 µg/L
Area ratio: 10.53515
Sample type: QC



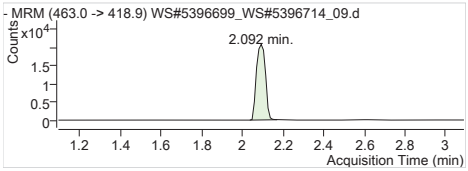



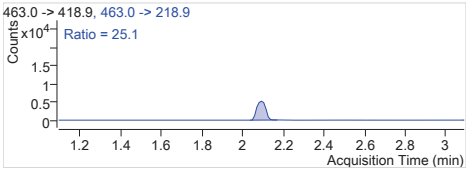

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.948 (1.948)
Calc. conc. 20.27 µg/L
Area ratio: 12.56454
Sample type: QC



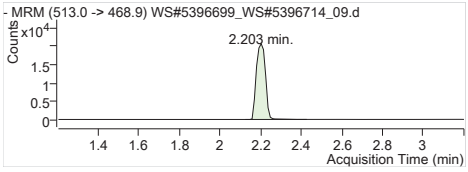



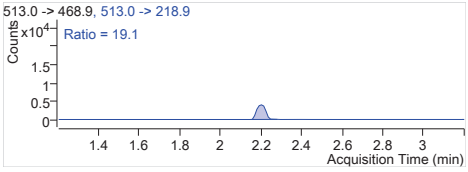

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 21.23 µg/L
Area ratio: 11.56228
Sample type: QC



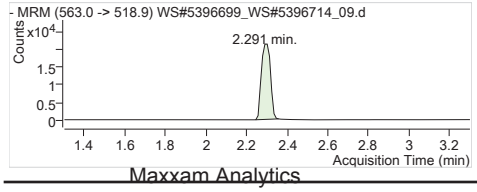



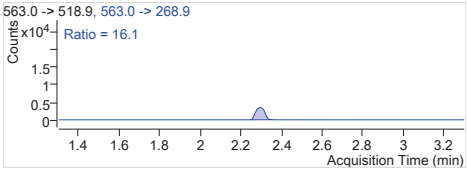

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 18.47 µg/L
Area ratio: 10.34131
Sample type: QC



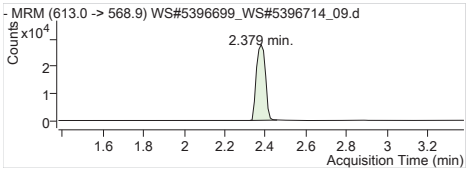



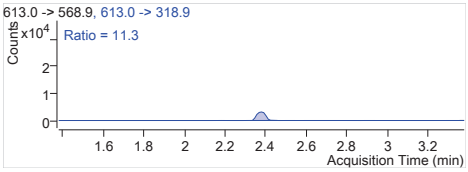

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 21.67 µg/L
Area ratio: 15.86088
Sample type: QC



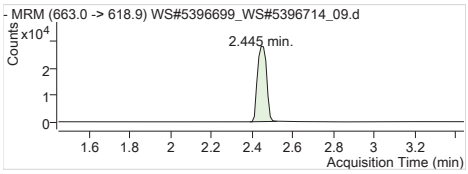



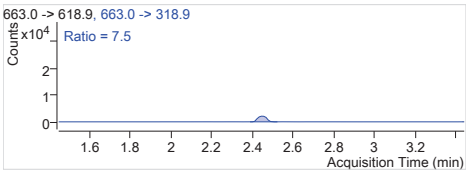

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.291 (2.302)
Calc. conc. 20.47 µg/L
Area ratio: 12.21611
Sample type: QC



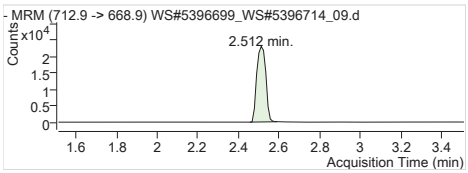



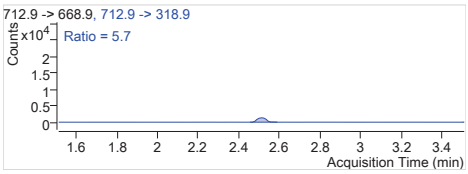

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.379 (2.379) |
| Calc. conc. | 20.26 µg/L |
| Area ratio: | 11.64322 |
| Sample type: | QC |



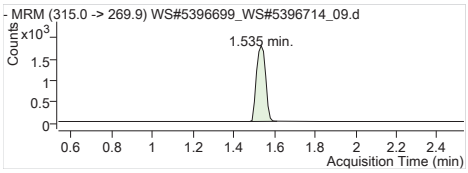



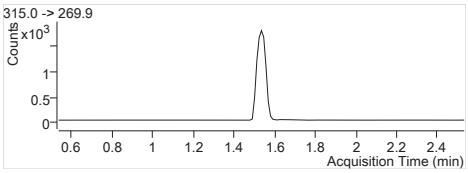

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.445 (2.445) |
| Calc. conc. | 19.96 µg/L |
| Area ratio: | 13.38237 |
| Sample type: | QC |



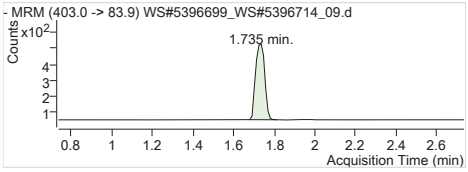



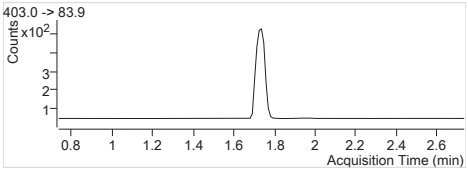

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.512 (2.512) |
| Calc. conc. | 20.36 µg/L |
| Area ratio: | 10.85167 |
| Sample type: | QC |



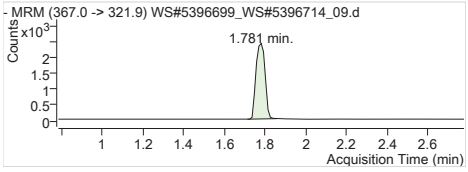



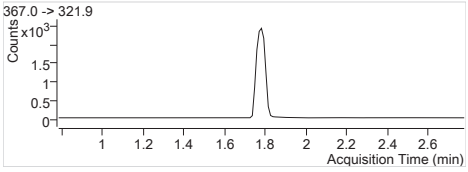

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 92.75 µg/L |
| Area ratio: | 0.21846 |
| Sample type: | QC |



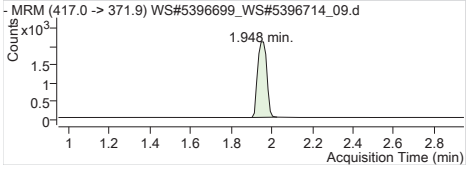



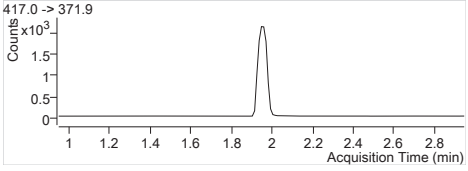

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.735 (1.735) |
| Calc. conc. | 108.72 µg/L |
| Area ratio: | 0.05969 |
| Sample type: | QC |



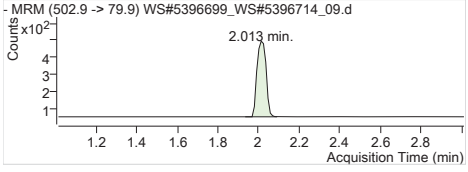



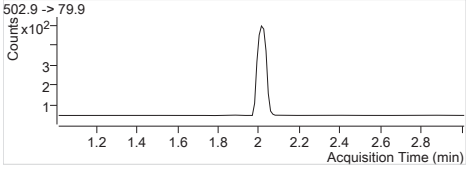

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.781 (1.781) |
| Calc. conc. | 104.60 µg/L |
| Area ratio: | 0.29394 |
| Sample type: | QC |



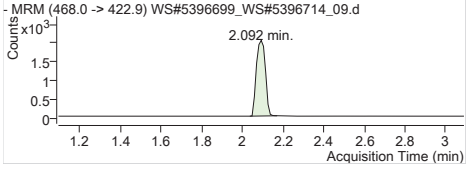



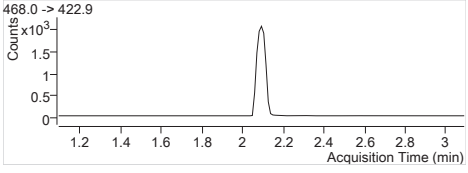

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.948 (1.948) |
| Calc. conc. | 97.44 µg/L |
| Area ratio: | 0.25995 |
| Sample type: | QC |



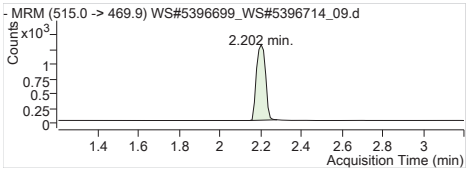



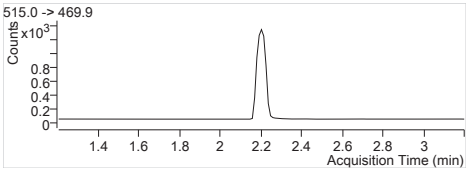

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 89.35 µg/L |
| Area ratio: | 0.05509 |
| Sample type: | QC |



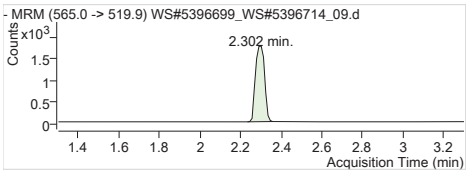



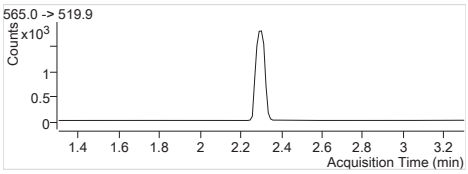

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 99.21 µg/L |
| Area ratio: | 0.24694 |
| Sample type: | QC |



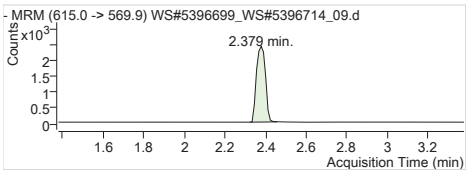



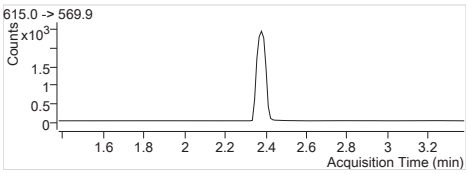

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 86.37 µg/L
Area ratio: 0.15684
Sample type: QC



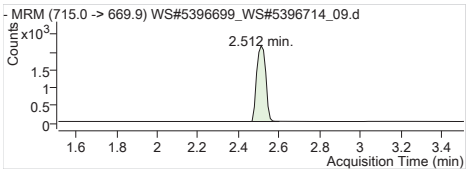



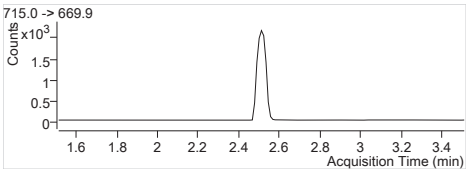

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 91.59 µg/L
Area ratio: 0.21533
Sample type: QC



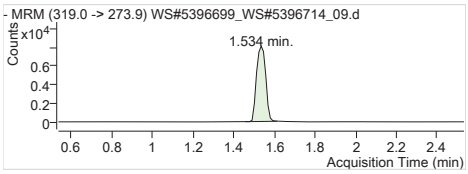



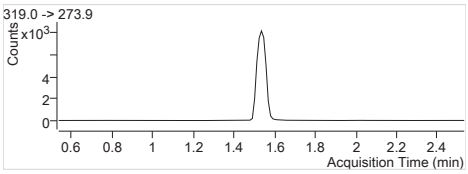

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 95.40 µg/L
Area ratio: 0.29196
Sample type: QC



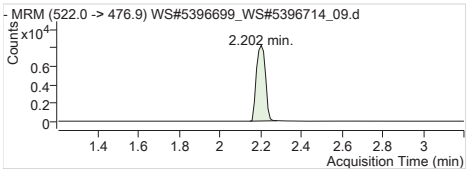



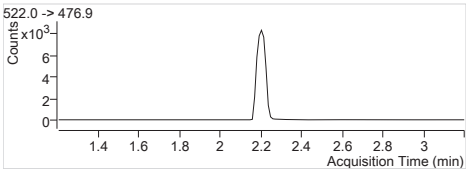

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 95.90 µg/L
Area ratio: 0.25943
Sample type: QC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 102.82 µg/L
Area ratio: 0
Sample type: QC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 104.41 µg/L
Area ratio: 0
Sample type: QC

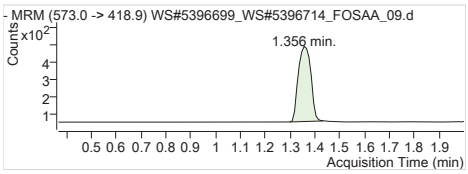
# Quantitation Results

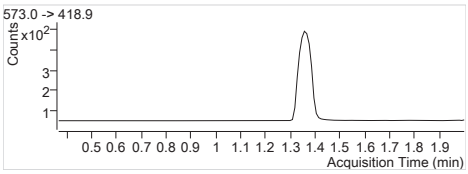
Agilent Technologies

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **ICV** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_09.d | **Operator** | |
| **Sample Type** | QC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A9 |
| **Acq. Date** | 2018/02/15 10:56:04 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

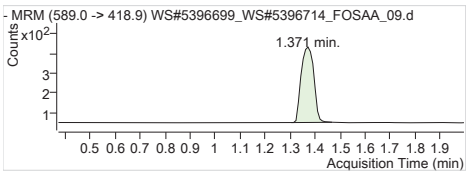
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1543 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1346 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 28101 | 1.11 | 1 µg/L | | |

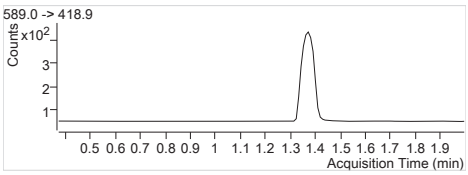
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 15484 | 1.36 | 20.80 | 20.01 µg/L | 96.20 |
| EtFOSAA 1 | 16102 | 1.37 | 20.80 | 20.34 µg/L | 97.78 |
| D3-MeFOSAA | 1575 | 1.36 | 100.00 | 101.81 µg/L | 101.81 |
| D5-EtFOSAA | 1357 | 1.37 | 100.00 | 100.73 µg/L | 100.73 |
| 13C9-PFDA | 27642 | 1.11 | 100.00 | 104.09 µg/L | 104.09 |



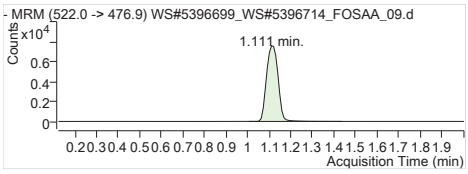



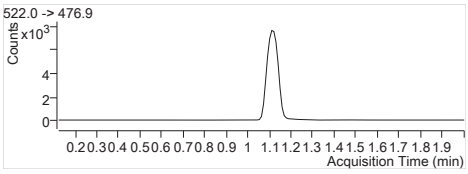

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: QC



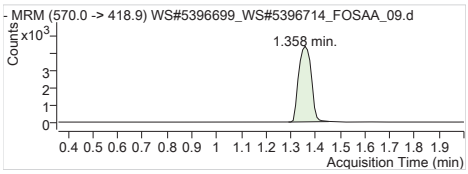



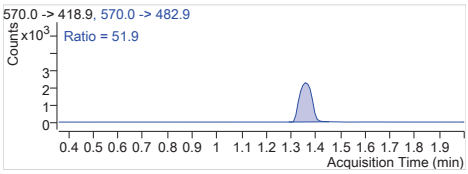

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: QC



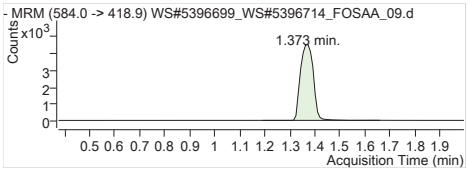



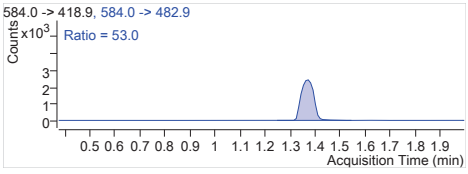

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.111 (1.121)
Concentration: 1 µg/L
Sample type: QC



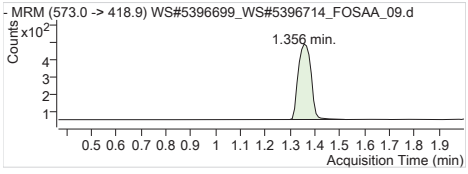



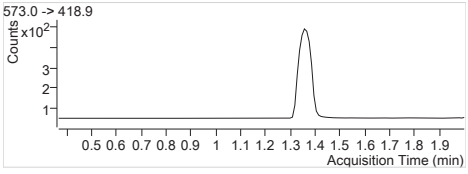

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.358 (1.358)
Calc. conc. 20.01 µg/L
Area ratio: 10.03500
Sample type: QC



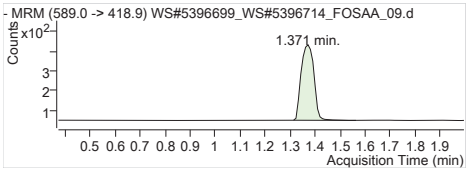



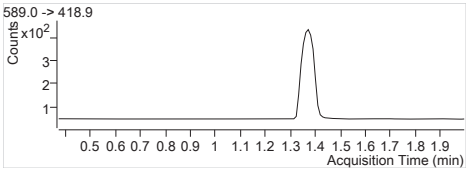

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.373 (1.373)
Calc. conc. 20.34 µg/L
Area ratio: 11.96285
Sample type: QC



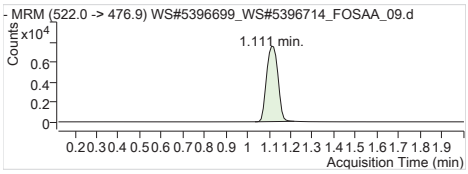



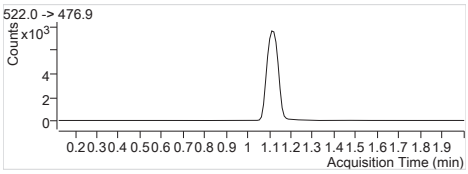

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 101.81 µg/L
Area ratio: 0.05605
Sample type: QC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 100.73 µg/L |
| Area ratio: | 0.04829 |
| Sample type: | QC |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.111 (1.121) |
| Calc. conc. | 104.09 µg/L |
| Area ratio: | 0 |
| Sample type: | QC |

# By Compound Report

Agilent Technologies

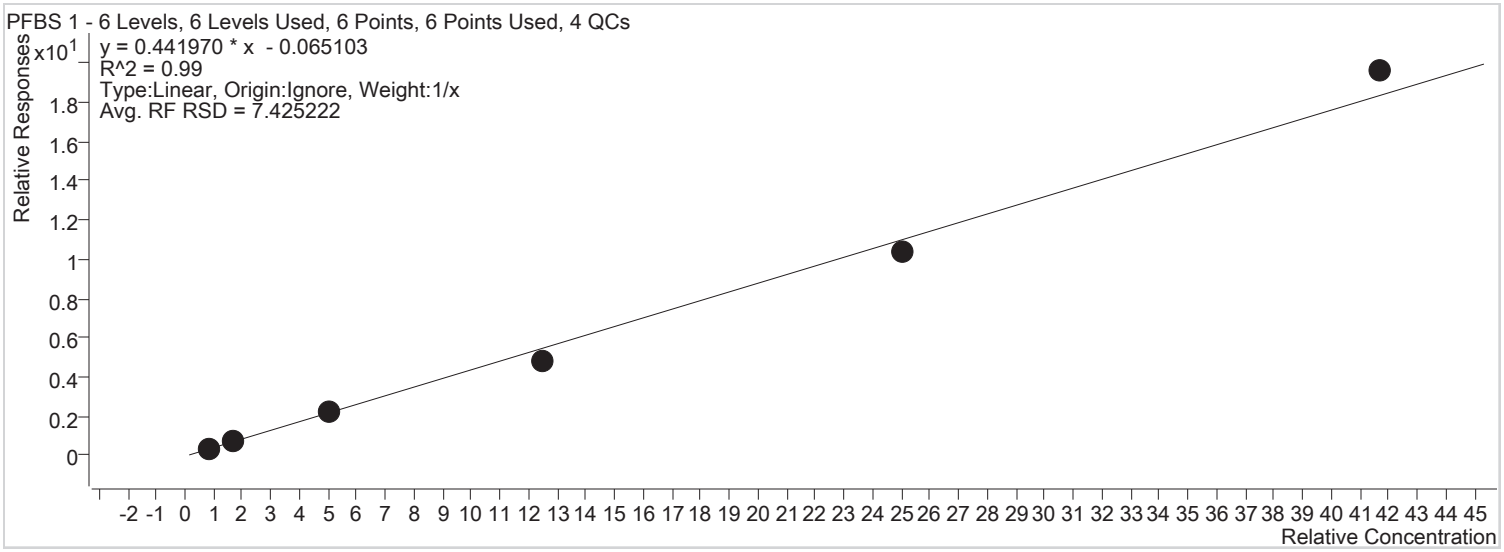
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFBS 1

**Internal Standard:** MPFHxS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.89 | 560 | 0.3948 | 57 | 107.1 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.77 | 1174 | 0.4229 | 207 | 104.3 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 5.00 | 3442 | 0.4289 | 103 | 100.0 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 10.92 | 7910 | 0.3810 | 165 | 87.4 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 23.59 | 18029 | 0.4145 | 120 | 94.4 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 44.55 | 30068 | 0.4707 | 187 | 106.8 |

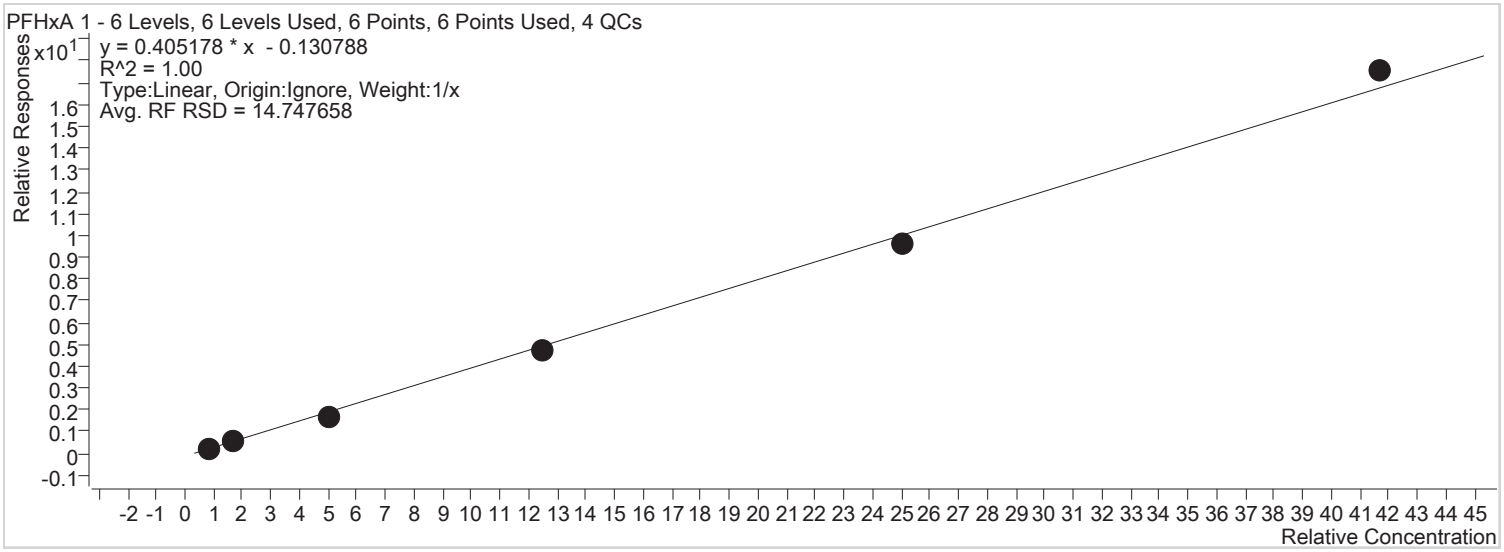
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFHxA 1

**Internal Standard:** MPFHxA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.86 | 1612 | 0.2639 | 65 | 104.0 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.86 | 4054 | 0.3665 | 319 | 109.5 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 4.56 | 11982 | 0.3431 | 1042 | 91.1 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.87 | 29220 | 0.3744 | 3543 | 95.0 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 23.94 | 67616 | 0.3827 | 2597 | 95.7 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 43.64 | 107039 | 0.4209 | 8065 | 104.6 |

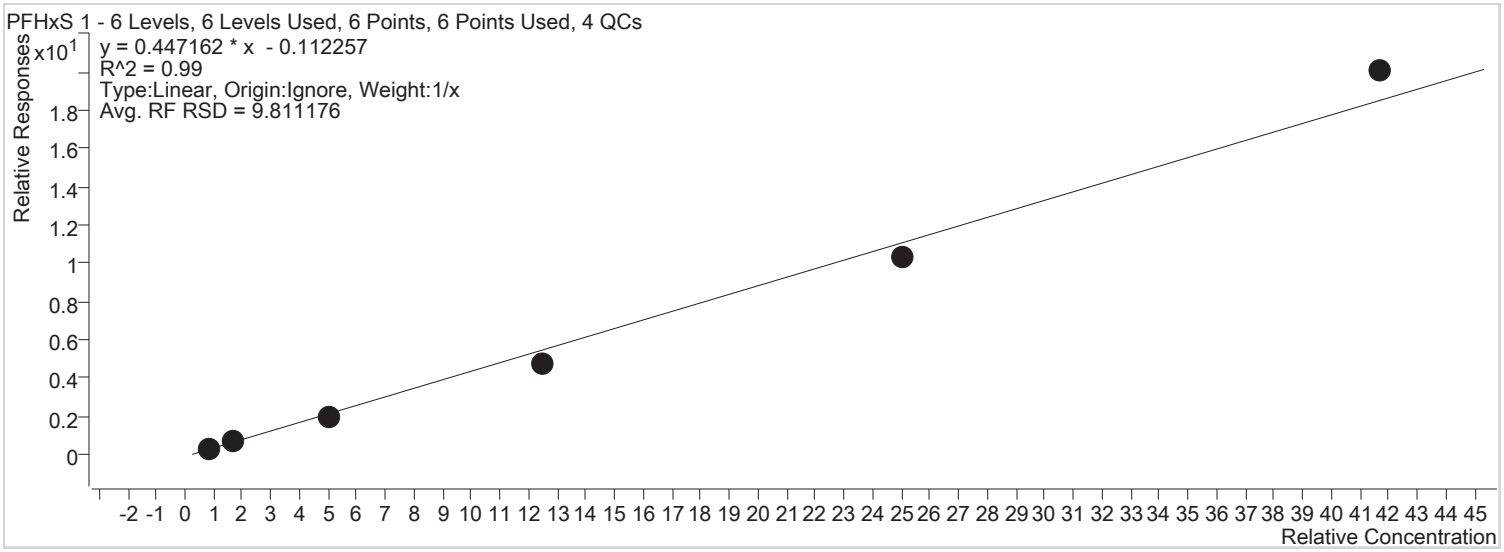
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFHxS 1

**Internal Standard:** MPFHxS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.94 | 524 | 0.3694 | 114 | 112.9 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.78 | 1115 | 0.4016 | 66 | 104.6 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 4.73 | 3214 | 0.4005 | 429 | 94.6 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 10.80 | 7832 | 0.3772 | 361 | 86.4 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 23.32 | 17949 | 0.4126 | 1264 | 93.3 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 45.17 | 30772 | 0.4817 | 2986 | 108.3 |

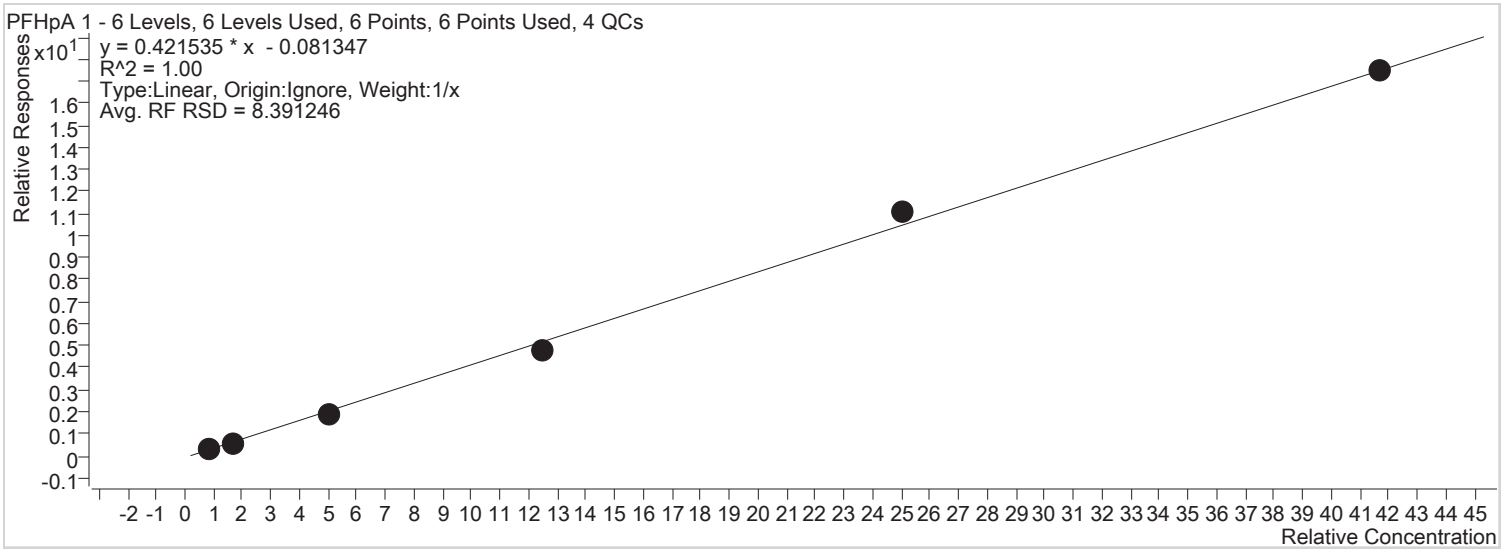
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFHpA 1

**Internal Standard:** MPFHpA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.96 | 2769 | 0.3900 | 28 | 115.8 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.63 | 5056 | 0.3562 | 60 | 95.9 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 4.55 | 15761 | 0.3676 | 190 | 91.1 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.43 | 38005 | 0.3789 | 352 | 91.4 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 26.49 | 87578 | 0.4433 | 1189 | 105.9 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 41.67 | 144581 | 0.4193 | 1765 | 99.9 |

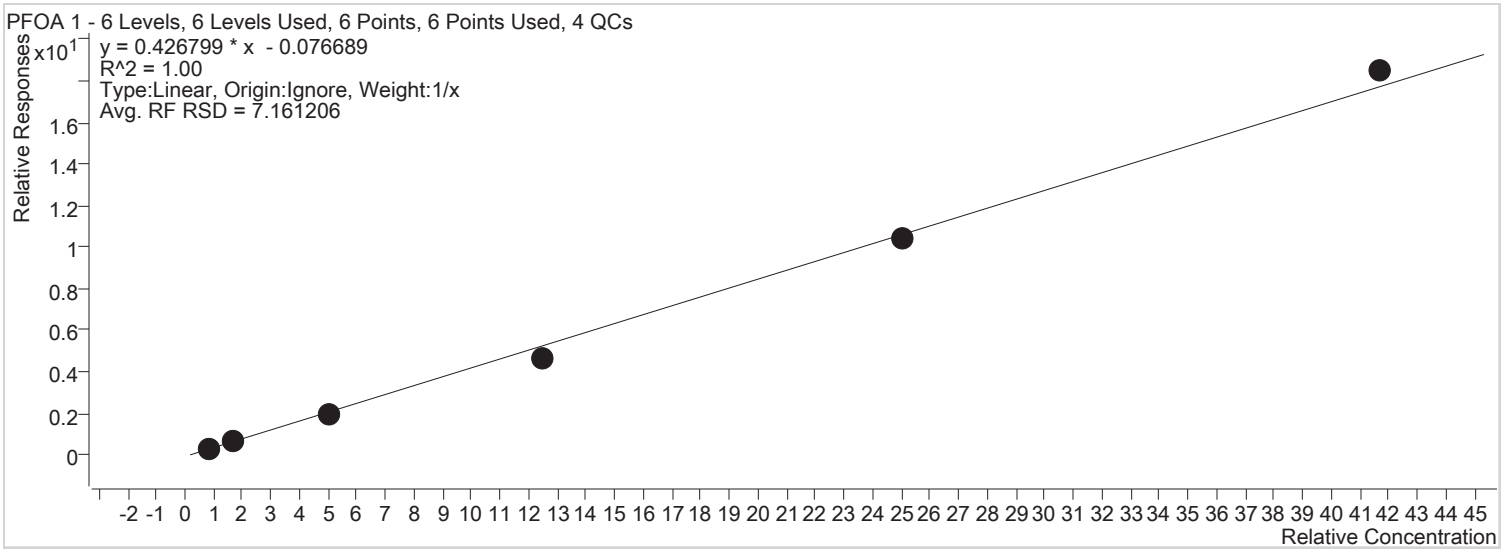
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFOA 1

**Internal Standard:** MPFOA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.89 | 2835 | 0.3675 | 27 | 107.8 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.77 | 5942 | 0.4001 | 55 | 104.3 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 4.82 | 17315 | 0.3960 | 251 | 96.4 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.06 | 42523 | 0.3716 | 363 | 88.5 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 24.69 | 94546 | 0.4184 | 1057 | 98.7 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 43.49 | 154971 | 0.4433 | 1698 | 104.3 |

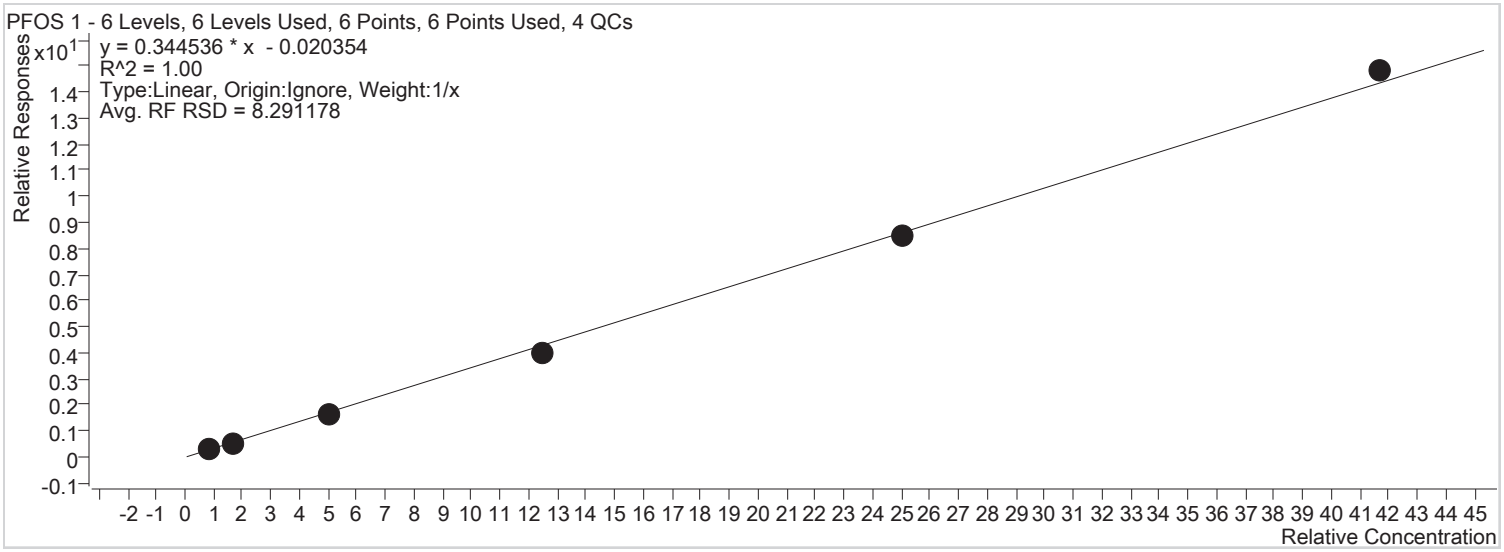
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFOS 1

**Internal Standard:** MPFOS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.97 | 592 | 0.3794 | 90 | 117.2 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.54 | 961 | 0.2993 | 162 | 90.3 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 4.87 | 3310 | 0.3318 | 213 | 97.5 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.63 | 7727 | 0.3190 | 147 | 93.1 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 24.66 | 17307 | 0.3390 | 292 | 98.6 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 43.06 | 29880 | 0.3553 | 242 | 103.3 |

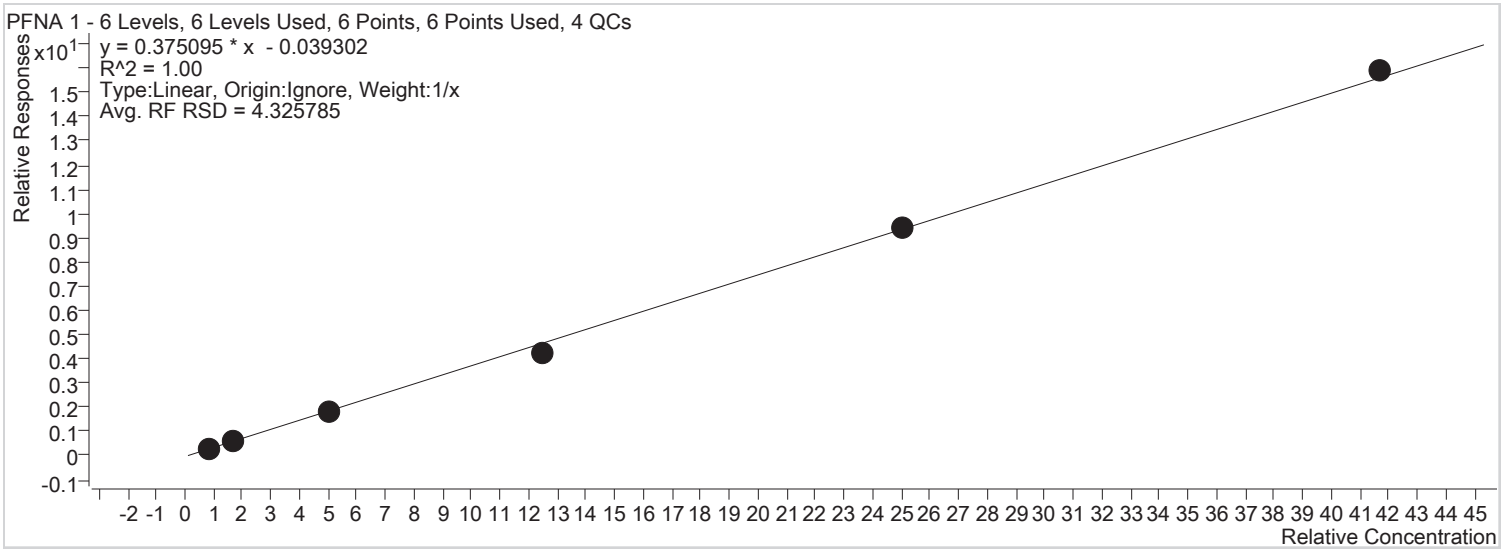
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFNA 1

**Internal Standard:** MPFNA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.88 | 2562 | 0.3499 | 48 | 105.9 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.71 | 5291 | 0.3533 | 151 | 100.4 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 4.95 | 16213 | 0.3636 | 293 | 99.0 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.49 | 37466 | 0.3417 | 727 | 91.9 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 25.23 | 84183 | 0.3770 | 1433 | 100.9 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 42.47 | 137494 | 0.3811 | 1911 | 101.9 |

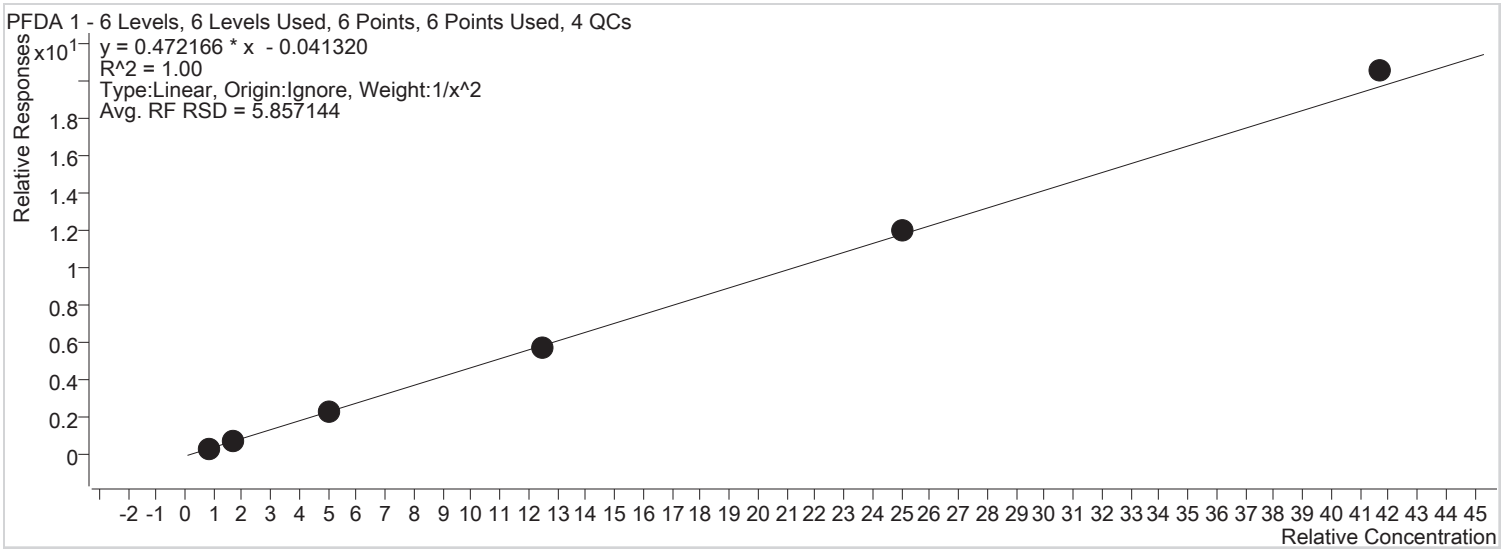
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFDA 1

**Internal Standard:** MPFDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.86 | 2686 | 0.4377 | 29 | 103.3 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.60 | 5351 | 0.4187 | 62 | 93.8 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 4.92 | 16796 | 0.4562 | 188 | 98.4 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 12.26 | 39281 | 0.4599 | 409 | 98.1 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 25.54 | 87430 | 0.4806 | 700 | 102.1 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 43.49 | 147759 | 0.4915 | 1476 | 104.3 |

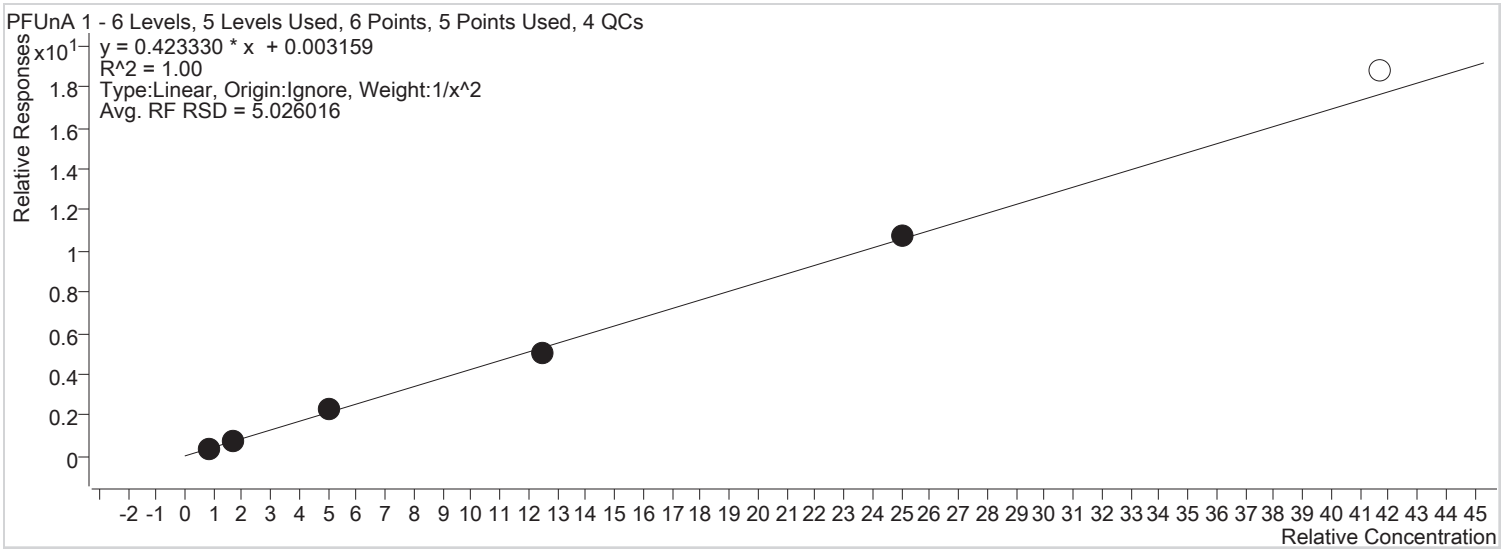
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFUnA 1

**Internal Standard:** MPFUnA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.85 | 3117 | 0.4360 | 20 | 102.1 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.60 | 5994 | 0.3998 | 71 | 94.0 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 5.32 | 19129 | 0.4508 | 113 | 106.3 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.98 | 42745 | 0.4059 | 217 | 95.8 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 25.43 | 96084 | 0.4308 | 236 | 101.7 |
| STD 6 | STD 6 | | 2018/02/06 6:36:29 PM | 41.70 | 44.42 | 162248 | 0.4511 | 303 | 106.5 |

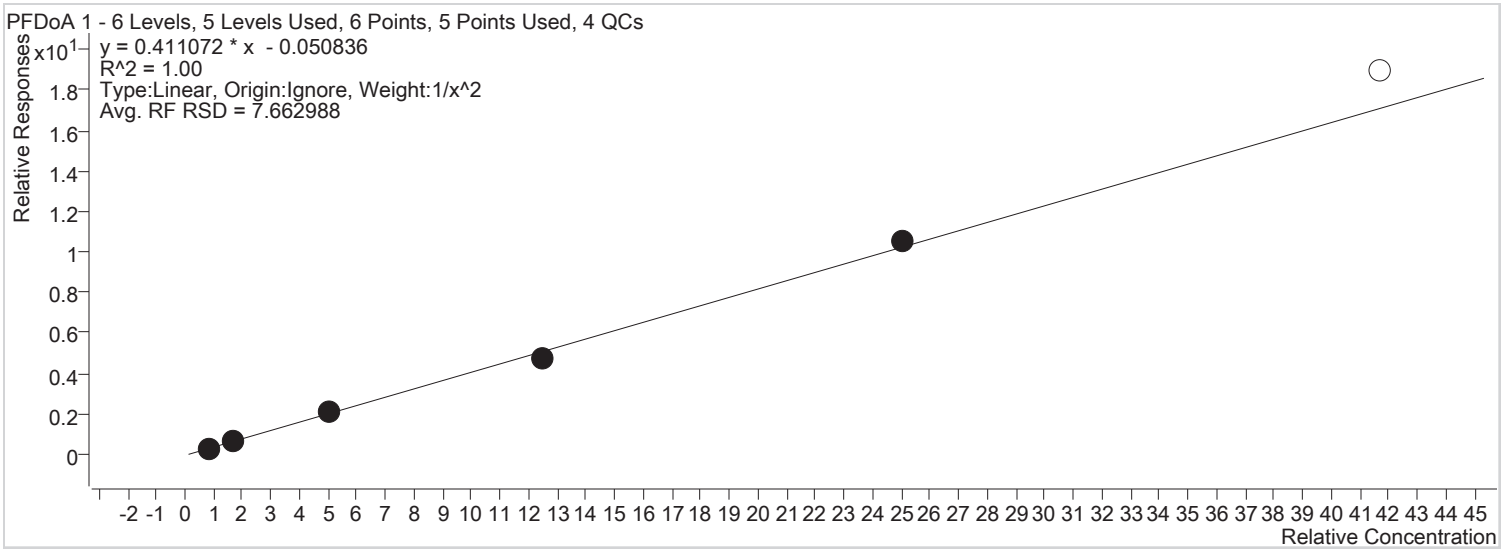
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFDoA 1

**Internal Standard:** MPFDoA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.82 | 3531 | 0.3457 | 89 | 99.0 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.73 | 7517 | 0.3894 | 128 | 102.0 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 5.11 | 23281 | 0.4097 | 657 | 102.1 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.67 | 54842 | 0.3799 | 1503 | 93.4 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 25.87 | 122186 | 0.4233 | 2081 | 103.5 |
| STD 6 | STD 6 | | 2018/02/06 6:36:29 PM | 41.70 | 46.23 | 206576 | 0.4545 | 3325 | 110.9 |

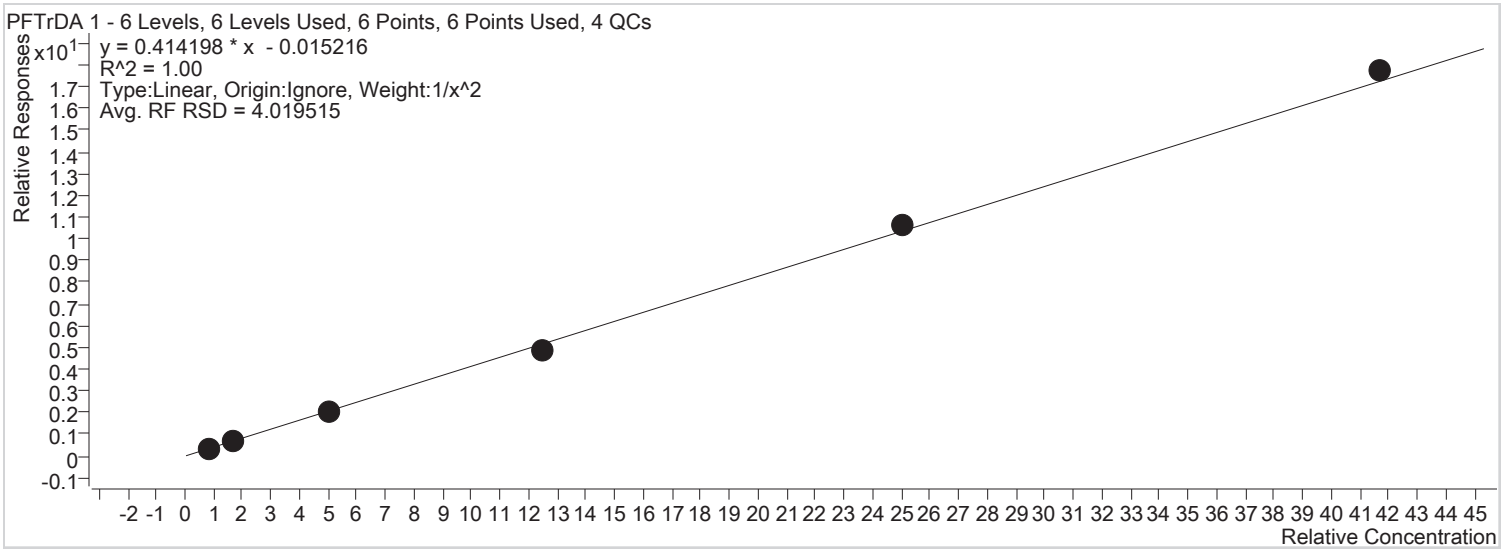
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFTrDA 1

**Internal Standard:** MPFTeDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.84 | 4399 | 0.4002 | 42 | 101.0 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.67 | 8288 | 0.3973 | 53 | 98.1 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 5.05 | 27306 | 0.4149 | 174 | 100.9 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.72 | 61125 | 0.3871 | 125 | 93.8 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 25.85 | 138442 | 0.4277 | 142 | 103.4 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 42.87 | 231782 | 0.4255 | 161 | 102.8 |

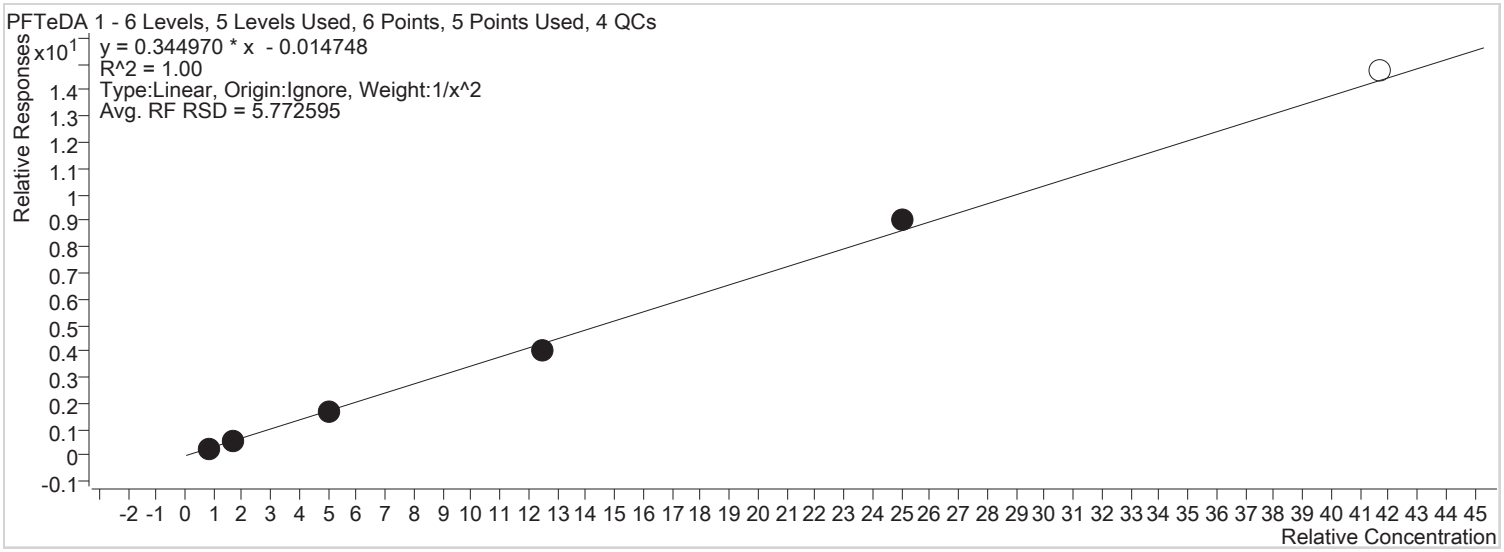
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFTeDA 1

**Internal Standard:** MPFTeDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.81 | 3520 | 0.3202 | 18 | 98.0 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.79 | 7406 | 0.3550 | 45 | 105.4 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 4.89 | 22027 | 0.3347 | 86 | 97.9 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.67 | 50660 | 0.3209 | 113 | 93.4 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 26.34 | 117482 | 0.3629 | 124 | 105.4 |
| STD 6 | STD 6 | | 2018/02/06 6:36:29 PM | 41.70 | 42.78 | 192586 | 0.3535 | 126 | 102.6 |

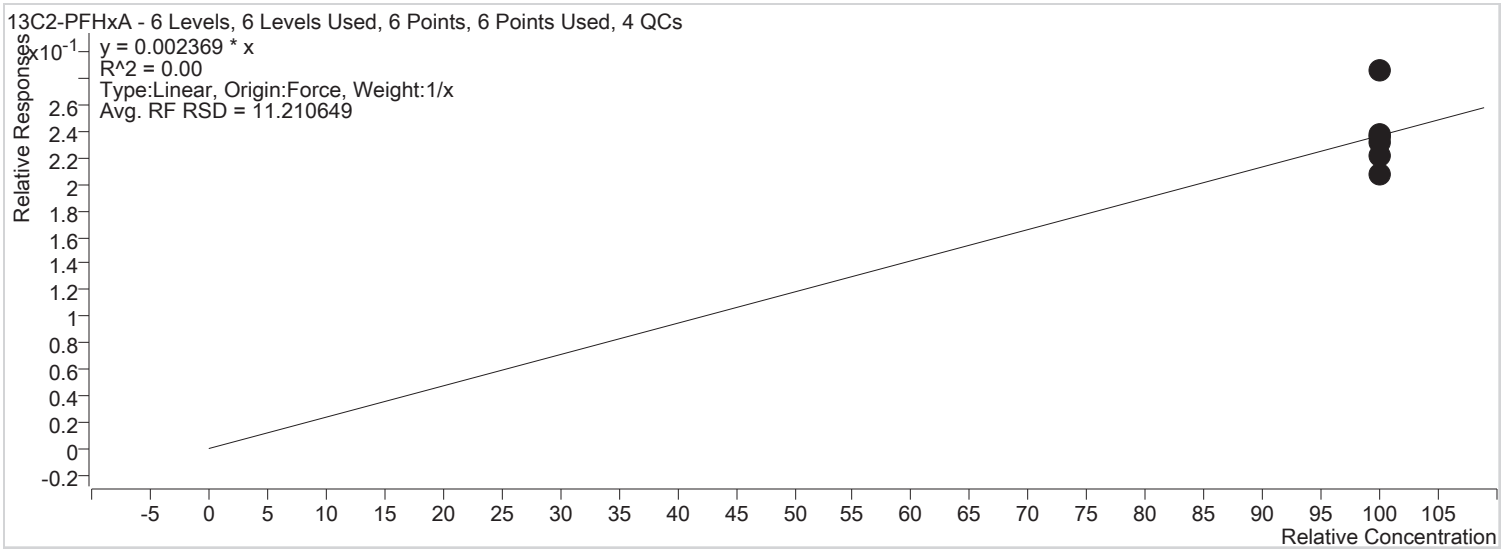
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** 13C2-PFHxA

**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 100.00 | 120.68 | 7360 | 0.0029 | 243 | 120.7 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 100.00 | 98.14 | 6506 | 0.0023 | 235 | 98.1 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 100.00 | 100.18 | 6984 | 0.0024 | 241 | 100.2 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 100.00 | 93.61 | 6243 | 0.0022 | 181 | 93.6 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 100.00 | 99.89 | 7067 | 0.0024 | 332 | 99.9 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 100.00 | 87.49 | 6099 | 0.0021 | 578 | 87.5 |

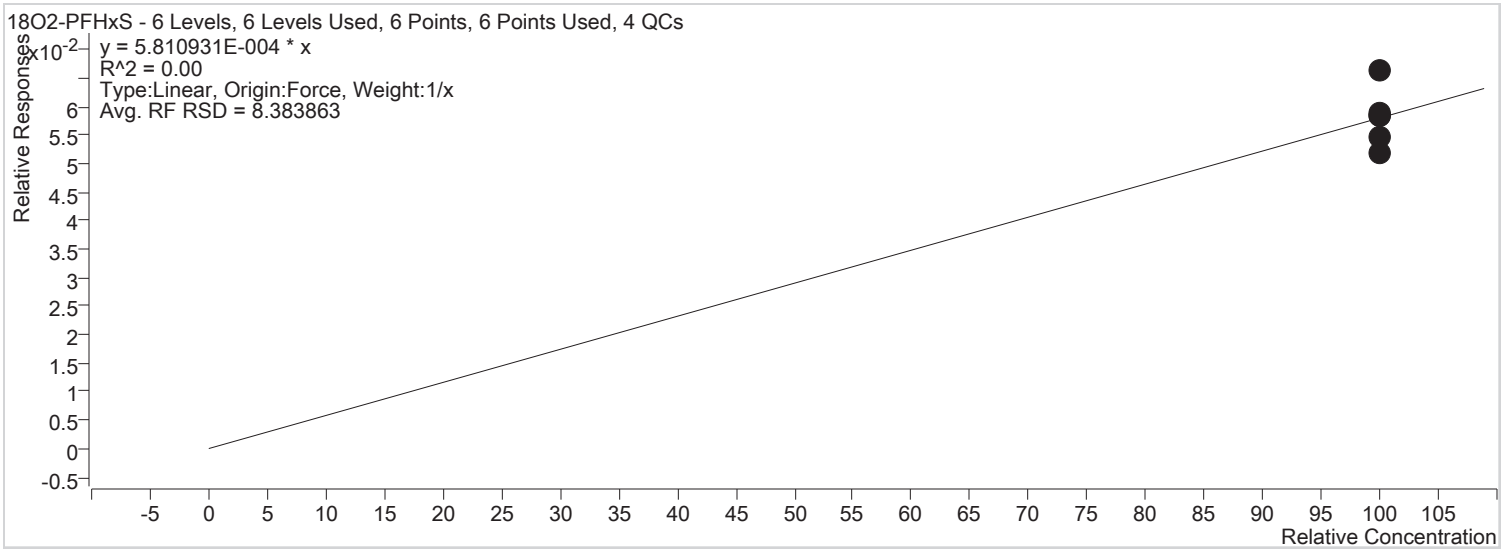
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** 18O2-PFHxS

**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 100.00 | 114.25 | 1709 | 0.0007 | 183 | 114.3 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 100.00 | 100.43 | 1633 | 0.0006 | 267 | 100.4 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 100.00 | 93.87 | 1605 | 0.0005 | 292 | 93.9 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 100.00 | 101.55 | 1661 | 0.0006 | 211 | 101.6 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 100.00 | 100.28 | 1740 | 0.0006 | 239 | 100.3 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 100.00 | 89.61 | 1532 | 0.0005 | 317 | 89.6 |

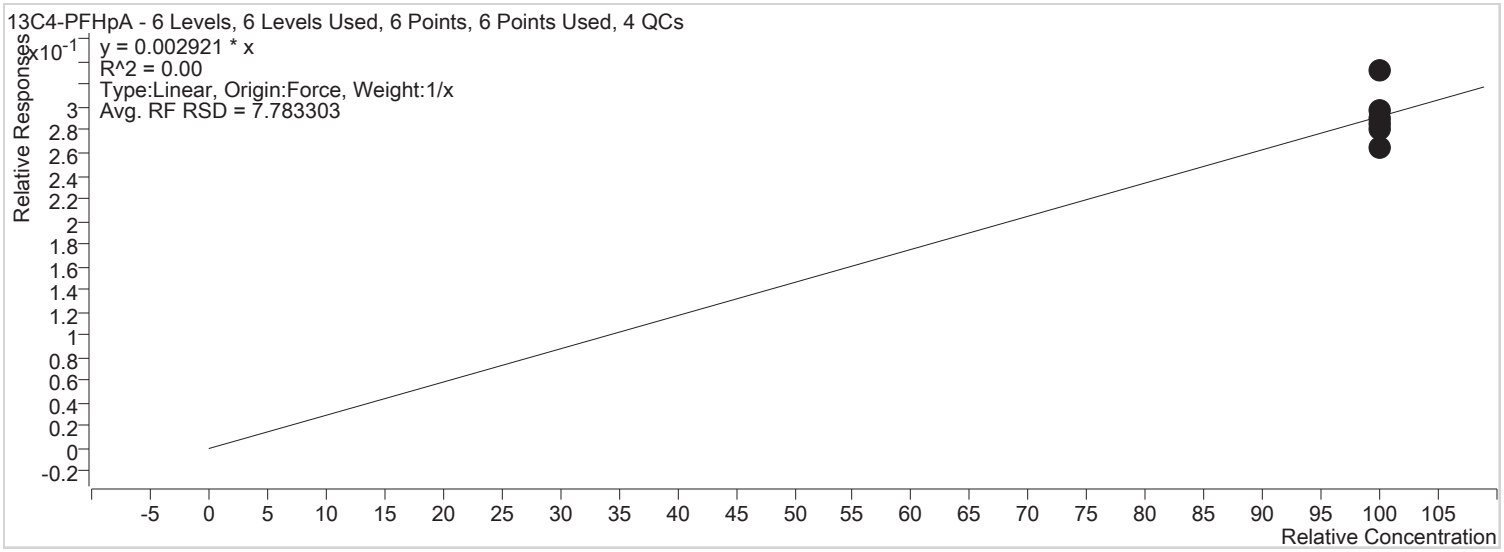
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** 13C4-PFHpA

**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 100.00 | 113.76 | 8555 | 0.0033 | 103 | 113.8 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 100.00 | 102.13 | 8349 | 0.0030 | 204 | 102.1 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 100.00 | 99.74 | 8574 | 0.0029 | 469 | 99.7 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 100.00 | 97.58 | 8024 | 0.0029 | 316 | 97.6 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 100.00 | 90.59 | 7902 | 0.0026 | 366 | 90.6 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 100.00 | 96.20 | 8269 | 0.0028 | 667 | 96.2 |

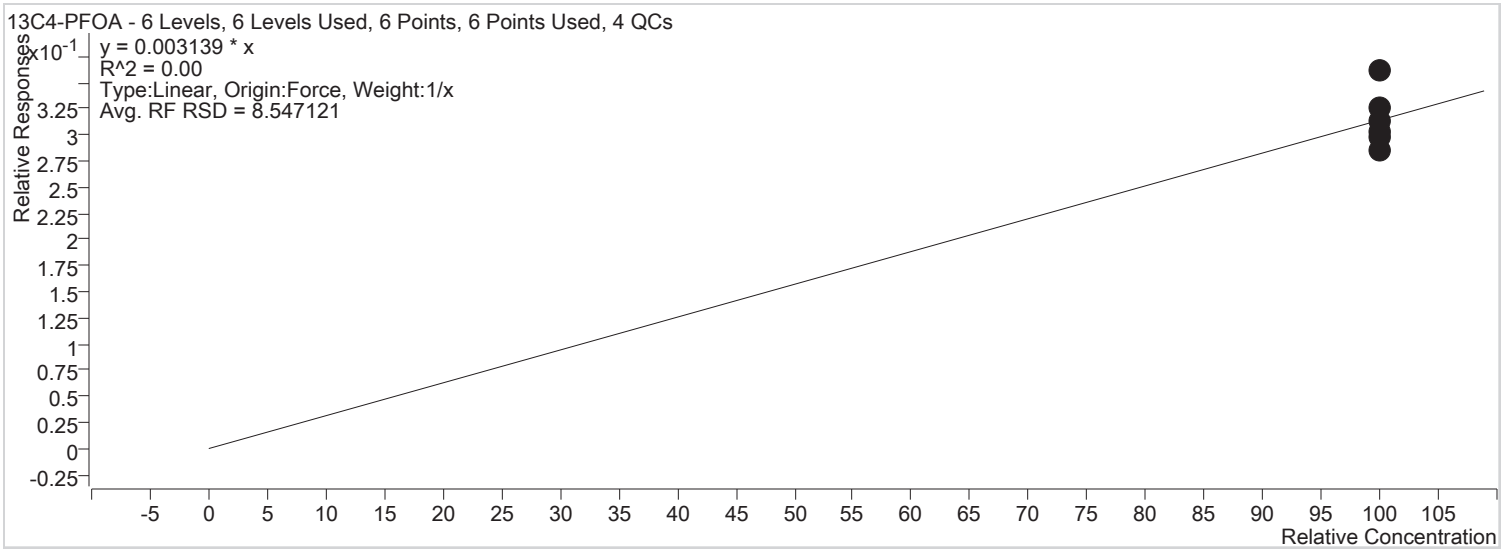
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** 13C4-PFOA

**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 100.00 | 115.02 | 9294 | 0.0036 | 363 | 115.0 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 100.00 | 99.46 | 8736 | 0.0031 | 219 | 99.5 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 100.00 | 94.68 | 8745 | 0.0030 | 189 | 94.7 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 100.00 | 103.62 | 9155 | 0.0033 | 280 | 103.6 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 100.00 | 96.44 | 9039 | 0.0030 | 230 | 96.4 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 100.00 | 90.77 | 8383 | 0.0028 | 186 | 90.8 |

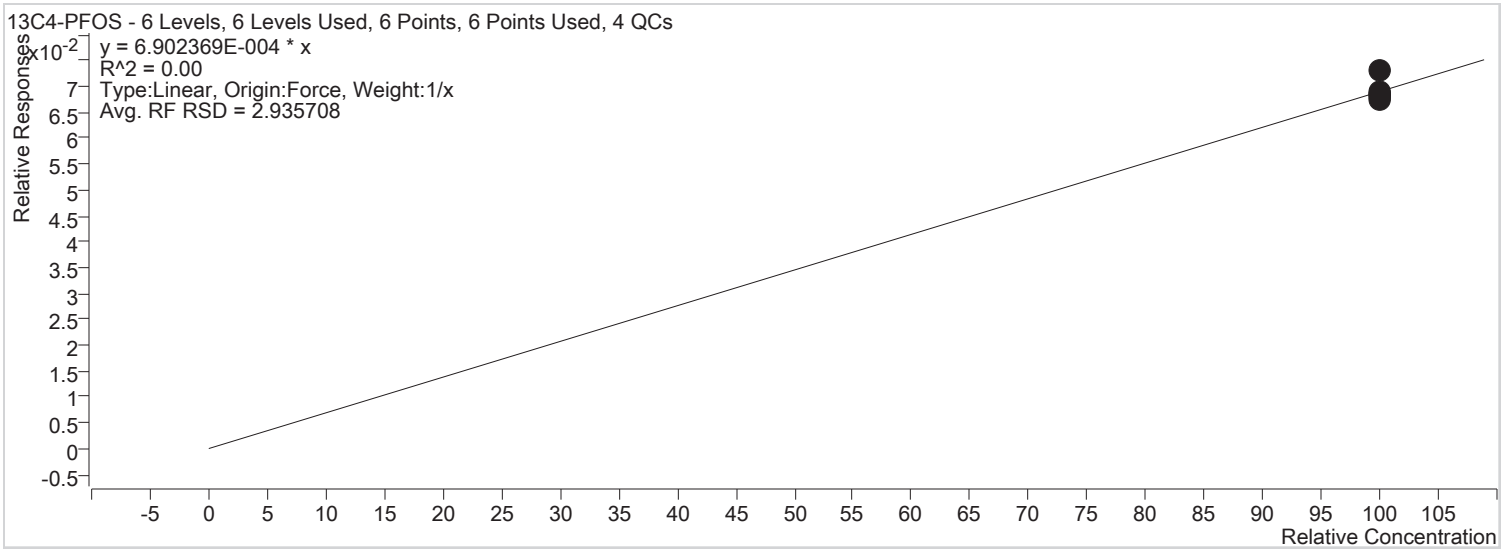
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** 13C4-PFOS

**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 100.00 | 105.81 | 1880 | 0.0007 | 201 | 105.8 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 100.00 | 97.81 | 1889 | 0.0007 | 284 | 97.8 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 100.00 | 98.23 | 1995 | 0.0007 | 153 | 98.2 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 100.00 | 99.75 | 1938 | 0.0007 | 321 | 99.8 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 100.00 | 99.08 | 2042 | 0.0007 | 139 | 99.1 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 100.00 | 99.32 | 2017 | 0.0007 | 398 | 99.3 |

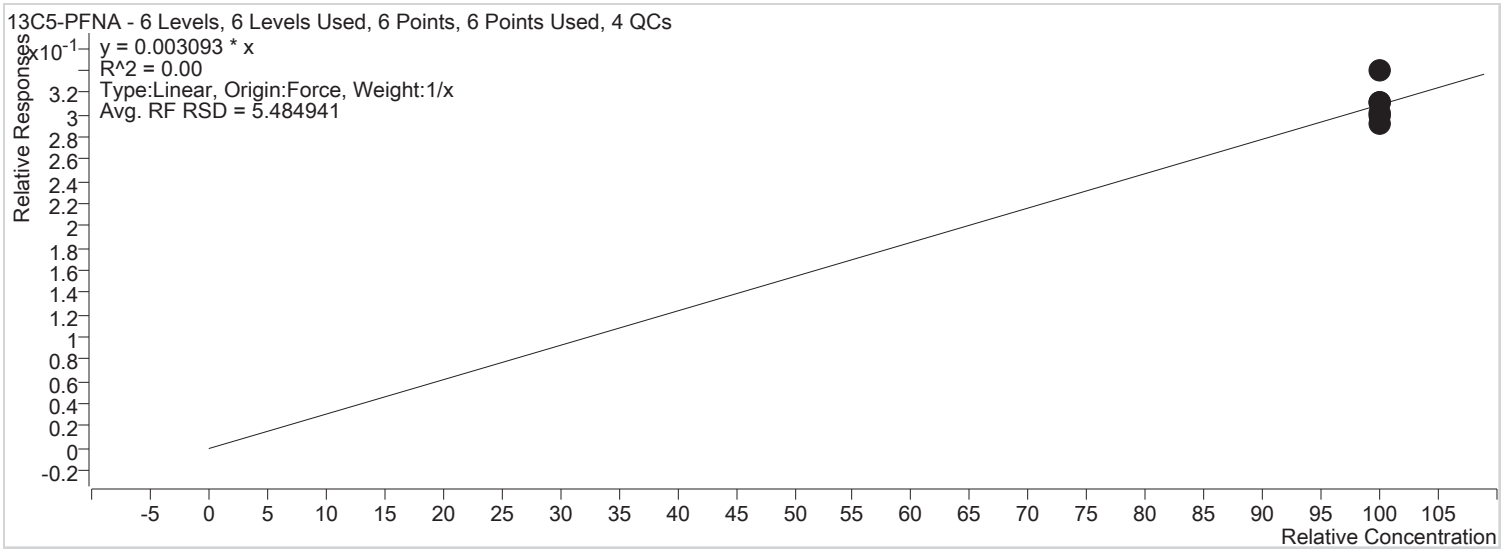
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** 13C5-PFNA

**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 100.00 | 109.89 | 8749 | 0.0034 | 149 | 109.9 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 100.00 | 101.06 | 8746 | 0.0031 | 224 | 101.1 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 100.00 | 97.30 | 8855 | 0.0030 | 136 | 97.3 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 100.00 | 100.75 | 8771 | 0.0031 | 551 | 100.8 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 100.00 | 96.73 | 8933 | 0.0030 | 340 | 96.7 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 100.00 | 94.26 | 8578 | 0.0029 | 162 | 94.3 |

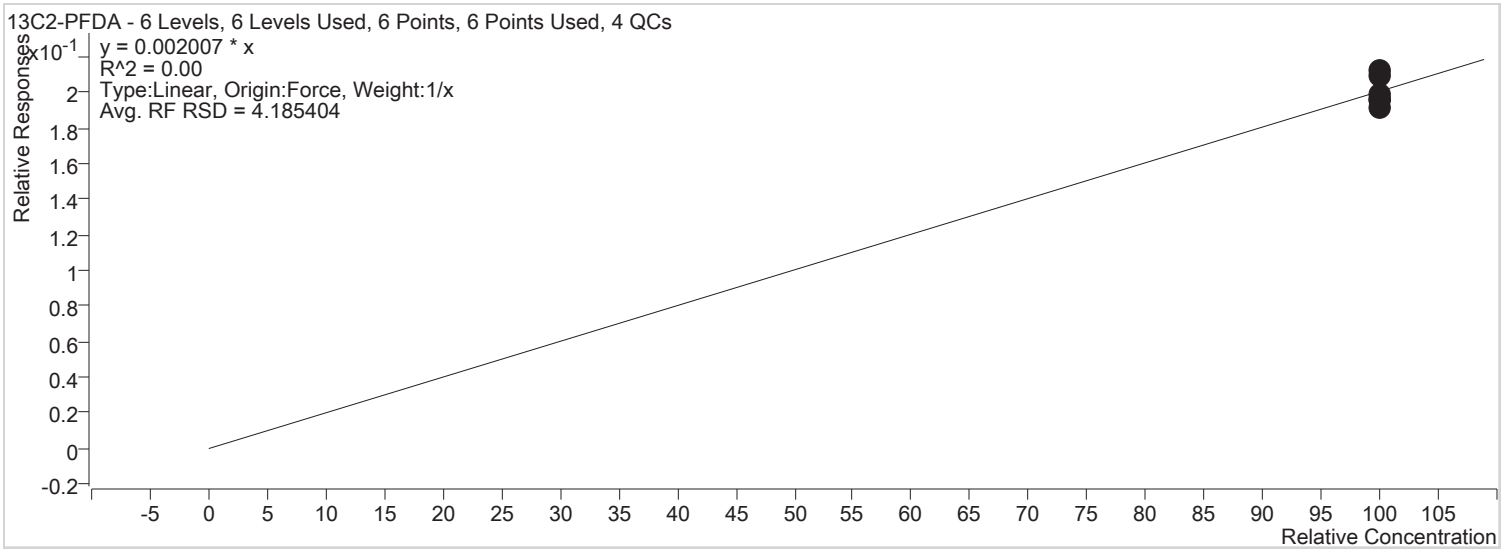
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** 13C2-PFDA

**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 100.00 | 105.73 | 7298 | 0.0021 | 271 | 105.7 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 100.00 | 104.50 | 7451 | 0.0021 | 298 | 104.5 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 100.00 | 97.75 | 7249 | 0.0020 | 269 | 97.8 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 100.00 | 95.15 | 6743 | 0.0019 | 250 | 95.2 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 100.00 | 97.70 | 7229 | 0.0020 | 358 | 97.7 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 100.00 | 99.16 | 7078 | 0.0020 | 223 | 99.2 |

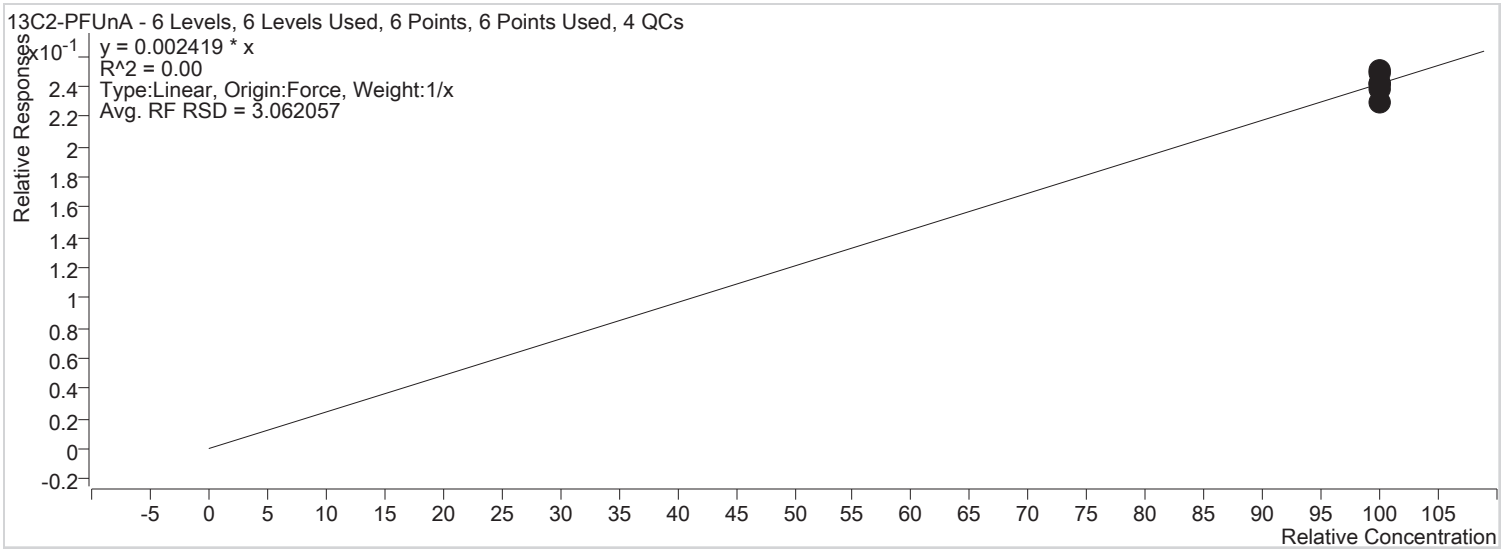
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** 13C2-PFUnA

**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 100.00 | 103.52 | 8613 | 0.0025 | 213 | 103.5 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 100.00 | 102.63 | 8820 | 0.0025 | 181 | 102.6 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 100.00 | 94.94 | 8486 | 0.0023 | 159 | 94.9 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 100.00 | 98.62 | 8424 | 0.0024 | 194 | 98.6 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 100.00 | 100.04 | 8922 | 0.0024 | 328 | 100.0 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 100.00 | 100.26 | 8626 | 0.0024 | 297 | 100.3 |

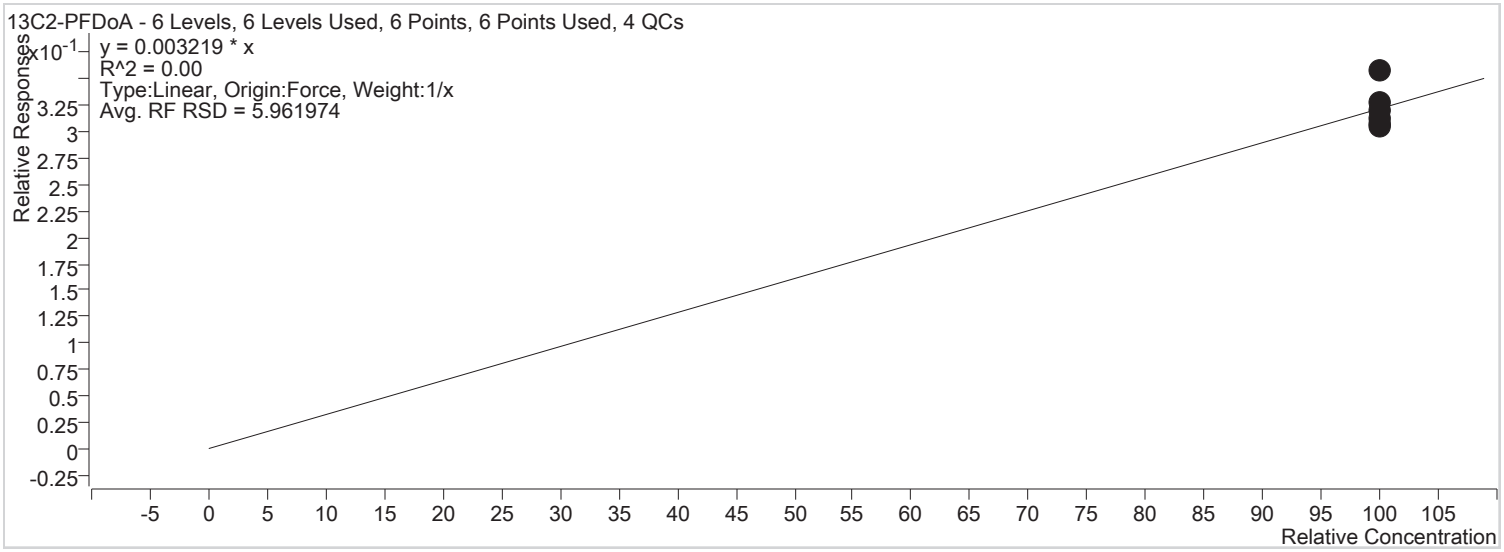
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** 13C2-PFDoA

**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 100.00 | 111.14 | 12307 | 0.0036 | 222 | 111.1 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 100.00 | 99.27 | 11355 | 0.0032 | 304 | 99.3 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 100.00 | 95.54 | 11366 | 0.0031 | 199 | 95.5 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 100.00 | 101.60 | 11550 | 0.0033 | 223 | 101.6 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 100.00 | 97.26 | 11545 | 0.0031 | 165 | 97.3 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 100.00 | 95.18 | 10899 | 0.0031 | 205 | 95.2 |

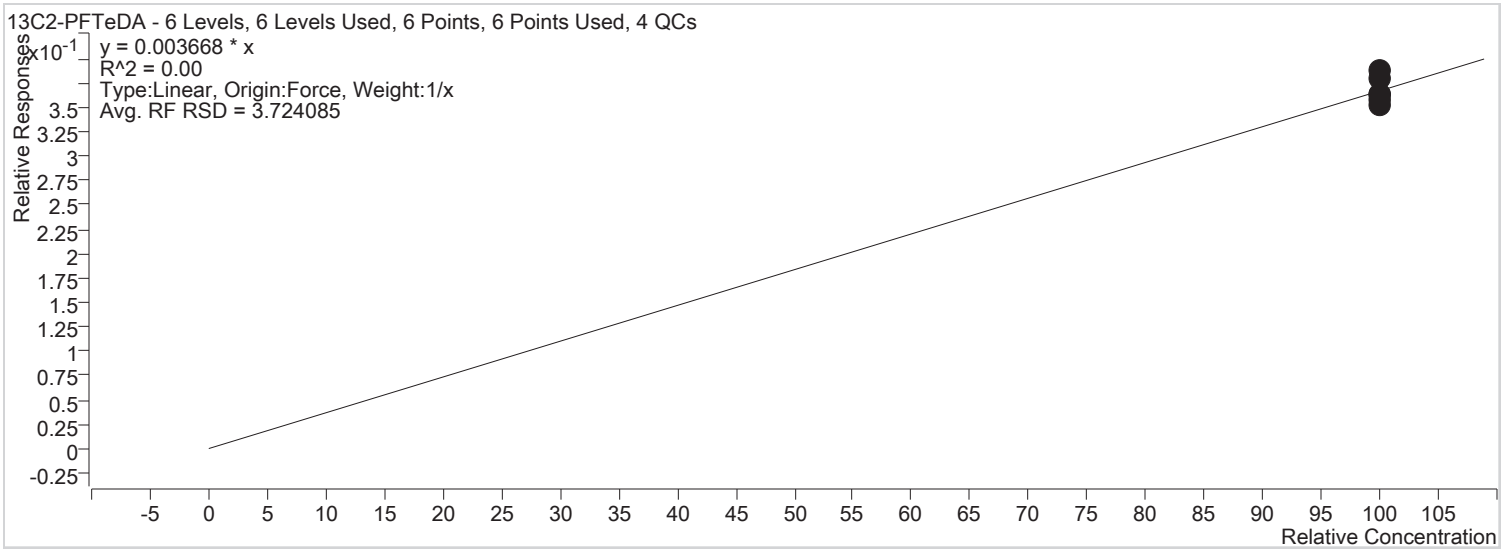
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_ETOxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** 13C2-PFTeDA

**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 100.00 | 105.61 | 13325 | 0.0039 | 217 | 105.6 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 100.00 | 95.72 | 12474 | 0.0035 | 477 | 95.7 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 100.00 | 98.84 | 13397 | 0.0036 | 310 | 98.8 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 100.00 | 99.38 | 12873 | 0.0036 | 320 | 99.4 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 100.00 | 97.25 | 13153 | 0.0036 | 455 | 97.3 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 100.00 | 103.20 | 13464 | 0.0038 | 477 | 103.2 |

# By Compound Report

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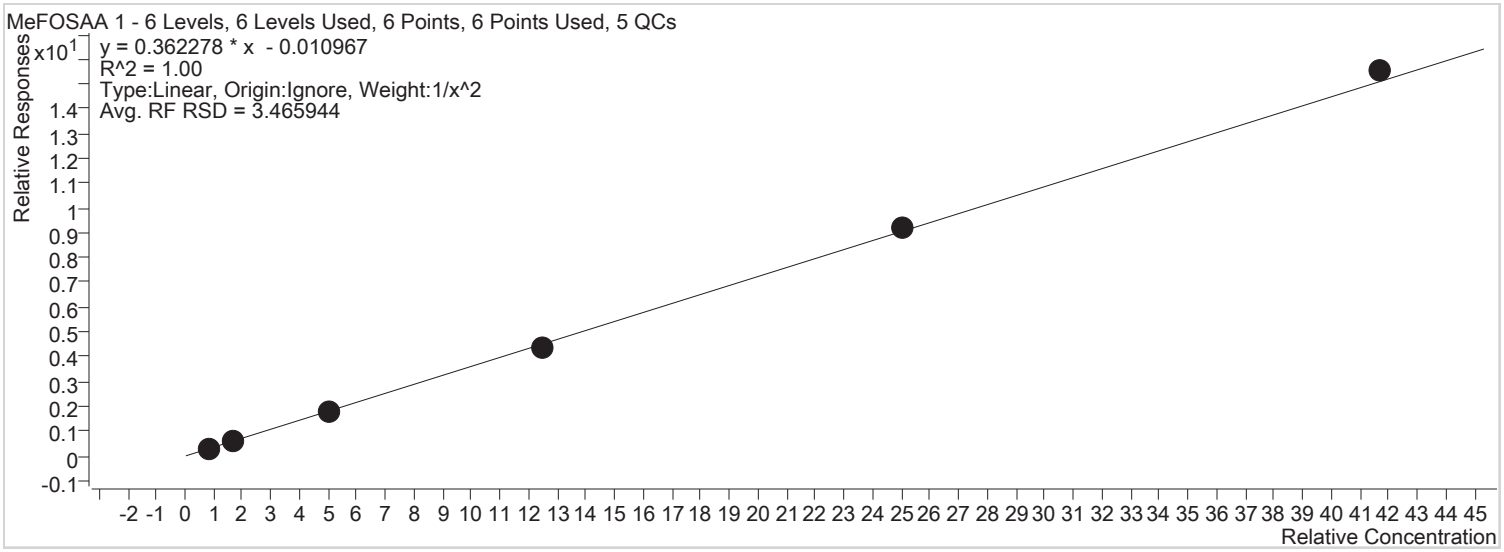
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/08 3:32:49 PM

**Instrument:** LCMS04

**Analyte:** MeFOSAA 1

**Internal Standard:** D3-MeFOSAA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 12:28:01 PM | 0.83 | 0.84 | 581 | 0.3546 | 187 | 101.5 |
| STD 2 | STD 2 | x | 2018/02/06 12:30:26 PM | 1.70 | 1.64 | 1088 | 0.3437 | 497 | 96.7 |
| STD 3 | STD 3 | x | 2018/02/06 12:32:51 PM | 5.00 | 5.09 | 3380 | 0.3664 | 578 | 101.7 |
| STD 4 | STD 4 | x | 2018/02/06 12:35:16 PM | 12.50 | 11.93 | 7647 | 0.3448 | 1165 | 95.4 |
| STD 5 | STD 5 | x | 2018/02/06 12:37:42 PM | 25.00 | 25.44 | 17314 | 0.3682 | 913 | 101.8 |
| STD 6 | STD 6 | x | 2018/02/06 12:40:07 PM | 41.70 | 42.90 | 27554 | 0.3725 | 1045 | 102.9 |

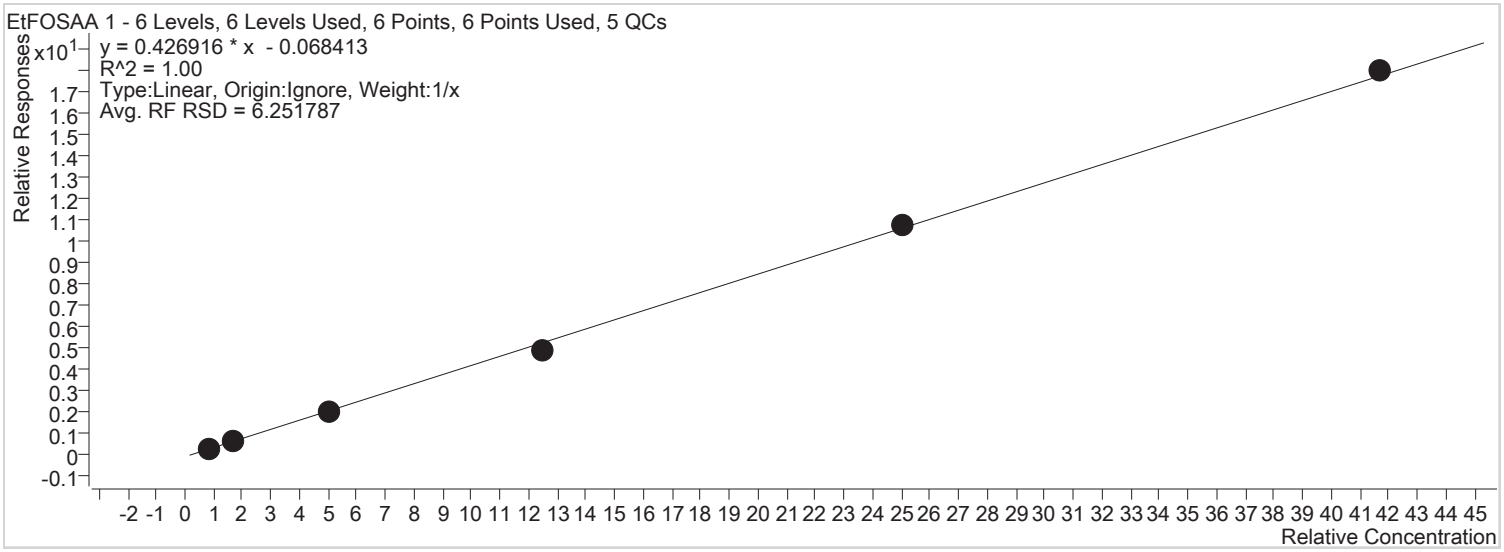
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/08 3:32:49 PM

**Instrument:** LCMS04

**Analyte:** EtFOSAA 1

**Internal Standard:** D5-EtFOSAA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 12:28:01 PM | 0.83 | 0.89 | 520 | 0.3761 | 76 | 107.4 |
| STD 2 | STD 2 | x | 2018/02/06 12:30:26 PM | 1.70 | 1.66 | 1054 | 0.3778 | 119 | 97.9 |
| STD 3 | STD 3 | x | 2018/02/06 12:32:51 PM | 5.00 | 4.97 | 3261 | 0.4104 | 283 | 99.3 |
| STD 4 | STD 4 | x | 2018/02/06 12:35:16 PM | 12.50 | 11.55 | 7583 | 0.3891 | 591 | 92.4 |
| STD 5 | STD 5 | x | 2018/02/06 12:37:42 PM | 25.00 | 25.39 | 17091 | 0.4308 | 1008 | 101.5 |
| STD 6 | STD 6 | x | 2018/02/06 12:40:07 PM | 41.70 | 42.27 | 27557 | 0.4311 | 1223 | 101.4 |

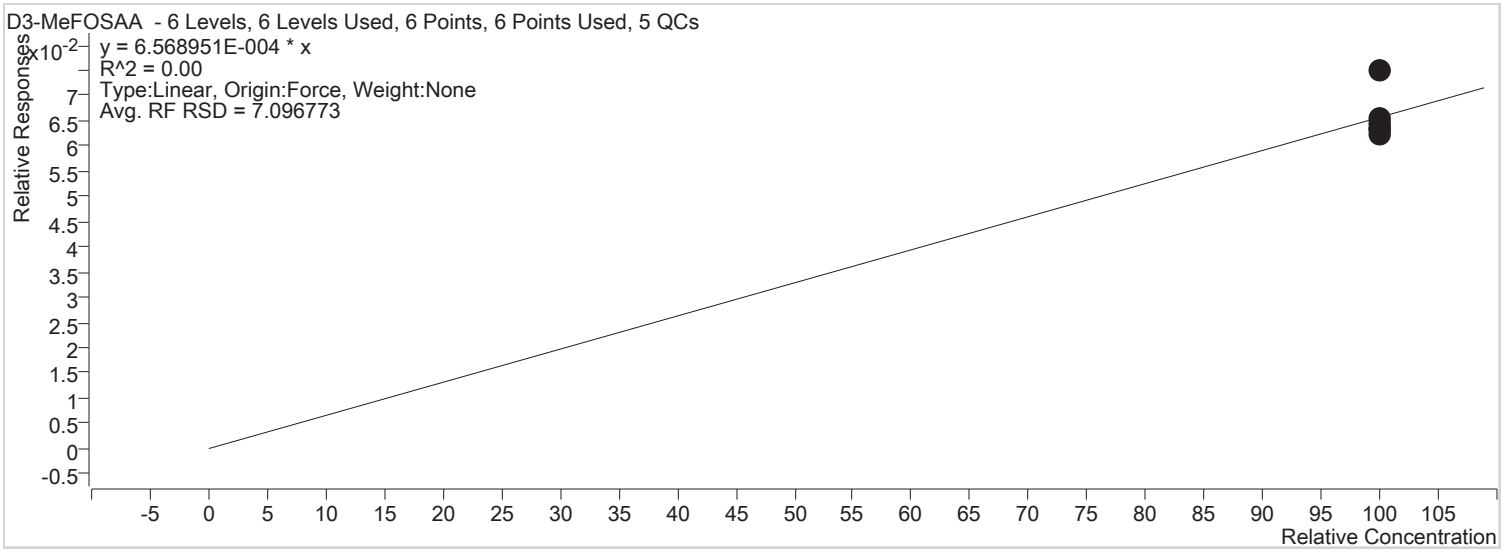
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/08 3:32:49 PM

**Instrument:** LCMS04

**Analyte:** D3-MeFOSAA

**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 12:28:01 PM | 100.00 | 114.03 | 1974 | 0.0007 | 133 | 114.0 |
| STD 2 | STD 2 | x | 2018/02/06 12:30:26 PM | 100.00 | 98.23 | 1862 | 0.0006 | 114 | 98.2 |
| STD 3 | STD 3 | x | 2018/02/06 12:32:51 PM | 100.00 | 96.74 | 1845 | 0.0006 | 159 | 96.7 |
| STD 4 | STD 4 | x | 2018/02/06 12:35:16 PM | 100.00 | 94.91 | 1774 | 0.0006 | 103 | 94.9 |
| STD 5 | STD 5 | x | 2018/02/06 12:37:42 PM | 100.00 | 100.02 | 1881 | 0.0007 | 180 | 100.0 |
| STD 6 | STD 6 | x | 2018/02/06 12:40:07 PM | 100.00 | 96.07 | 1774 | 0.0006 | 141 | 96.1 |

# By Compound Report

Agilent Technologies

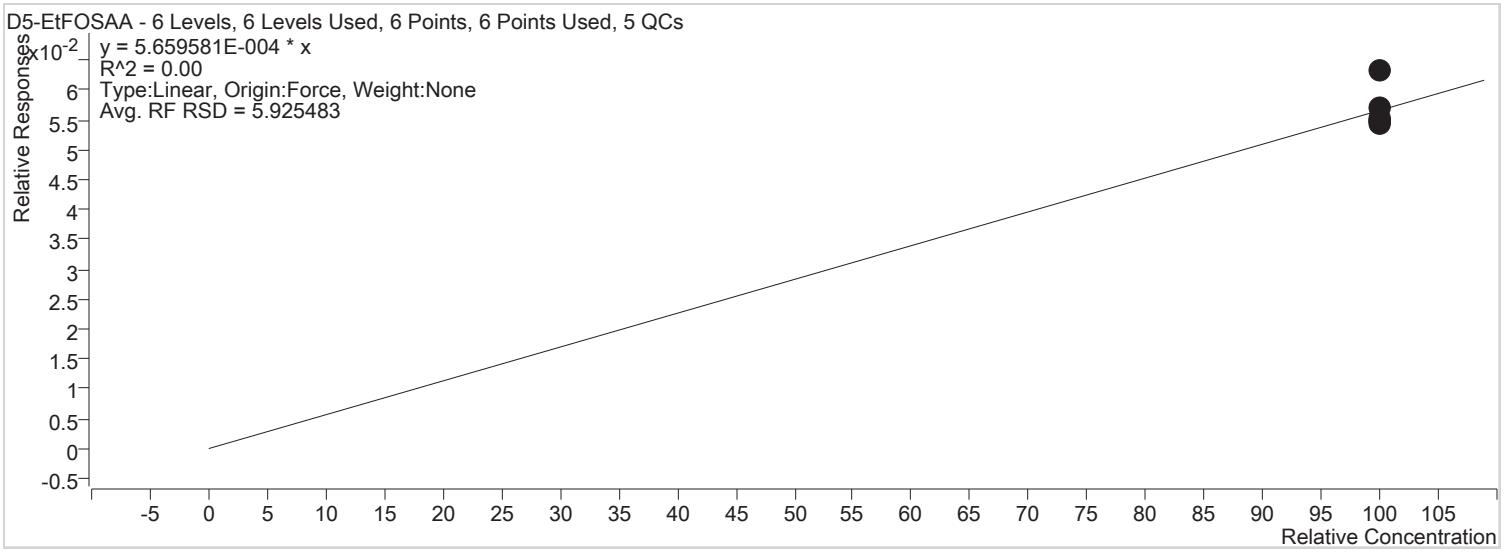
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/08 3:32:49 PM

**Instrument:** LCMS04

**Analyte:** D5-EtFOSAA

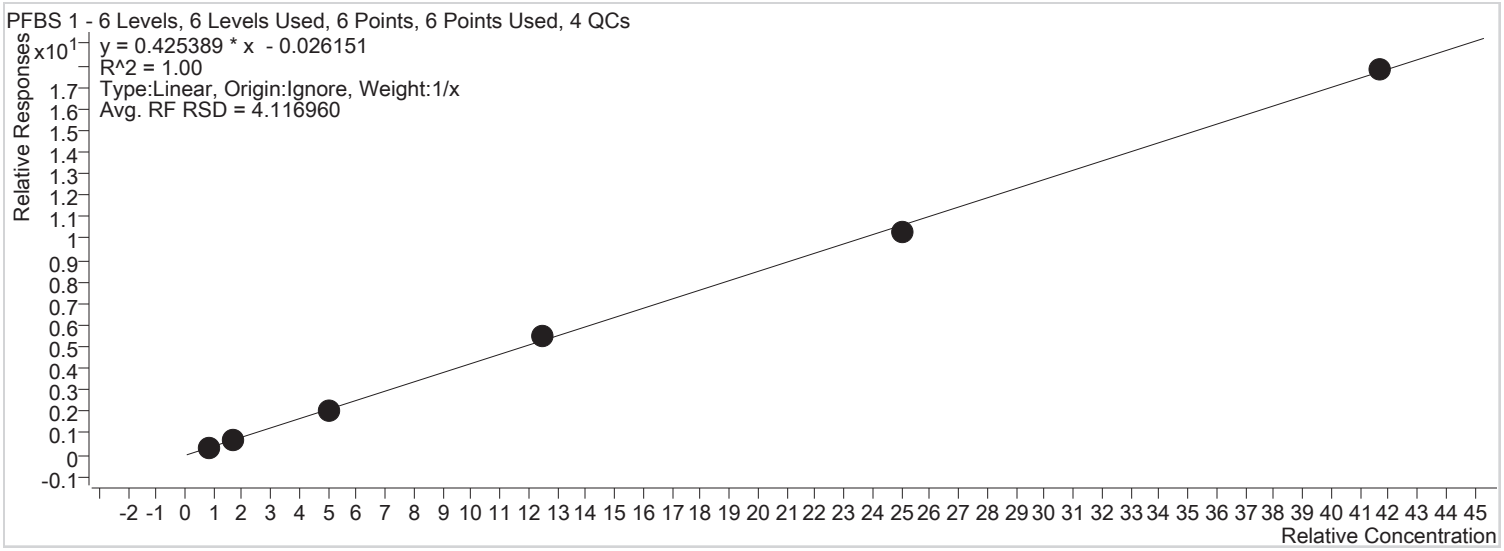
**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 12:28:01 PM | 100.00 | 111.70 | 1666 | 0.0006 | 192 | 111.7 |
| STD 2 | STD 2 | x | 2018/02/06 12:30:26 PM | 100.00 | 100.48 | 1641 | 0.0006 | 112 | 100.5 |
| STD 3 | STD 3 | x | 2018/02/06 12:32:51 PM | 100.00 | 96.70 | 1589 | 0.0005 | 168 | 96.7 |
| STD 4 | STD 4 | x | 2018/02/06 12:35:16 PM | 100.00 | 96.81 | 1559 | 0.0005 | 275 | 96.8 |
| STD 5 | STD 5 | x | 2018/02/06 12:37:42 PM | 100.00 | 97.95 | 1587 | 0.0006 | 225 | 97.9 |
| STD 6 | STD 6 | x | 2018/02/06 12:40:07 PM | 100.00 | 96.36 | 1533 | 0.0005 | 254 | 96.4 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

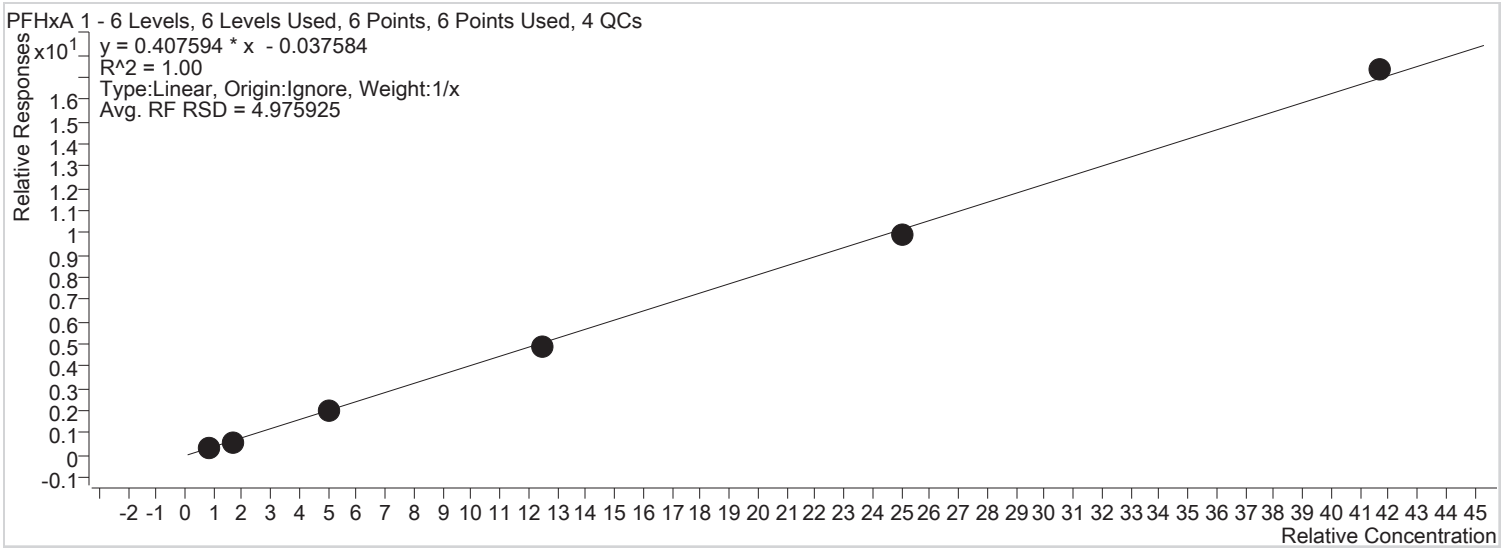
**Analyte:** PFBS 1
**Internal Standard:** MPFHxS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.85 | 497 | 0.4065 | 97 | 103.0 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.63 | 1093 | 0.3928 | 150 | 95.9 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 4.94 | 3474 | 0.4148 | 439 | 98.7 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 13.07 | 8497 | 0.4426 | 1039 | 104.5 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.32 | 16101 | 0.4128 | 837 | 97.3 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 41.92 | 28114 | 0.4270 | 125 | 100.5 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

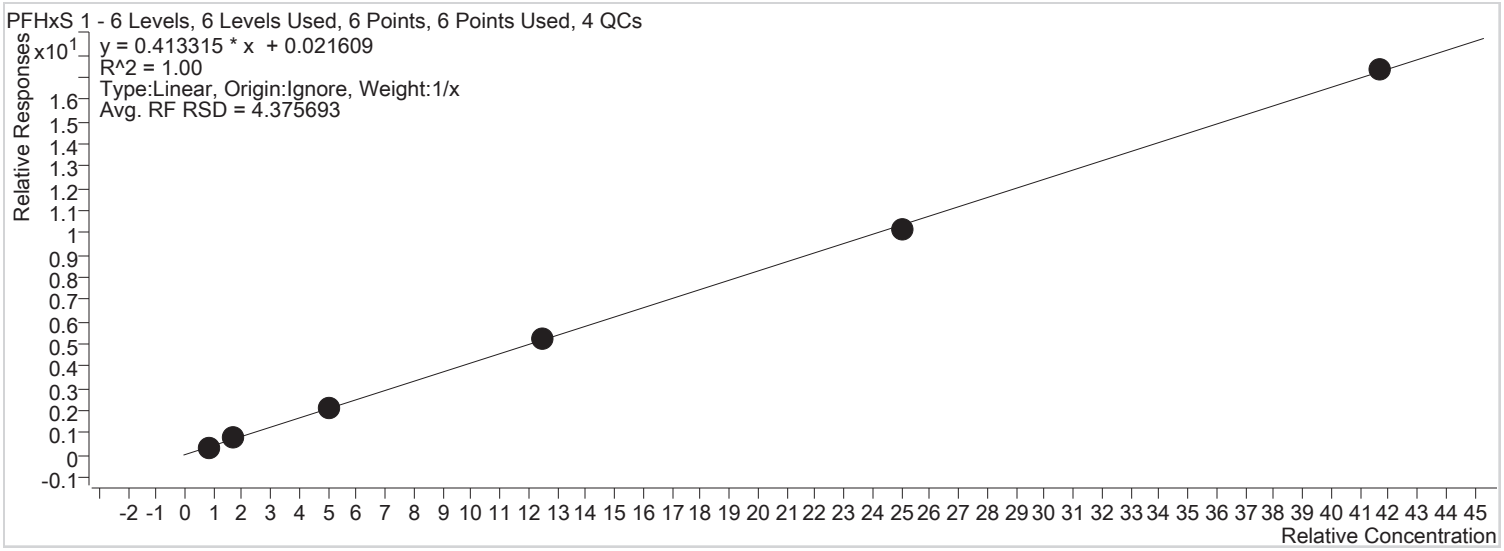
**Analyte:** PFHxA 1
**Internal Standard:** MPFHxA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.90 | 2077 | 0.3981 | 145 | 108.8 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.59 | 3838 | 0.3591 | 502 | 93.5 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 5.07 | 13004 | 0.4060 | 1085 | 101.5 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 11.97 | 29662 | 0.3874 | 1794 | 95.8 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.55 | 59203 | 0.3987 | 2807 | 98.2 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 42.64 | 103000 | 0.4159 | 5713 | 102.3 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

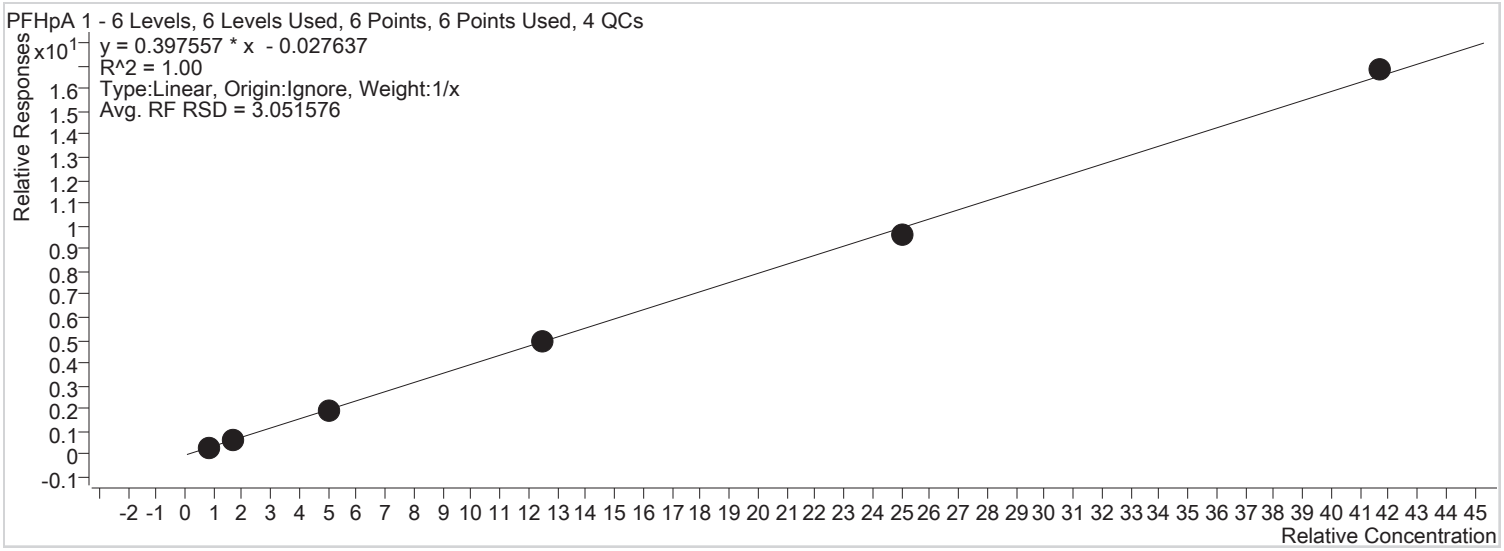
**Analyte:** PFHxS 1
**Internal Standard:** MPFHxS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.77 | 500 | 0.4090 | 121 | 92.6 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.83 | 1272 | 0.4571 | 183 | 107.5 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 4.98 | 3485 | 0.4161 | 326 | 99.6 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 12.68 | 8086 | 0.4211 | 269 | 101.5 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.55 | 15866 | 0.4068 | 634 | 98.2 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 41.91 | 27387 | 0.4159 | 785 | 100.5 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

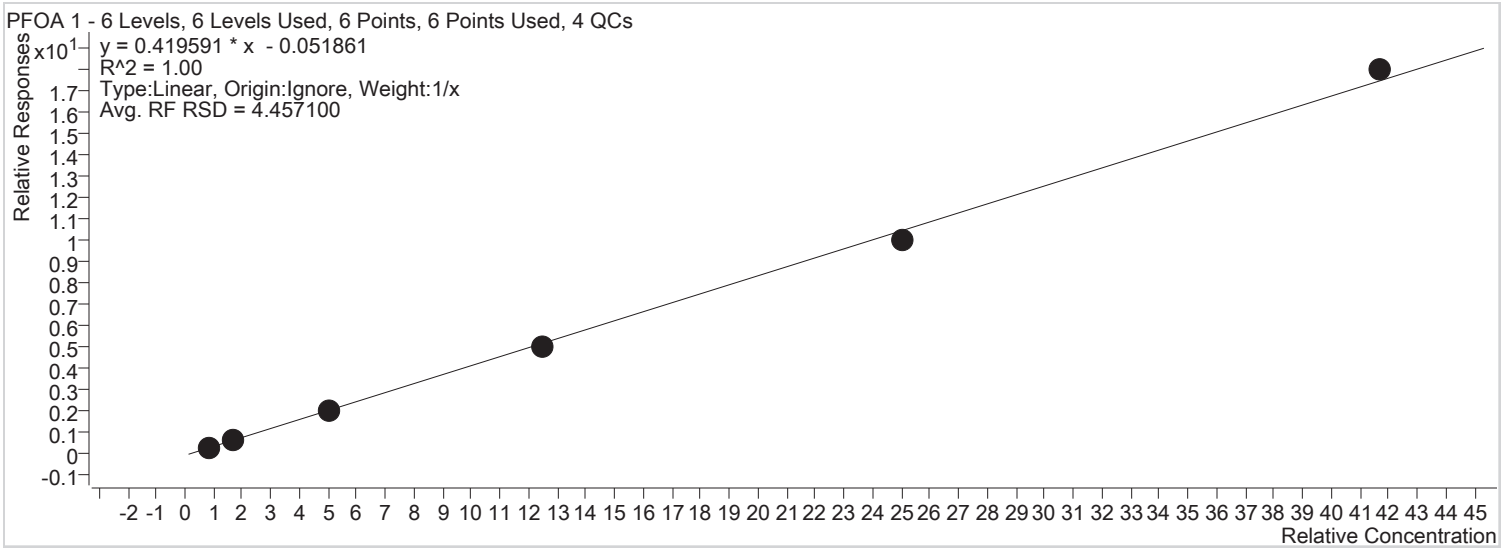
**Analyte:** PFHpA 1
**Internal Standard:** MPFHpA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.84 | 2450 | 0.3681 | 25 | 101.0 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.71 | 5287 | 0.3832 | 38 | 100.5 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 5.01 | 16931 | 0.3926 | 167 | 100.2 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 12.40 | 39741 | 0.3922 | 257 | 99.2 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.38 | 75218 | 0.3866 | 310 | 97.5 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 42.39 | 131039 | 0.4035 | 312 | 101.7 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

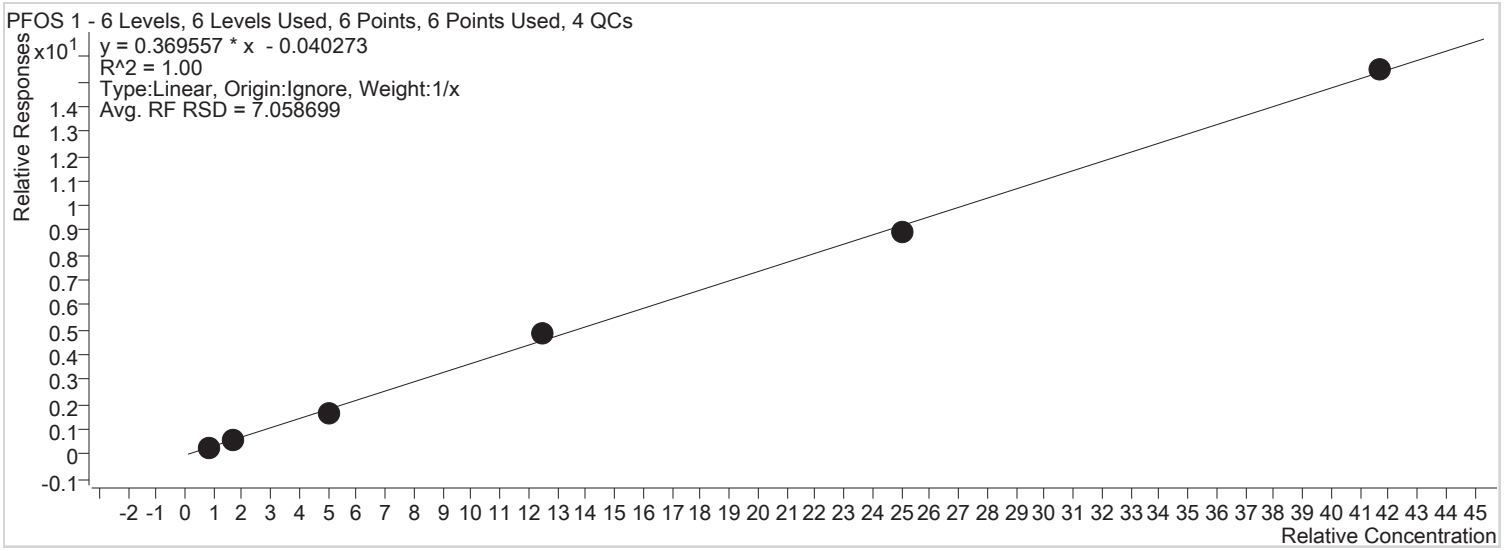
**Analyte:** PFOA 1
**Internal Standard:** MPFOA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.87 | 2739 | 0.3781 | 28 | 105.0 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.70 | 5595 | 0.3882 | 57 | 99.8 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 4.91 | 17877 | 0.4013 | 168 | 98.1 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 12.21 | 42181 | 0.4057 | 343 | 97.7 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.12 | 85357 | 0.4027 | 922 | 96.5 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 42.93 | 146836 | 0.4307 | 850 | 103.0 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

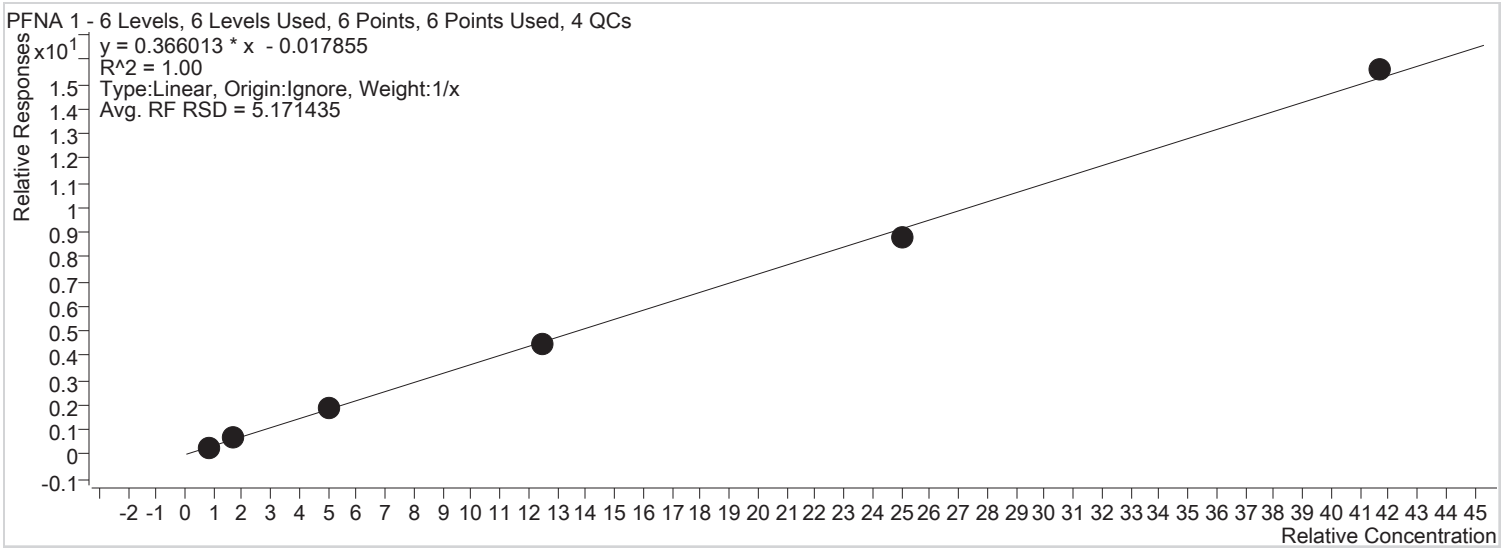
**Analyte:** PFOS 1
**Internal Standard:** MPFOS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.83 | 497 | 0.3219 | 43 | 100.2 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.76 | 1227 | 0.3600 | 164 | 103.8 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 4.59 | 3588 | 0.3315 | 201 | 91.9 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 13.29 | 8472 | 0.3897 | 245 | 106.3 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.26 | 16897 | 0.3570 | 166 | 97.0 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 41.99 | 28723 | 0.3711 | 249 | 100.7 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

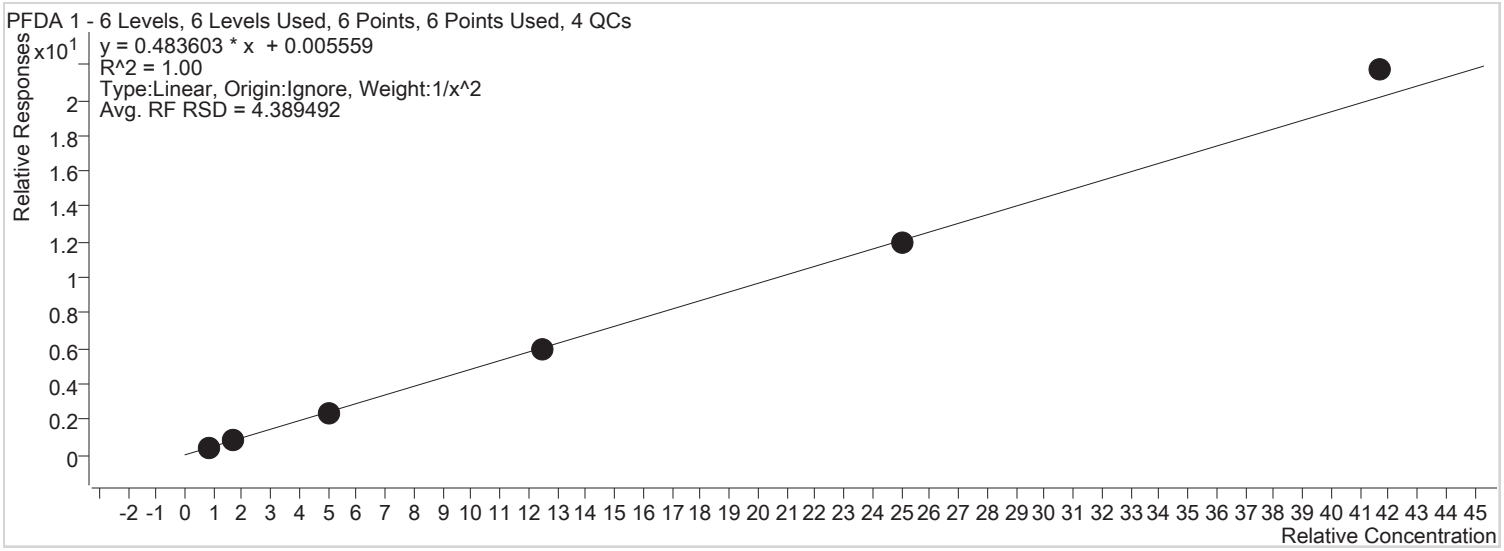
**Analyte:** PFNA 1
**Internal Standard:** MPFNA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.79 | 2263 | 0.3264 | 24 | 95.1 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.79 | 5567 | 0.3747 | 69 | 105.2 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 5.12 | 16539 | 0.3712 | 383 | 102.4 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 12.36 | 37275 | 0.3606 | 450 | 98.9 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.05 | 74127 | 0.3514 | 1100 | 96.2 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 42.62 | 128982 | 0.3737 | 3317 | 102.2 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

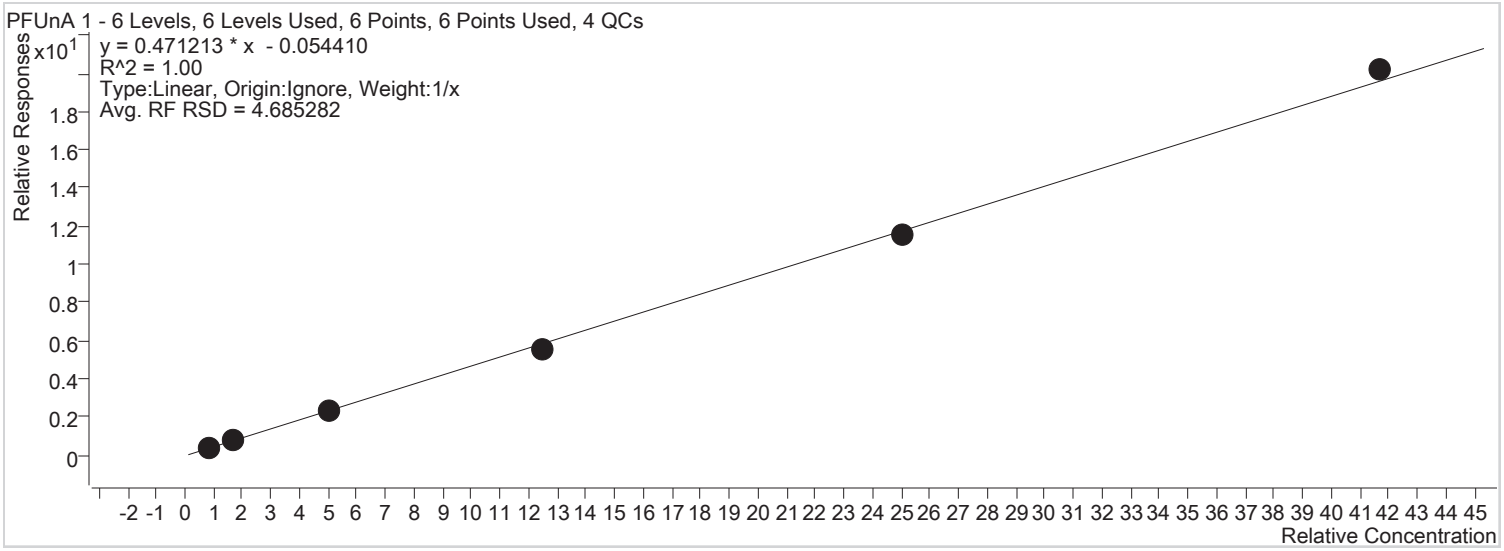
**Analyte:** PFDA 1
**Internal Standard:** MPFDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.85 | 2942 | 0.5016 | 38 | 102.3 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.64 | 5859 | 0.4699 | 49 | 96.5 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 4.80 | 17246 | 0.4654 | 191 | 96.0 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 12.35 | 42674 | 0.4781 | 616 | 98.8 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.68 | 82723 | 0.4775 | 830 | 98.7 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 44.90 | 138781 | 0.5208 | 1271 | 107.7 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

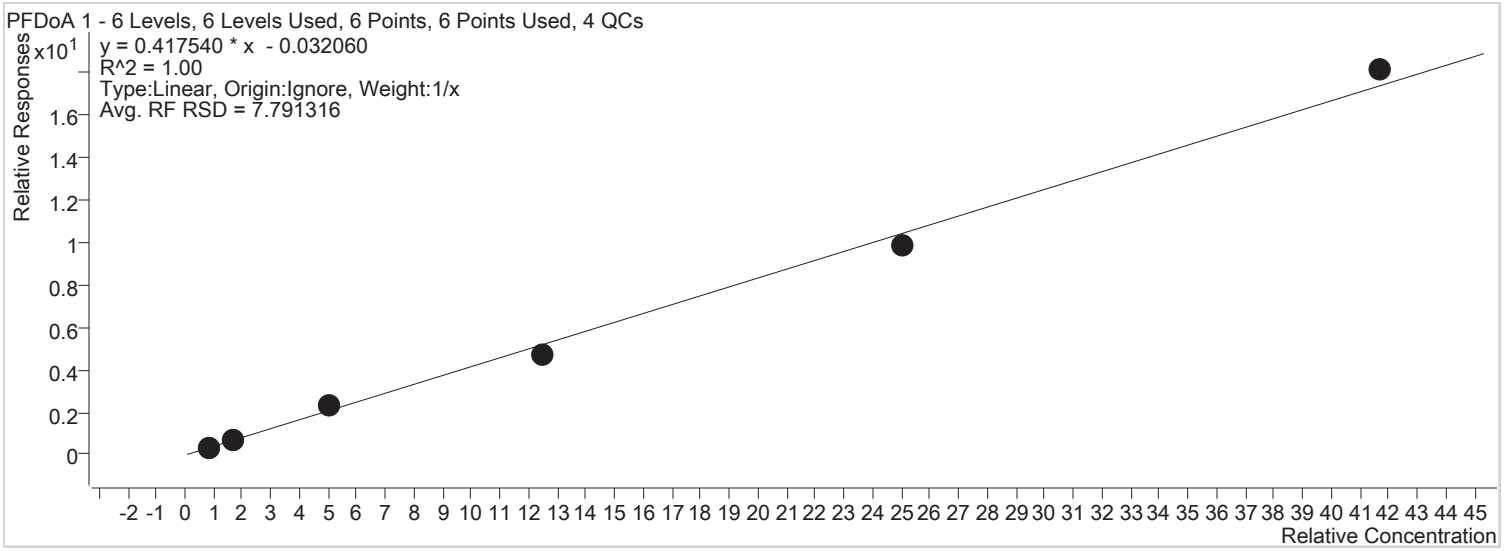
**Analyte:** PFUnA 1
**Internal Standard:** MPFUnA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.92 | 3263 | 0.4545 | 30 | 110.4 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.64 | 6188 | 0.4214 | 43 | 96.2 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 4.91 | 19018 | 0.4518 | 111 | 98.2 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 11.74 | 44484 | 0.4384 | 149 | 94.0 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.56 | 87330 | 0.4608 | 157 | 98.2 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 42.96 | 155746 | 0.4842 | 175 | 103.0 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

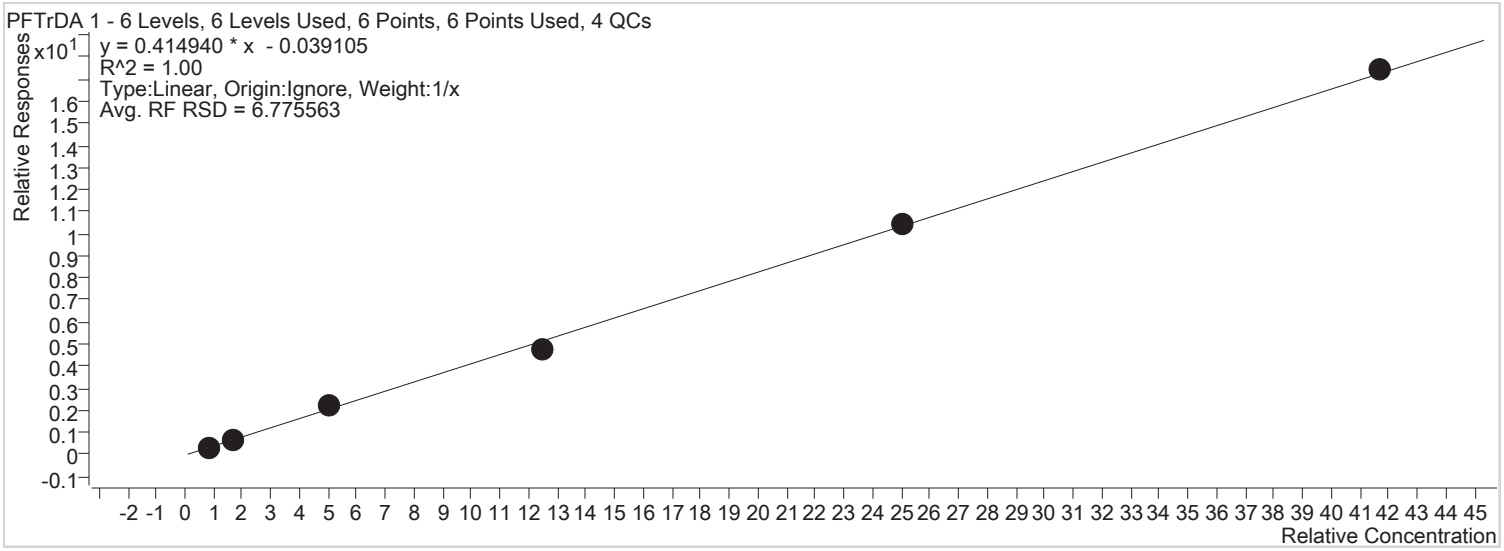
**Analyte:** PFDoA 1
**Internal Standard:** MPFDoA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.86 | 3755 | 0.3923 | 89 | 103.2 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.62 | 7818 | 0.3779 | 330 | 95.0 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 5.53 | 25147 | 0.4555 | 596 | 110.6 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 11.48 | 57101 | 0.3810 | 1427 | 91.9 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 23.73 | 108804 | 0.3951 | 2236 | 94.9 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 43.51 | 189906 | 0.4349 | 3216 | 104.3 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

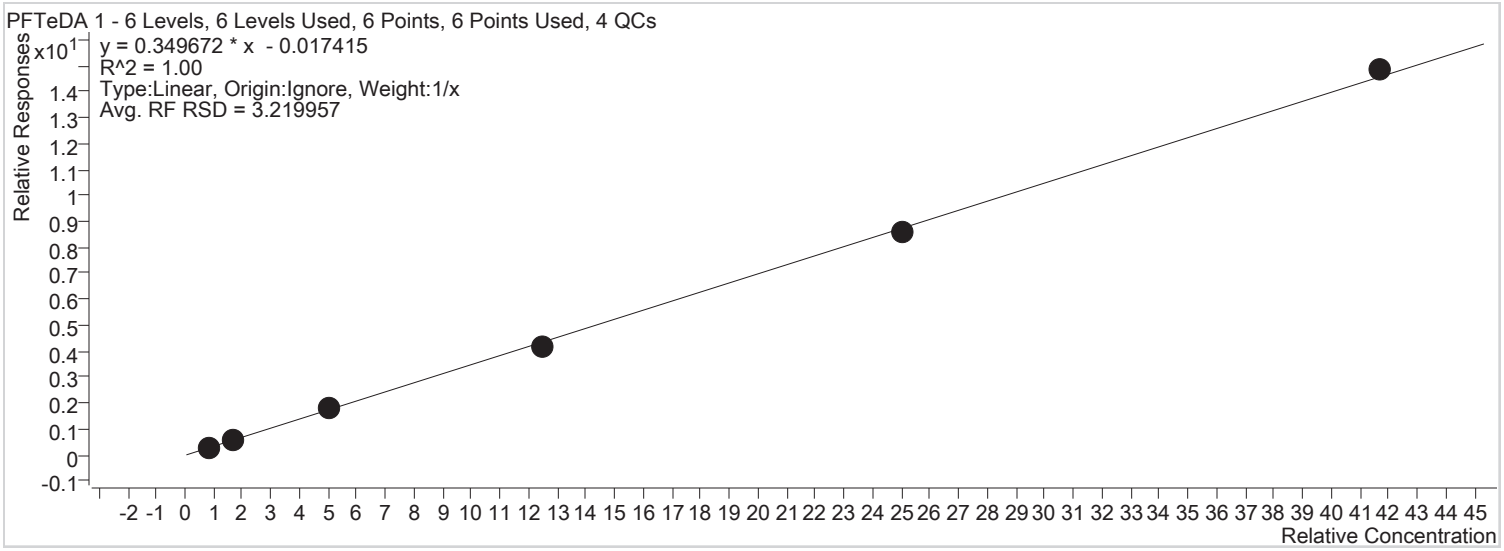
**Analyte:** PFTrDA 1
**Internal Standard:** MPFTeDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.83 | 3880 | 0.3675 | 35 | 99.9 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.68 | 8552 | 0.3863 | 73 | 98.6 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 5.37 | 28657 | 0.4377 | 178 | 107.4 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 11.53 | 62931 | 0.3795 | 200 | 92.2 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 25.22 | 124952 | 0.4170 | 220 | 100.9 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 42.11 | 216546 | 0.4181 | 253 | 101.0 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

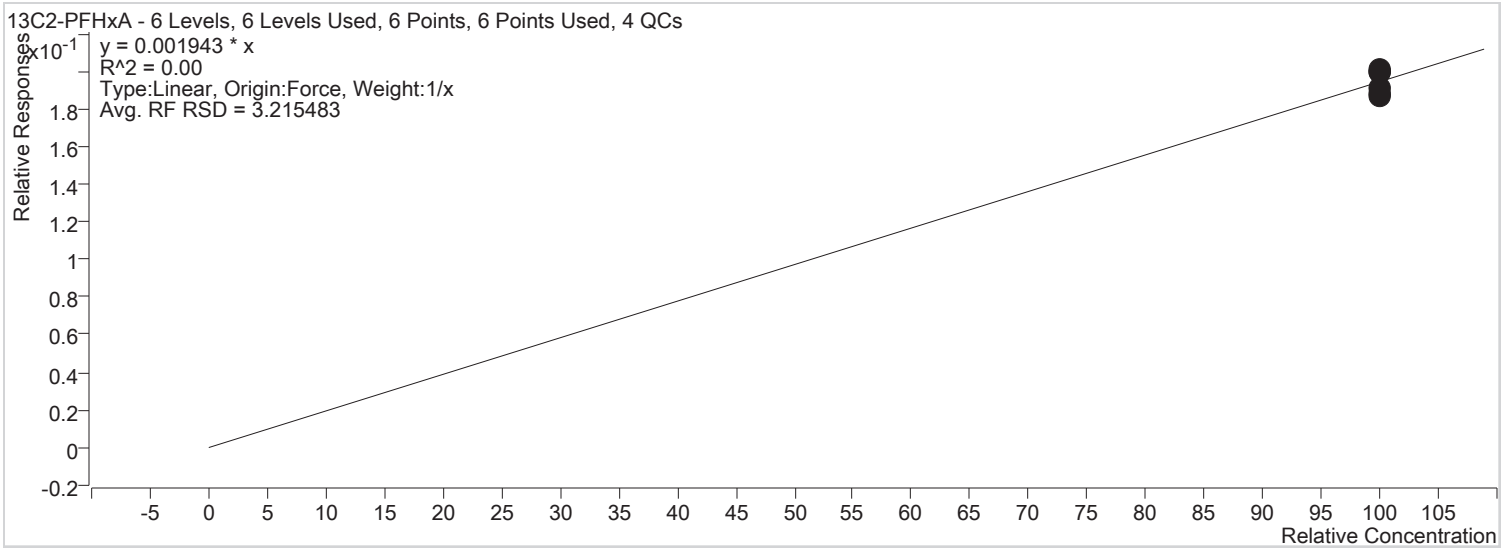
**Analyte:** PFTeDA 1
**Internal Standard:** MPFTeDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.86 | 3584 | 0.3395 | 18 | 103.1 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.65 | 7309 | 0.3301 | 57 | 97.3 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 5.16 | 23410 | 0.3575 | 121 | 103.2 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 12.04 | 55599 | 0.3353 | 223 | 96.3 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.54 | 102650 | 0.3425 | 190 | 98.2 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 42.48 | 184279 | 0.3558 | 237 | 101.9 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

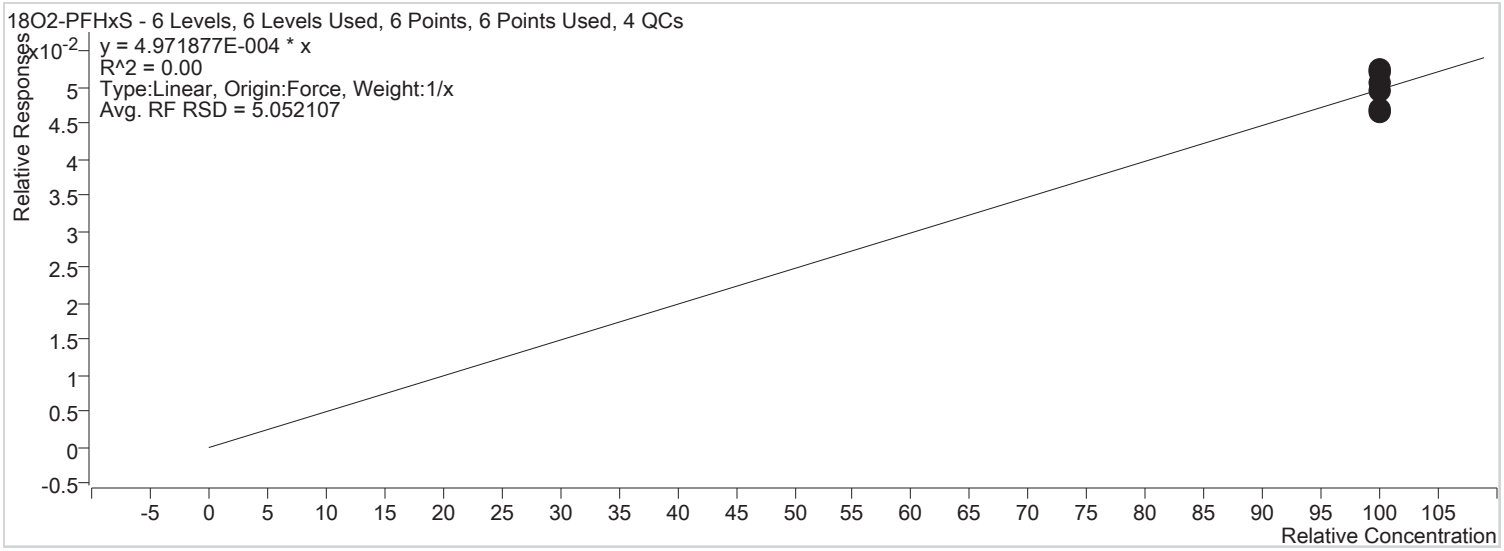
**Analyte:** 13C2-PFHxA
**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 100.00 | 102.54 | 6286 | 0.0020 | 273 | 102.5 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 100.00 | 102.76 | 6287 | 0.0020 | 412 | 102.8 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 100.00 | 103.25 | 6406 | 0.0020 | 126 | 103.3 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 100.00 | 96.08 | 6125 | 0.0019 | 362 | 96.1 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 100.00 | 97.01 | 5939 | 0.0019 | 245 | 97.0 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 100.00 | 98.36 | 5939 | 0.0019 | 991 | 98.4 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

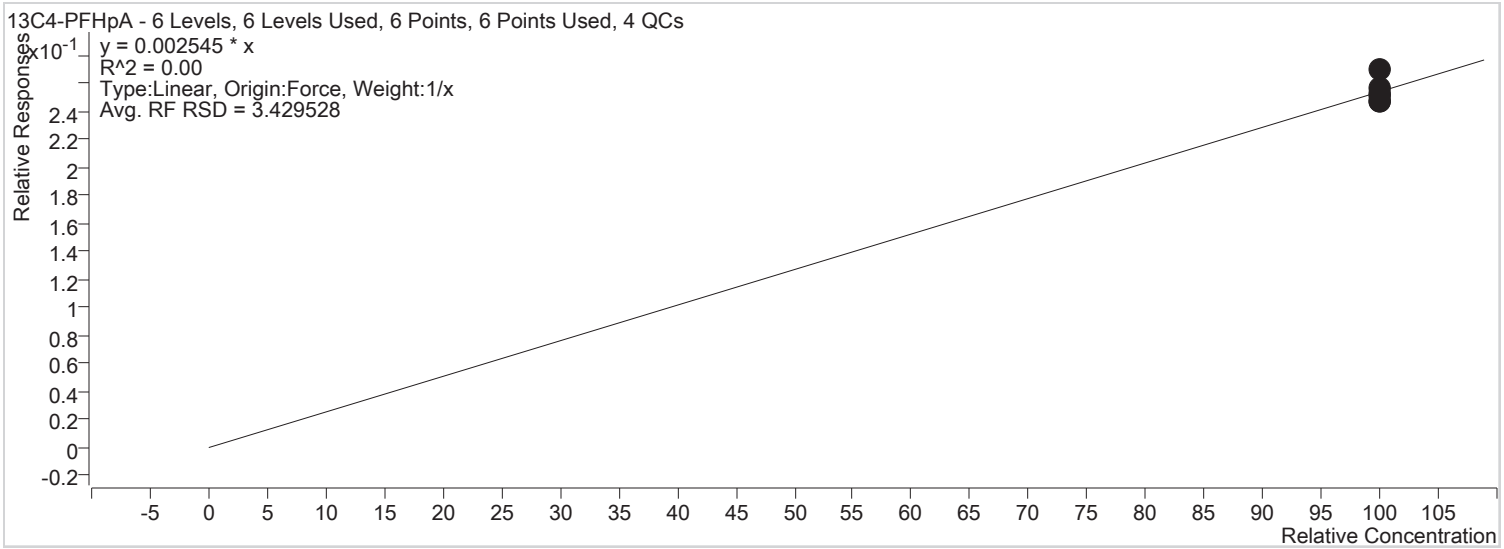
**Analyte:** 18O2-PFHxS
**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 100.00 | 93.91 | 1473 | 0.0005 | 294 | 93.9 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 100.00 | 104.58 | 1637 | 0.0005 | 252 | 104.6 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 100.00 | 105.52 | 1675 | 0.0005 | 260 | 105.5 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 100.00 | 94.17 | 1536 | 0.0005 | 200 | 94.2 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 100.00 | 99.60 | 1560 | 0.0005 | 170 | 99.6 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 100.00 | 102.21 | 1579 | 0.0005 | 143 | 102.2 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

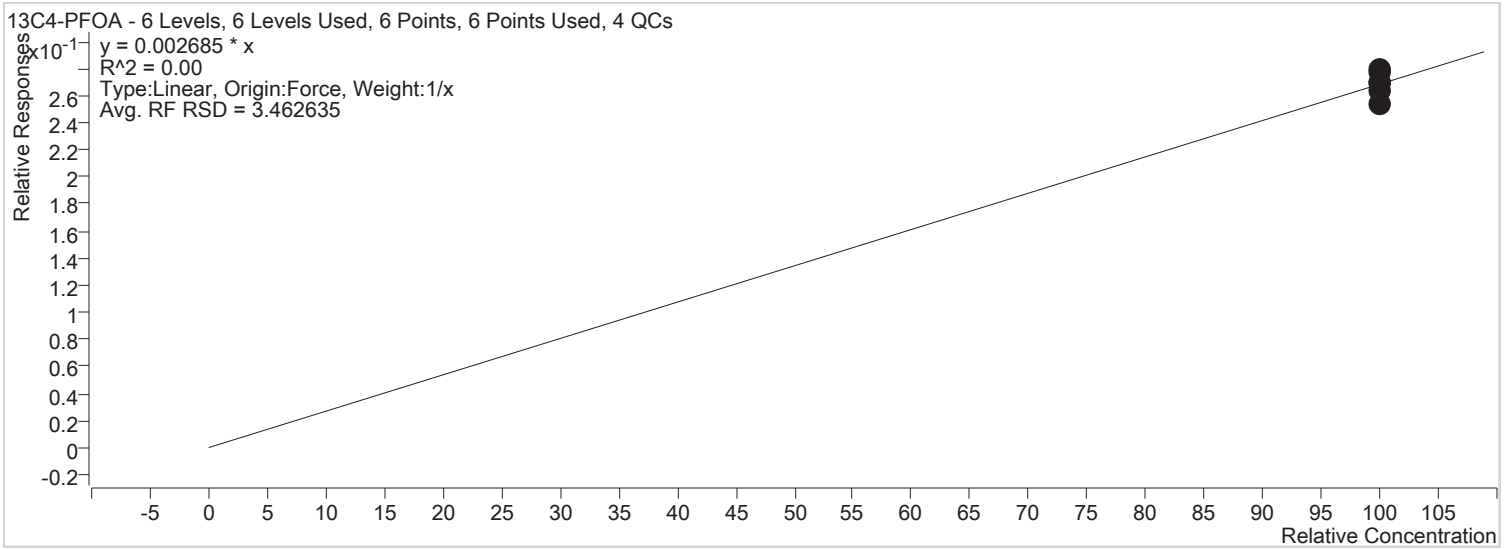
**Analyte:** 13C4-PFHpA
**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 100.00 | 99.89 | 8019 | 0.0025 | 324 | 99.9 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 100.00 | 101.30 | 8116 | 0.0026 | 273 | 101.3 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 100.00 | 106.15 | 8624 | 0.0027 | 158 | 106.1 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 100.00 | 97.10 | 8106 | 0.0025 | 291 | 97.1 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 100.00 | 97.07 | 7782 | 0.0025 | 295 | 97.1 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 100.00 | 98.50 | 7788 | 0.0025 | 415 | 98.5 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

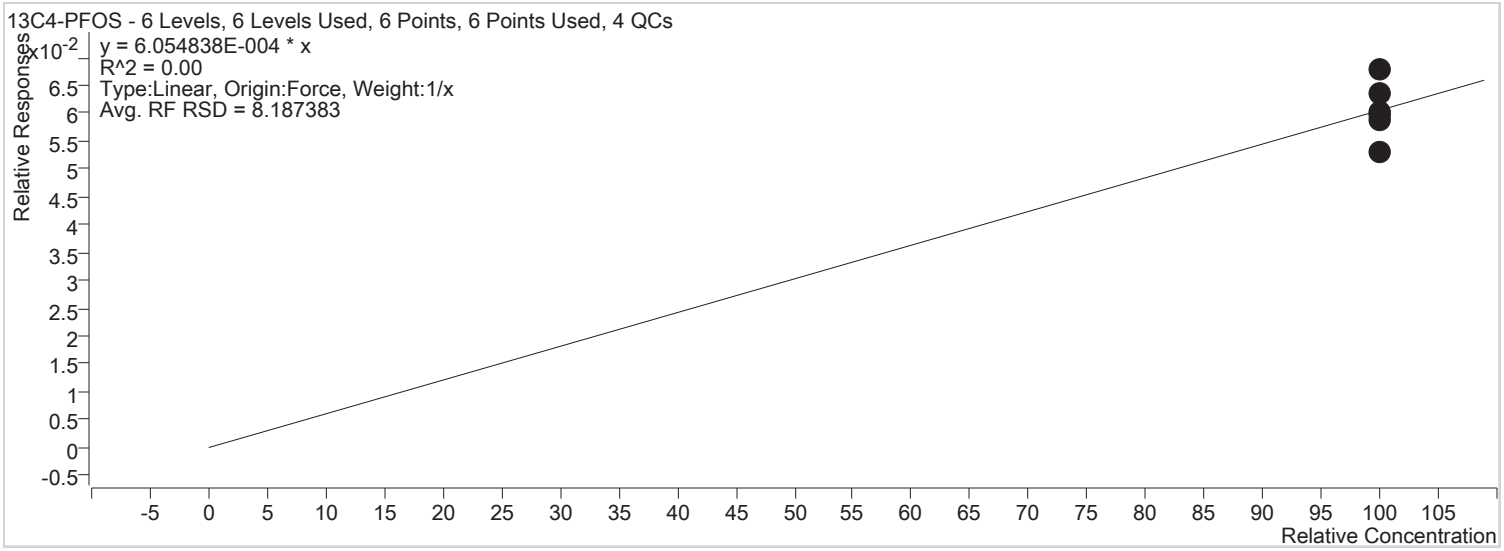
**Analyte:** 13C4-PFOA
**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 100.00 | 103.07 | 8729 | 0.0028 | 219 | 103.1 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 100.00 | 100.30 | 8477 | 0.0027 | 209 | 100.3 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 100.00 | 103.94 | 8909 | 0.0028 | 161 | 103.9 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 100.00 | 94.44 | 8318 | 0.0025 | 154 | 94.4 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 100.00 | 100.25 | 8479 | 0.0027 | 116 | 100.3 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 100.00 | 98.00 | 8175 | 0.0026 | 321 | 98.0 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

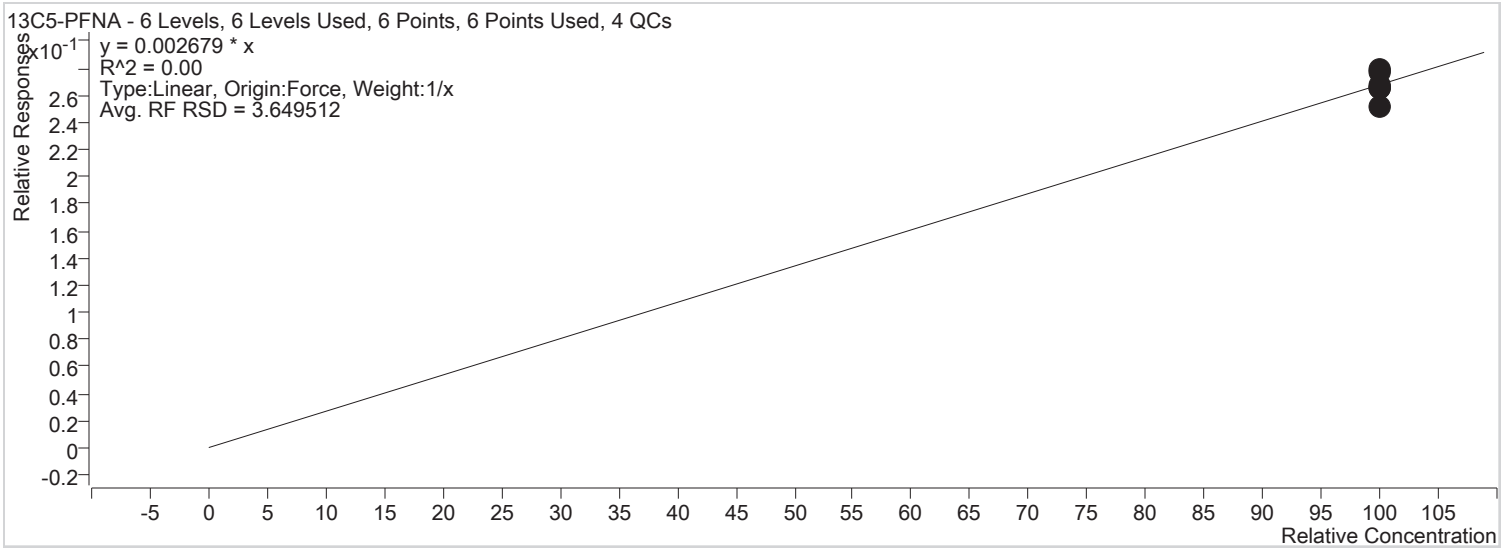
**Analyte:** 13C4-PFOS
**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 100.00 | 97.38 | 1860 | 0.0006 | 351 | 97.4 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 100.00 | 105.18 | 2005 | 0.0006 | 326 | 105.2 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 100.00 | 112.00 | 2165 | 0.0007 | 185 | 112.0 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 100.00 | 87.55 | 1739 | 0.0005 | 124 | 87.5 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 100.00 | 99.24 | 1893 | 0.0006 | 327 | 99.2 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 100.00 | 98.66 | 1856 | 0.0006 | 87 | 98.7 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

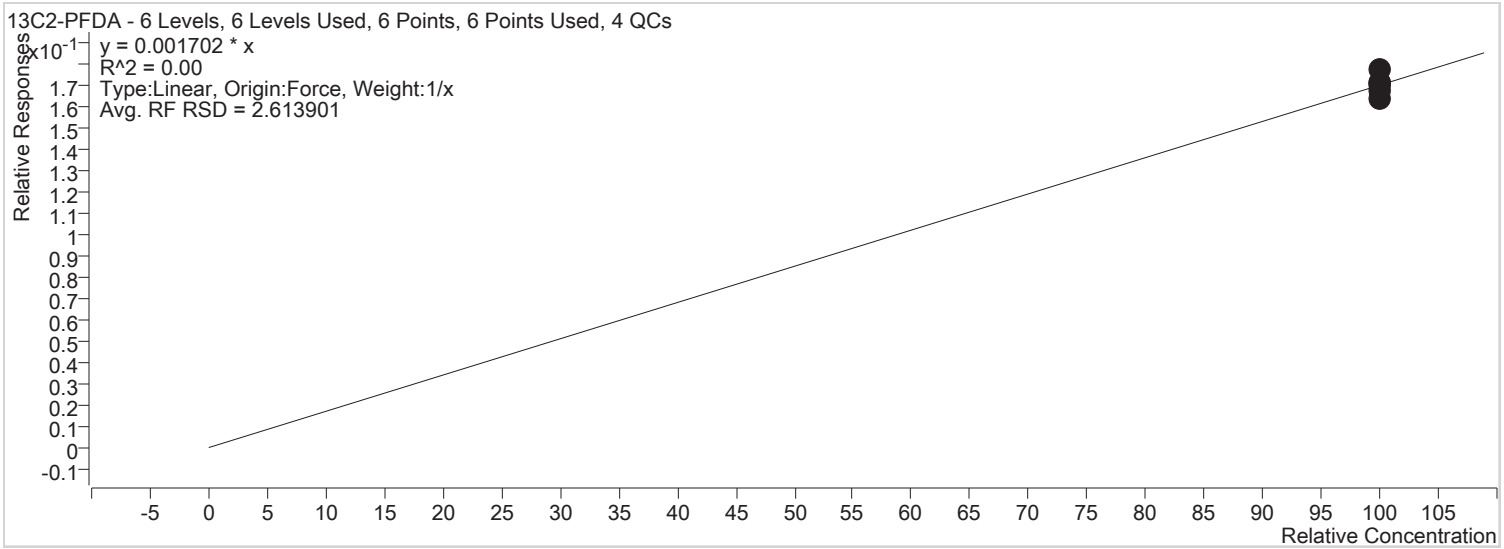
**Analyte:** 13C5-PFNA
**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 100.00 | 98.83 | 8354 | 0.0026 | 258 | 98.8 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 100.00 | 103.60 | 8739 | 0.0028 | 297 | 103.6 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 100.00 | 104.10 | 8905 | 0.0028 | 270 | 104.1 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 100.00 | 94.07 | 8269 | 0.0025 | 446 | 94.1 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 100.00 | 99.97 | 8439 | 0.0027 | 466 | 100.0 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 100.00 | 99.43 | 8278 | 0.0027 | 343 | 99.4 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

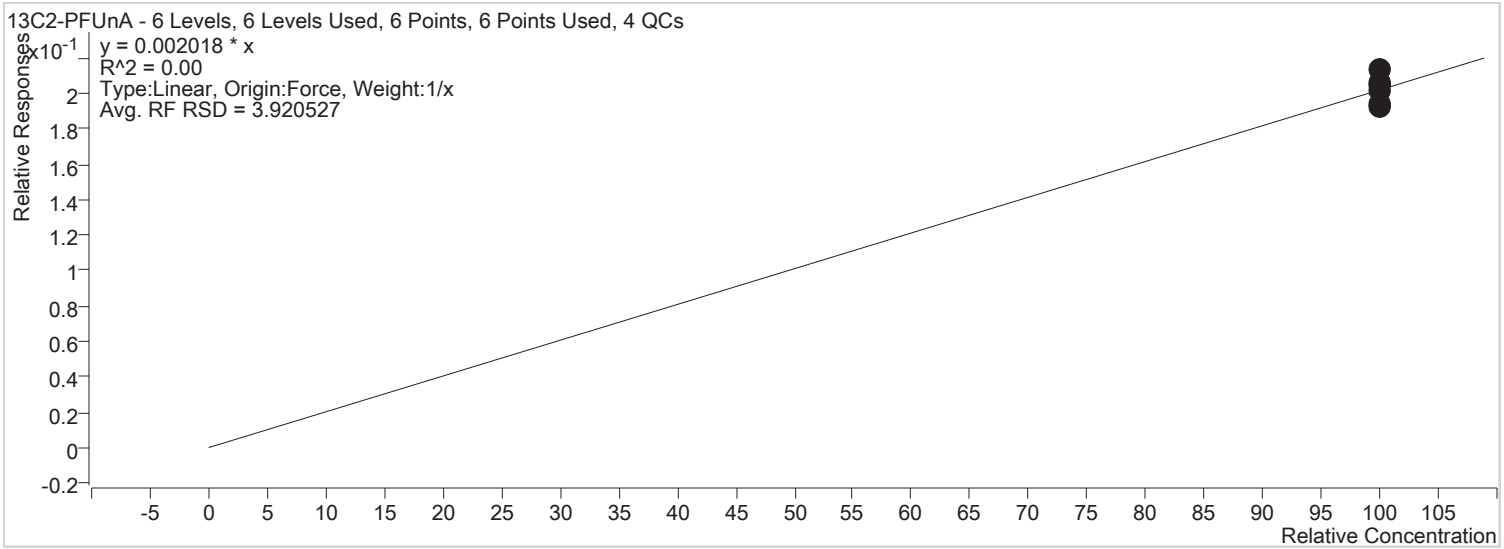
**Analyte:** 13C2-PFDA
**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 100.00 | 100.68 | 6953 | 0.0017 | 200 | 100.7 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 100.00 | 99.66 | 7177 | 0.0017 | 146 | 99.7 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 100.00 | 104.22 | 7232 | 0.0018 | 165 | 104.2 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 100.00 | 98.30 | 7017 | 0.0017 | 216 | 98.3 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 100.00 | 100.66 | 6749 | 0.0017 | 132 | 100.7 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 100.00 | 96.47 | 6297 | 0.0016 | 175 | 96.5 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

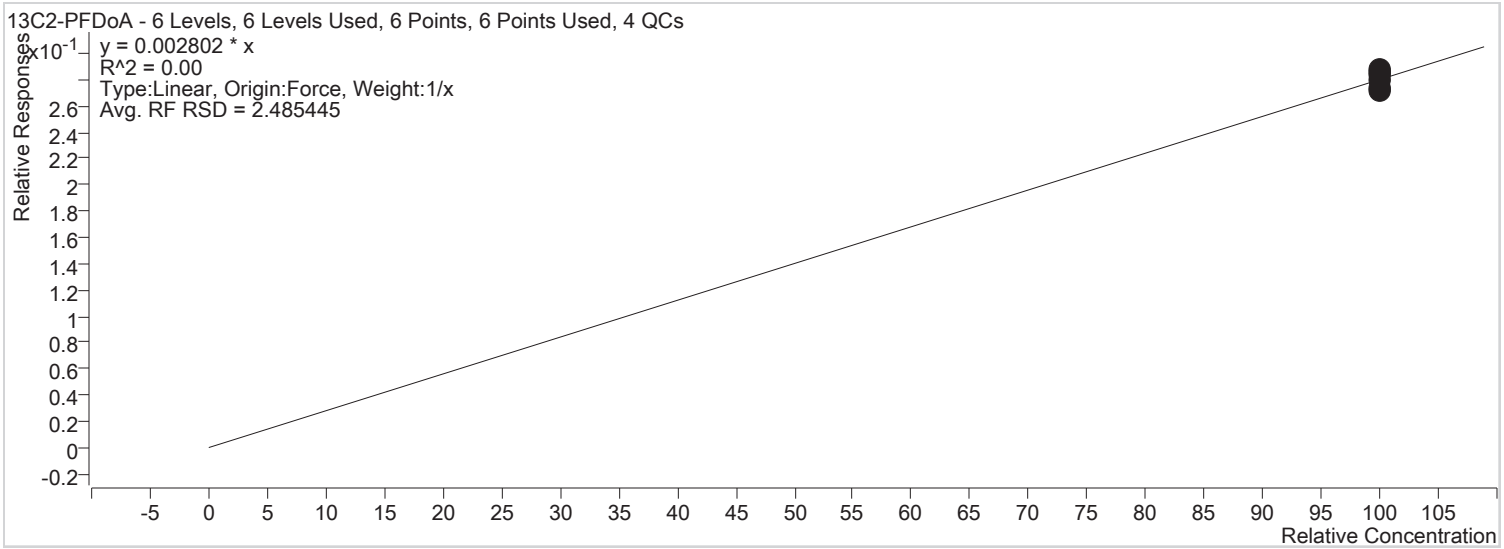
**Analyte:** 13C2-PFUnA
**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 100.00 | 105.62 | 8650 | 0.0021 | 143 | 105.6 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 100.00 | 101.15 | 8638 | 0.0020 | 161 | 101.2 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 100.00 | 102.32 | 8419 | 0.0021 | 206 | 102.3 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 100.00 | 95.90 | 8118 | 0.0019 | 225 | 95.9 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 100.00 | 95.35 | 7581 | 0.0019 | 147 | 95.3 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 100.00 | 99.66 | 7714 | 0.0020 | 164 | 99.7 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

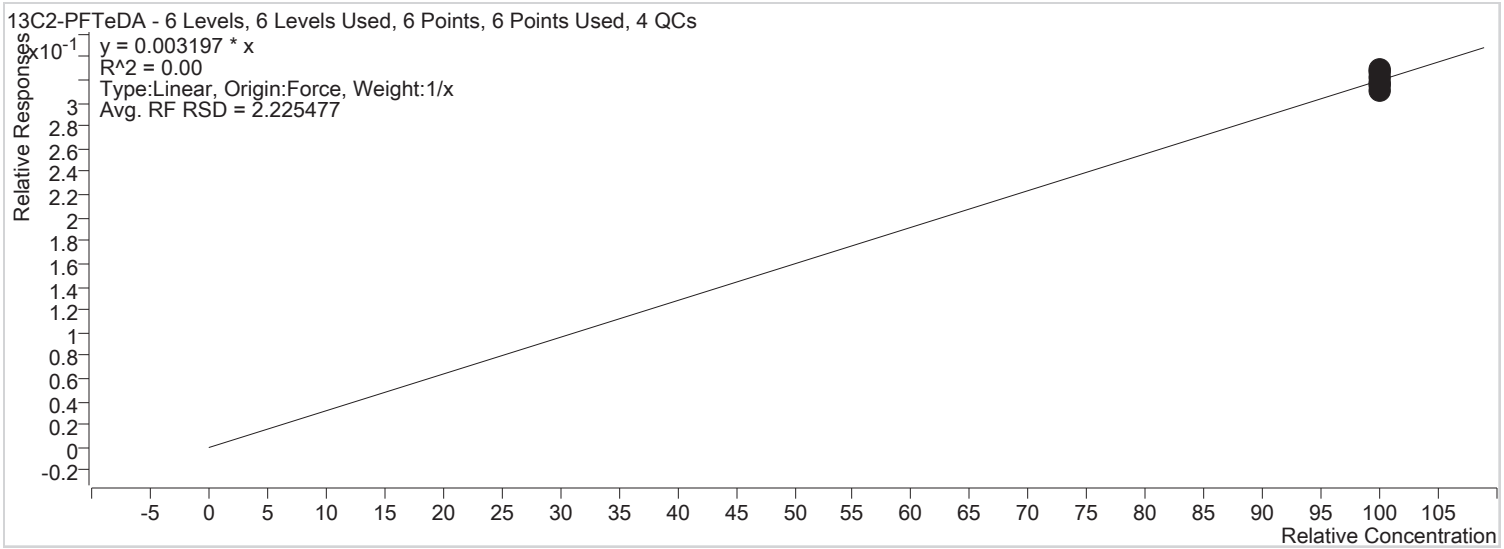
**Analyte:** 13C2-PFDoA
**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 100.00 | 101.44 | 11533 | 0.0028 | 337 | 101.4 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 100.00 | 102.65 | 12169 | 0.0029 | 378 | 102.6 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 100.00 | 96.65 | 11041 | 0.0027 | 196 | 96.7 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 100.00 | 102.02 | 11989 | 0.0029 | 172 | 102.0 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 100.00 | 99.79 | 11015 | 0.0028 | 291 | 99.8 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 100.00 | 97.45 | 10472 | 0.0027 | 199 | 97.5 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

**Analyte:** 13C2-PFTeDA
**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 100.00 | 99.31 | 12880 | 0.0032 | 531 | 99.3 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 100.00 | 98.30 | 13294 | 0.0031 | 608 | 98.3 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 100.00 | 101.91 | 13280 | 0.0033 | 327 | 101.9 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 100.00 | 100.63 | 13490 | 0.0032 | 421 | 100.6 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 100.00 | 96.98 | 12212 | 0.0031 | 455 | 97.0 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 100.00 | 102.87 | 12610 | 0.0033 | 324 | 102.9 |

# By Compound Report

Agilent Technologies

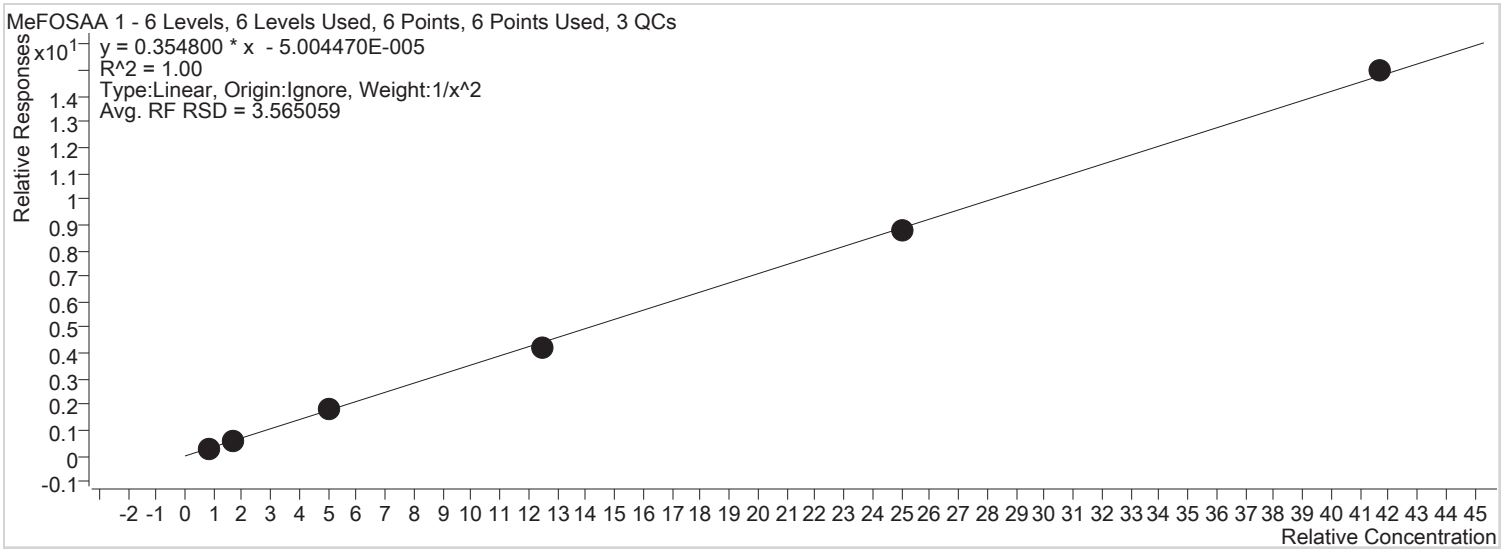
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/21 11:12:38 AM

**Instrument:** LCMS04

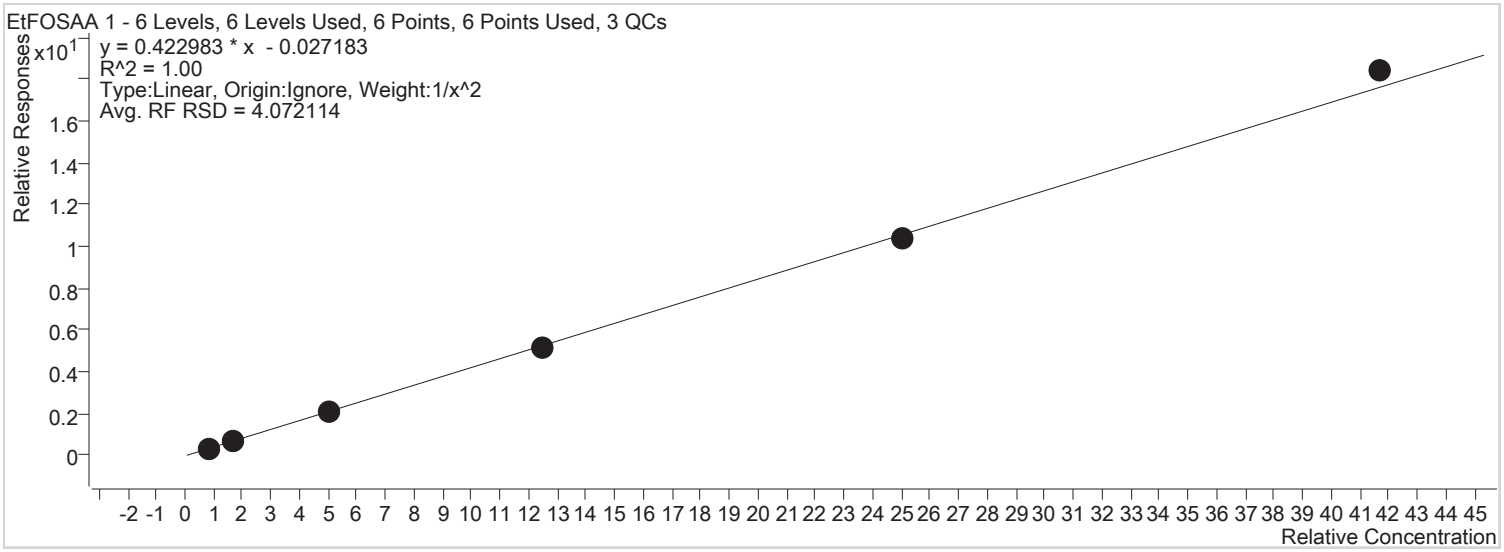
**Analyte:** MeFOSAA 1

**Internal Standard:** D3-MeFOSAA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 9:36:26 AM | 0.83 | 0.82 | 533 | 0.3484 | 100 | 98.2 |
| STD 2 | STD 2 | x | 2018/02/08 9:38:51 AM | 1.70 | 1.75 | 1154 | 0.3654 | 146 | 103.0 |
| STD 3 | STD 3 | x | 2018/02/08 9:41:15 AM | 5.00 | 5.21 | 3426 | 0.3698 | 138 | 104.2 |
| STD 4 | STD 4 | x | 2018/02/08 9:43:38 AM | 12.50 | 11.81 | 7653 | 0.3353 | 130 | 94.5 |
| STD 5 | STD 5 | x | 2018/02/08 9:46:01 AM | 25.00 | 24.68 | 14992 | 0.3503 | 346 | 98.7 |
| STD 6 | STD 6 | x | 2018/02/08 9:48:24 AM | 41.70 | 42.26 | 25594 | 0.3596 | 140 | 101.3 |

| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_EToxics.batch.bin |
| **Last Calib Update** | 2018/02/21 11:12:38 AM |
| **Instrument:** | LCMS04 |
| **Analyte:** | EtFOSAA 1 |
| **Internal Standard:** | D5-EtFOSAA IS |




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 9:36:26 AM | 0.83 | 0.83 | 524 | 0.3895 | 79 | 99.8 |
| STD 2 | STD 2 | x | 2018/02/08 9:38:51 AM | 1.70 | 1.71 | 1119 | 0.4101 | 137 | 100.7 |
| STD 3 | STD 3 | x | 2018/02/08 9:41:15 AM | 5.00 | 5.00 | 3469 | 0.4177 | 380 | 100.0 |
| STD 4 | STD 4 | x | 2018/02/08 9:43:38 AM | 12.50 | 12.10 | 7698 | 0.4073 | 1011 | 96.8 |
| STD 5 | STD 5 | x | 2018/02/08 9:46:01 AM | 25.00 | 24.53 | 15337 | 0.4140 | 614 | 98.1 |
| STD 6 | STD 6 | x | 2018/02/08 9:48:24 AM | 41.70 | 43.57 | 26939 | 0.4413 | 1621 | 104.5 |

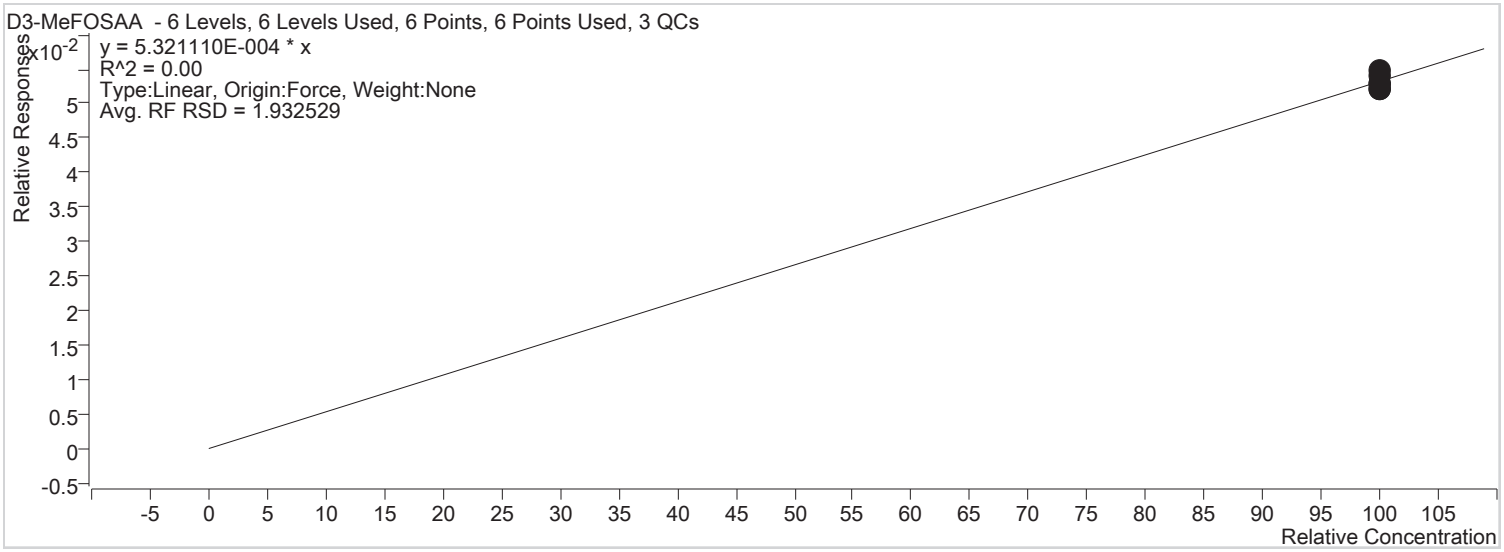
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/21 11:12:38 AM

**Instrument:** LCMS04

**Analyte:** D3-MeFOSAA

**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 9:36:26 AM | 100.00 | 101.70 | 1860 | 0.0005 | 135 | 101.7 |
| STD 2 | STD 2 | x | 2018/02/08 9:38:51 AM | 100.00 | 99.43 | 1854 | 0.0005 | 111 | 99.4 |
| STD 3 | STD 3 | x | 2018/02/08 9:41:15 AM | 100.00 | 102.89 | 1876 | 0.0005 | 122 | 102.9 |
| STD 4 | STD 4 | x | 2018/02/08 9:43:38 AM | 100.00 | 98.07 | 1843 | 0.0005 | 148 | 98.1 |
| STD 5 | STD 5 | x | 2018/02/08 9:46:01 AM | 100.00 | 99.73 | 1720 | 0.0005 | 129 | 99.7 |
| STD 6 | STD 6 | x | 2018/02/08 9:48:24 AM | 100.00 | 98.18 | 1709 | 0.0005 | 79 | 98.2 |

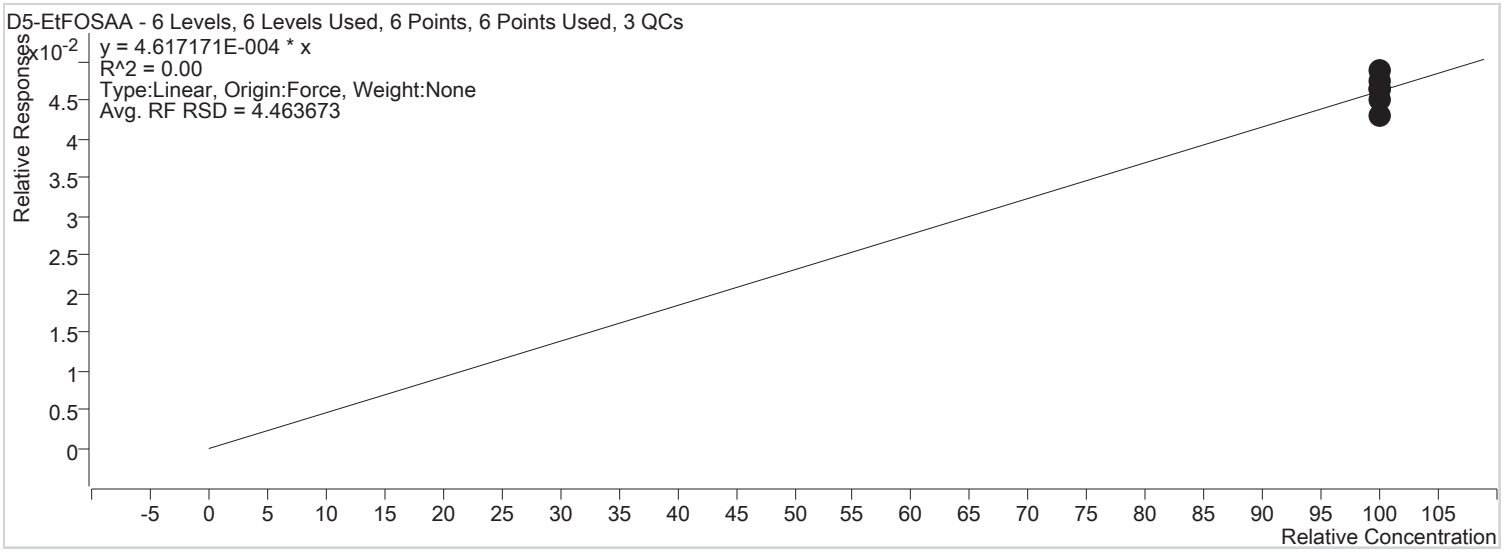
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/21 11:12:38 AM

**Instrument:** LCMS04

**Analyte:** D5-EtFOSAA

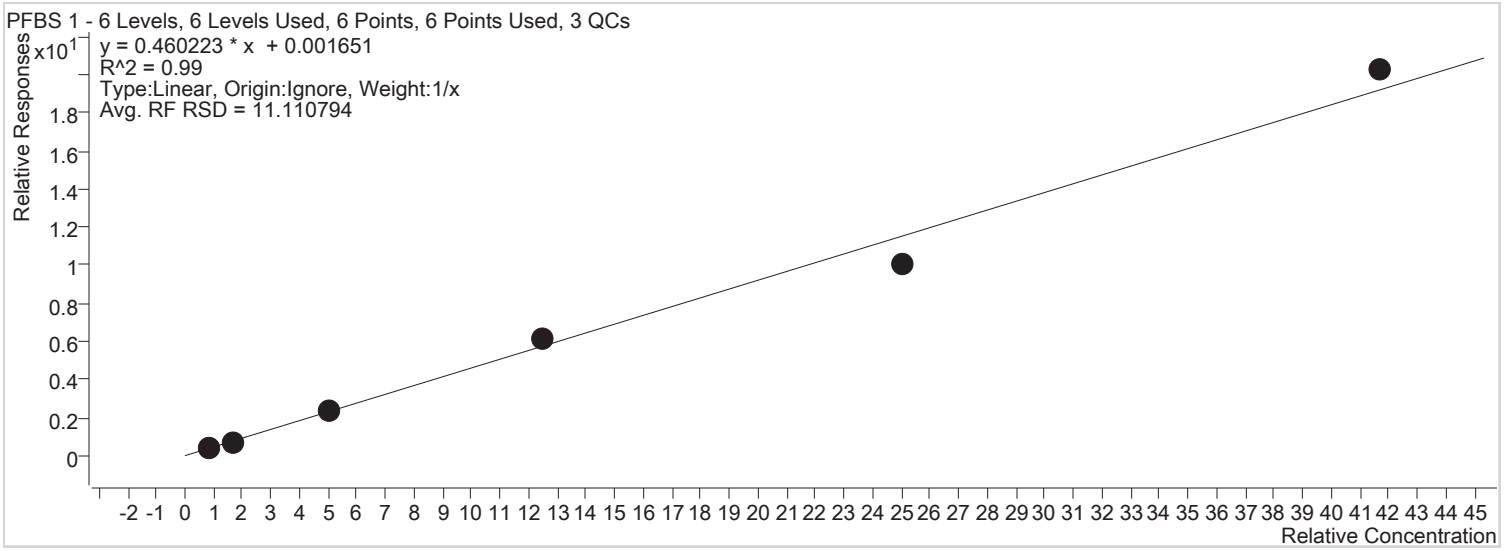
**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 9:36:26 AM | 100.00 | 103.15 | 1637 | 0.0005 | 270 | 103.1 |
| STD 2 | STD 2 | x | 2018/02/08 9:38:51 AM | 100.00 | 100.44 | 1625 | 0.0005 | 196 | 100.4 |
| STD 3 | STD 3 | x | 2018/02/08 9:41:15 AM | 100.00 | 105.68 | 1672 | 0.0005 | 120 | 105.7 |
| STD 4 | STD 4 | x | 2018/02/08 9:43:38 AM | 100.00 | 92.97 | 1516 | 0.0004 | 118 | 93.0 |
| STD 5 | STD 5 | x | 2018/02/08 9:46:01 AM | 100.00 | 100.50 | 1504 | 0.0005 | 177 | 100.5 |
| STD 6 | STD 6 | x | 2018/02/08 9:48:24 AM | 100.00 | 97.26 | 1469 | 0.0004 | 120 | 97.3 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

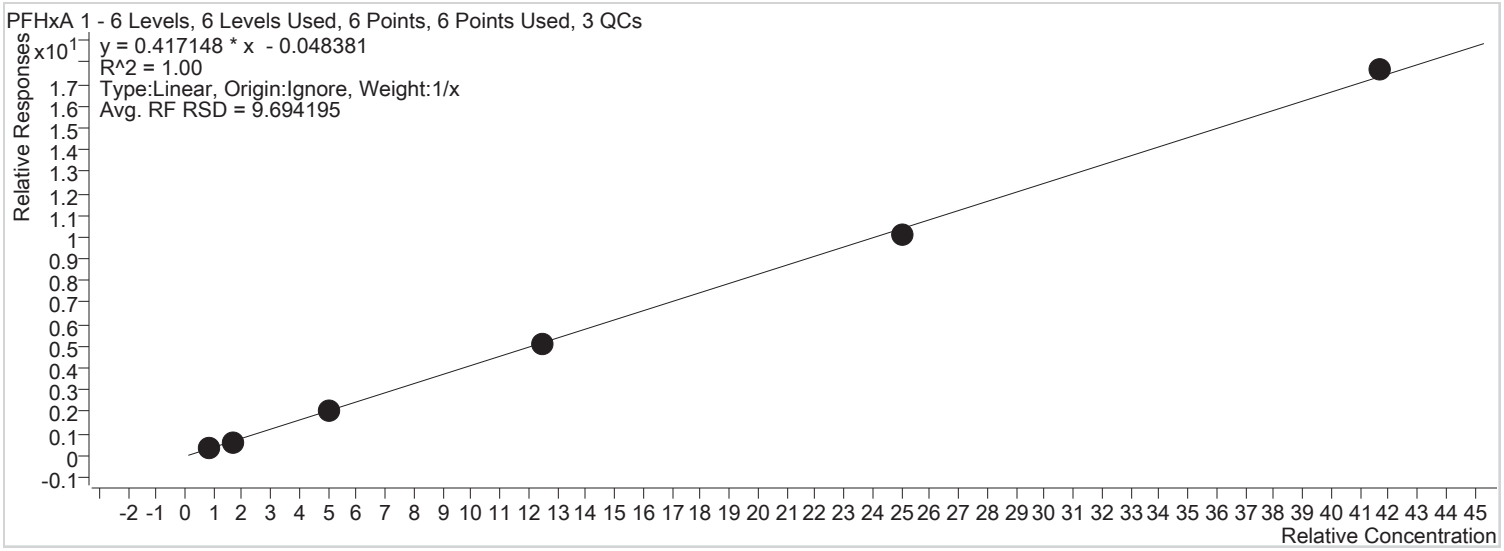
**Analyte:** PFBS 1
**Internal Standard:** MPFHxS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.92 | 671 | 0.5143 | 93 | 111.3 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.44 | 1069 | 0.3898 | 122 | 84.5 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 5.27 | 3685 | 0.4855 | 91 | 105.4 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 13.21 | 8679 | 0.4866 | 649 | 105.7 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 21.89 | 16004 | 0.4031 | 295 | 87.6 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 43.99 | 31202 | 0.4856 | 151 | 105.5 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

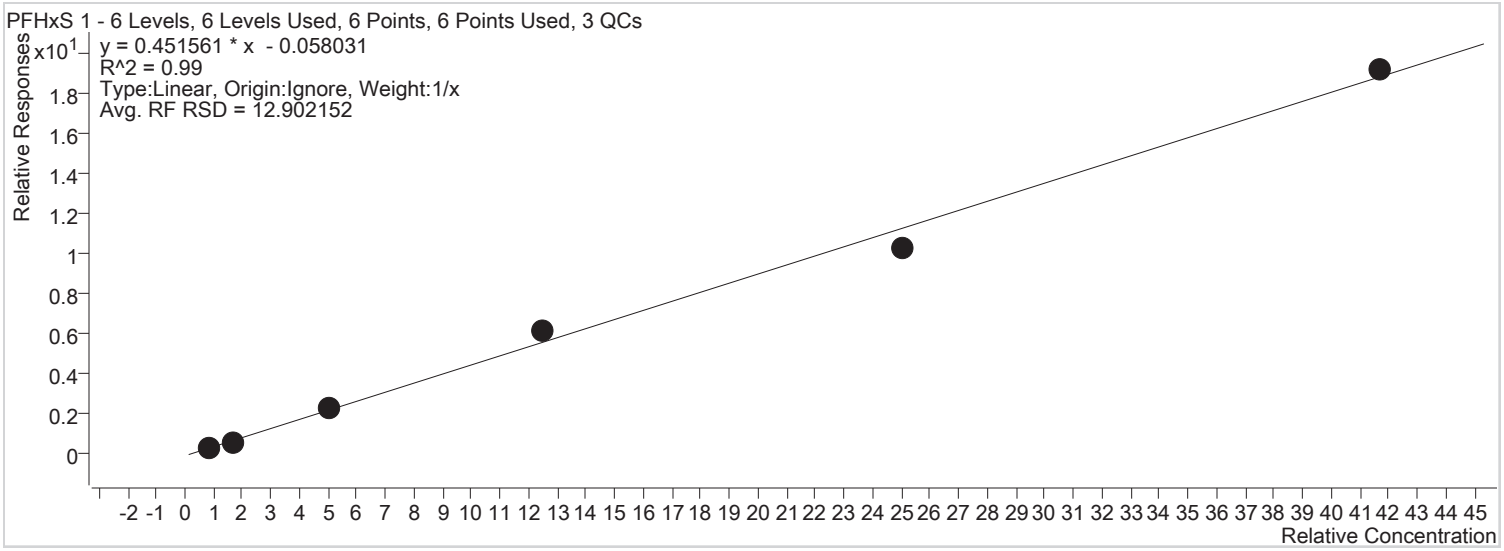
**Analyte:** PFHxA 1
**Internal Standard:** MPFHxA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.97 | 2012 | 0.4291 | 132 | 116.8 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.43 | 3269 | 0.3231 | 280 | 84.3 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 4.99 | 12687 | 0.4064 | 1116 | 99.8 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 12.44 | 30119 | 0.4113 | 2486 | 99.5 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 24.45 | 60745 | 0.4060 | 4432 | 97.8 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 42.45 | 111030 | 0.4235 | 10263 | 101.8 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

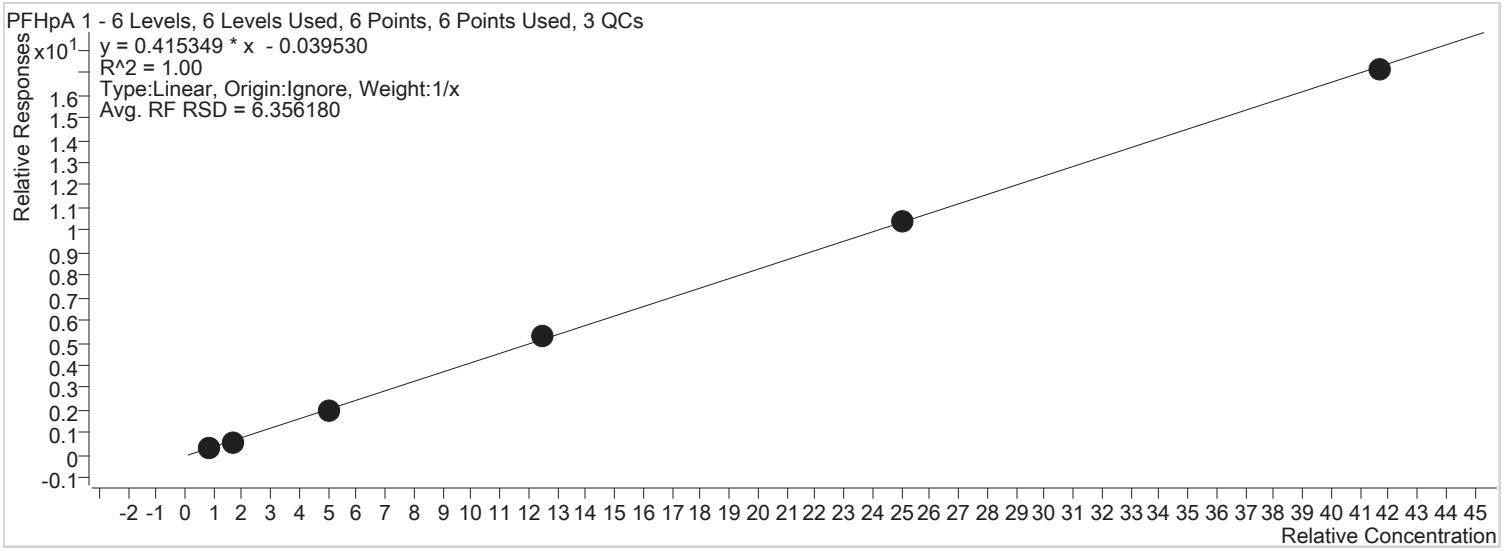
**Analyte:** PFHxS 1
**Internal Standard:** MPFHxS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.90 | 549 | 0.4208 | 78 | 108.7 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.39 | 918 | 0.3348 | 106 | 81.7 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 5.32 | 3558 | 0.4688 | 312 | 106.4 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 13.71 | 8749 | 0.4905 | 532 | 109.6 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 22.93 | 16354 | 0.4119 | 1056 | 91.7 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 42.48 | 29470 | 0.4586 | 2241 | 101.9 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

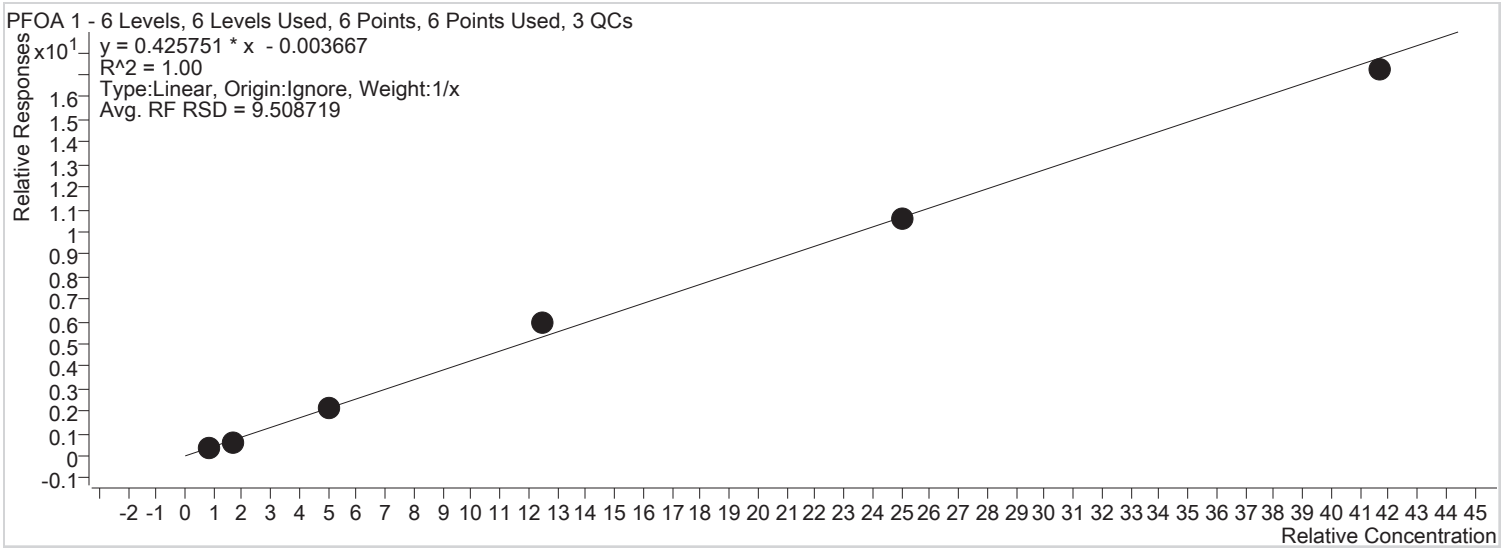
**Analyte:** PFHpA 1
**Internal Standard:** MPFHpA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.91 | 2767 | 0.4081 | 25 | 109.7 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.56 | 4633 | 0.3577 | 38 | 91.7 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 4.74 | 16651 | 0.3857 | 135 | 94.8 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 12.98 | 41071 | 0.4283 | 259 | 103.9 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 25.19 | 80239 | 0.4170 | 255 | 100.8 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 41.34 | 138947 | 0.4109 | 299 | 99.1 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

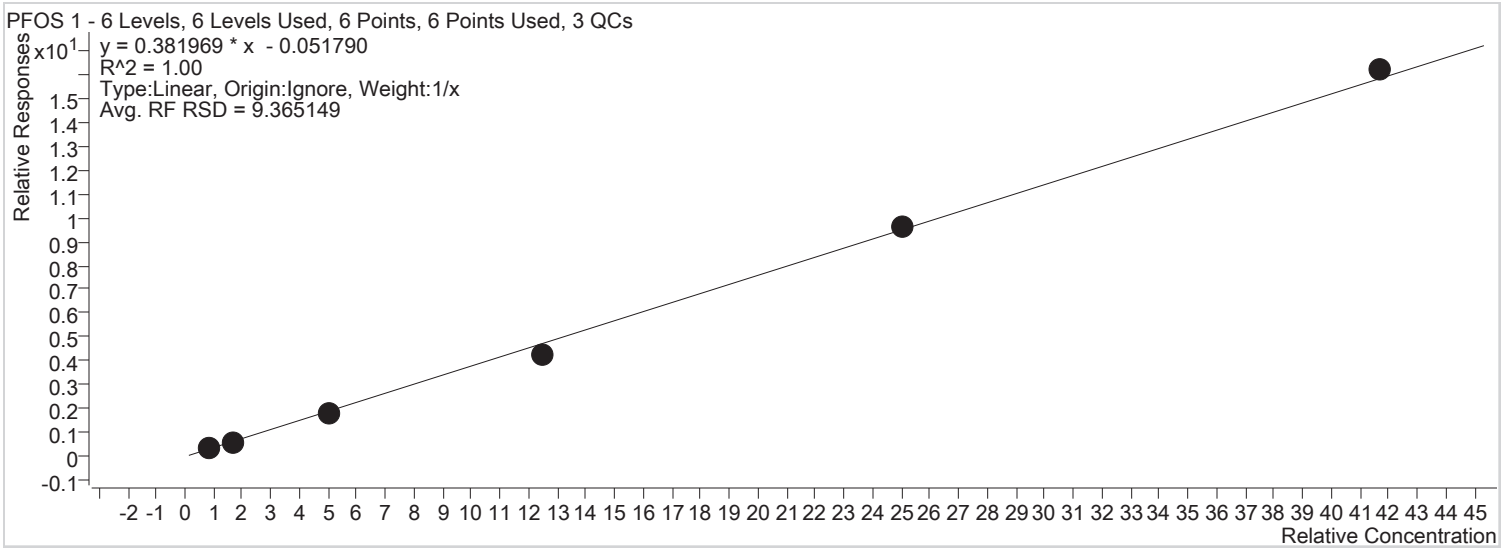
**Analyte:** PFOA 1
**Internal Standard:** MPFOA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.88 | 3259 | 0.4479 | 39 | 106.2 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.42 | 5039 | 0.3532 | 67 | 83.5 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 5.12 | 19009 | 0.4353 | 231 | 102.4 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 13.87 | 46159 | 0.4720 | 514 | 110.9 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 24.97 | 88474 | 0.4251 | 1281 | 99.9 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 40.47 | 158054 | 0.4131 | 1590 | 97.1 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

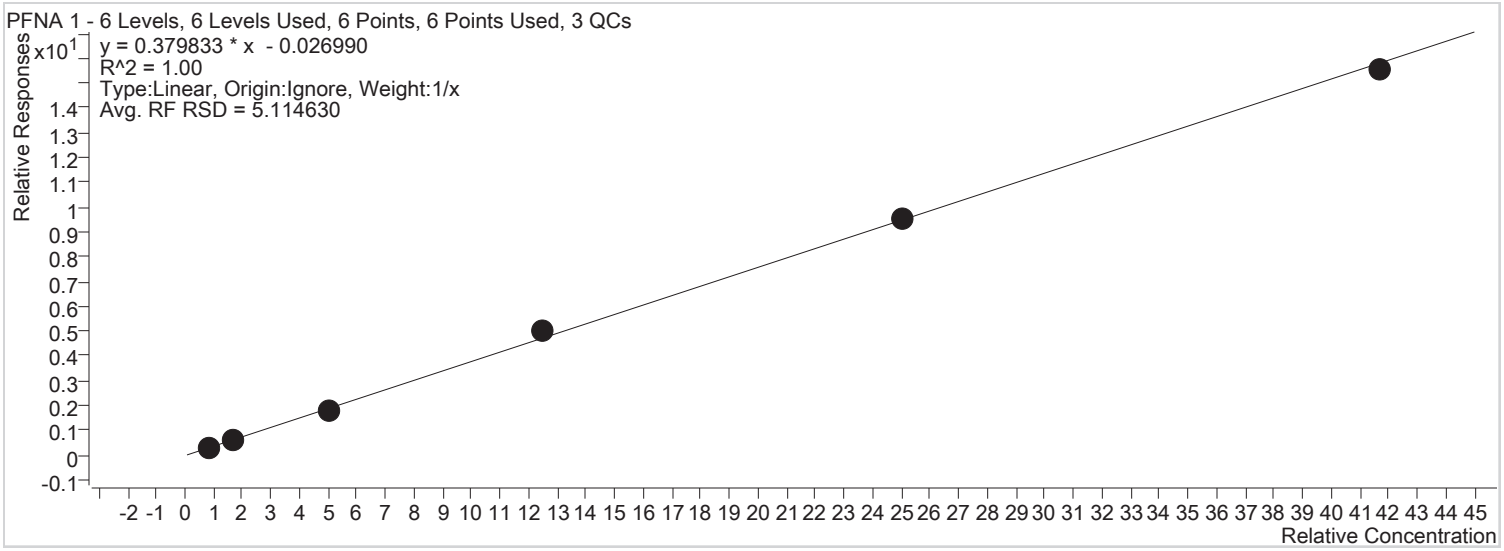
**Analyte:** PFOS 1
**Internal Standard:** MPFOS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 1.00 | 595 | 0.3974 | 77 | 120.4 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.51 | 1026 | 0.3090 | 123 | 88.9 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 4.80 | 3653 | 0.3566 | 162 | 96.1 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 11.34 | 8207 | 0.3425 | 141 | 90.8 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 25.40 | 16958 | 0.3861 | 195 | 101.6 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 42.67 | 30641 | 0.3896 | 263 | 102.3 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

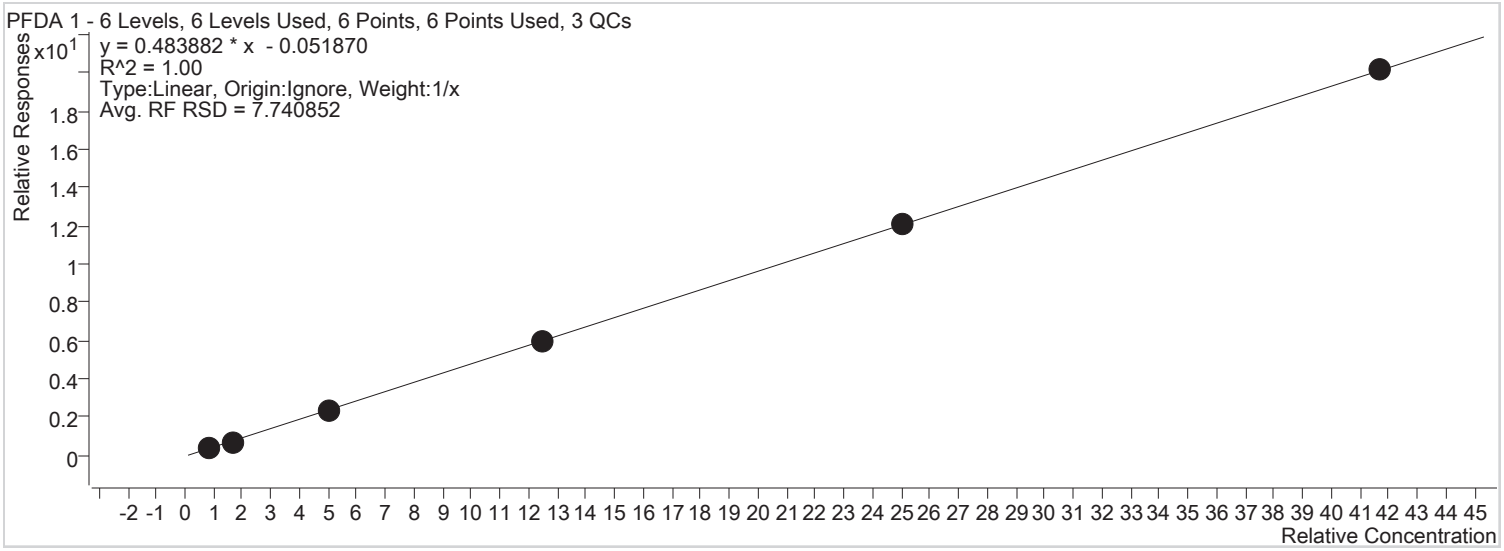
**Analyte:** PFNA 1
**Internal Standard:** MPFNA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.86 | 2670 | 0.3590 | 33 | 103.1 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.61 | 5021 | 0.3438 | 73 | 94.7 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 4.88 | 16269 | 0.3654 | 314 | 97.6 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 13.18 | 40186 | 0.3985 | 584 | 105.5 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 25.21 | 79008 | 0.3820 | 1193 | 100.9 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 40.99 | 137642 | 0.3727 | 1979 | 98.3 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

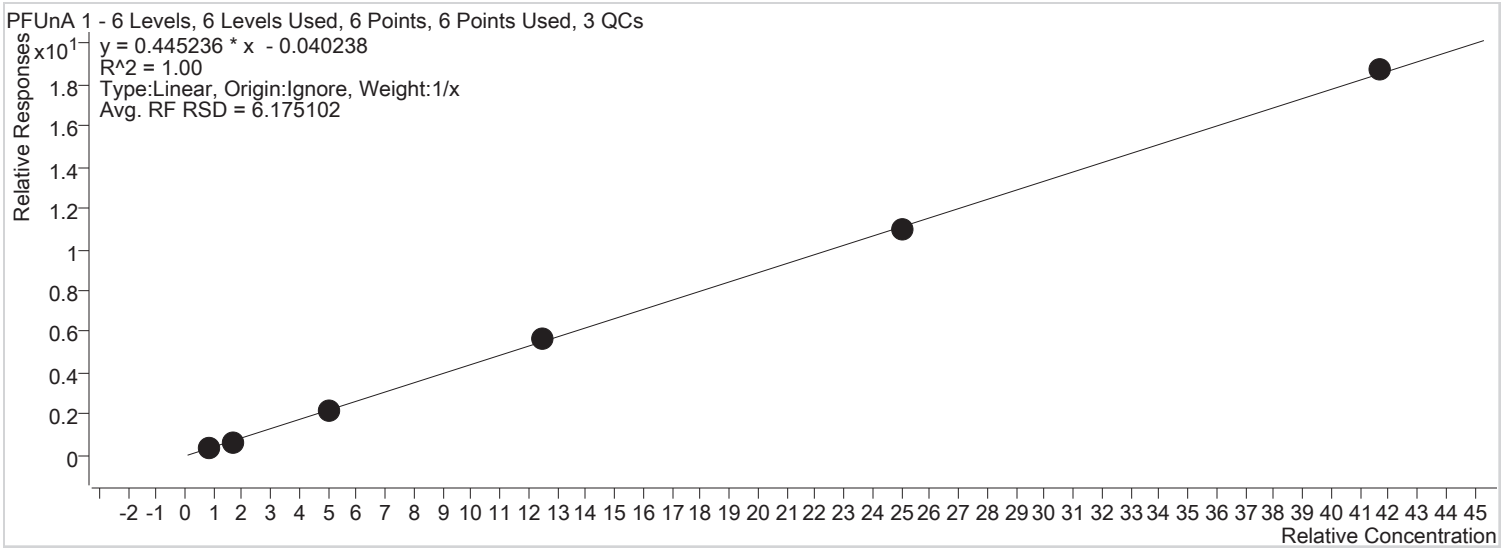
**Analyte:** PFDA 1
**Internal Standard:** MPFDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.94 | 2811 | 0.4849 | 37 | 113.1 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.49 | 4944 | 0.3928 | 54 | 87.5 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 4.96 | 17521 | 0.4697 | 232 | 99.2 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 12.43 | 43587 | 0.4771 | 534 | 99.5 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 25.13 | 83684 | 0.4844 | 1022 | 100.5 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 41.78 | 153798 | 0.4836 | 946 | 100.2 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

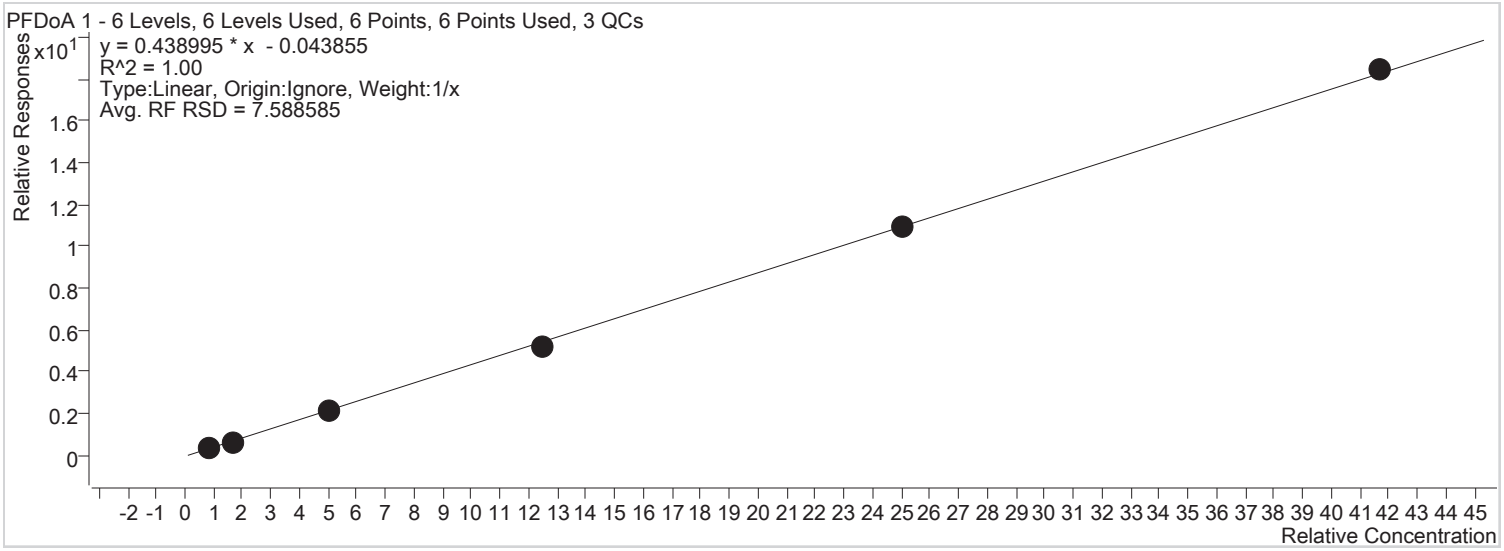
**Analyte:** PFUnA 1
**Internal Standard:** MPFUnA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.93 | 3172 | 0.4478 | 29 | 111.5 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.54 | 5409 | 0.3809 | 55 | 90.9 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 4.84 | 18843 | 0.4225 | 133 | 96.7 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 12.69 | 47185 | 0.4489 | 266 | 101.5 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 24.59 | 89716 | 0.4363 | 296 | 98.4 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 42.14 | 167796 | 0.4490 | 299 | 101.1 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

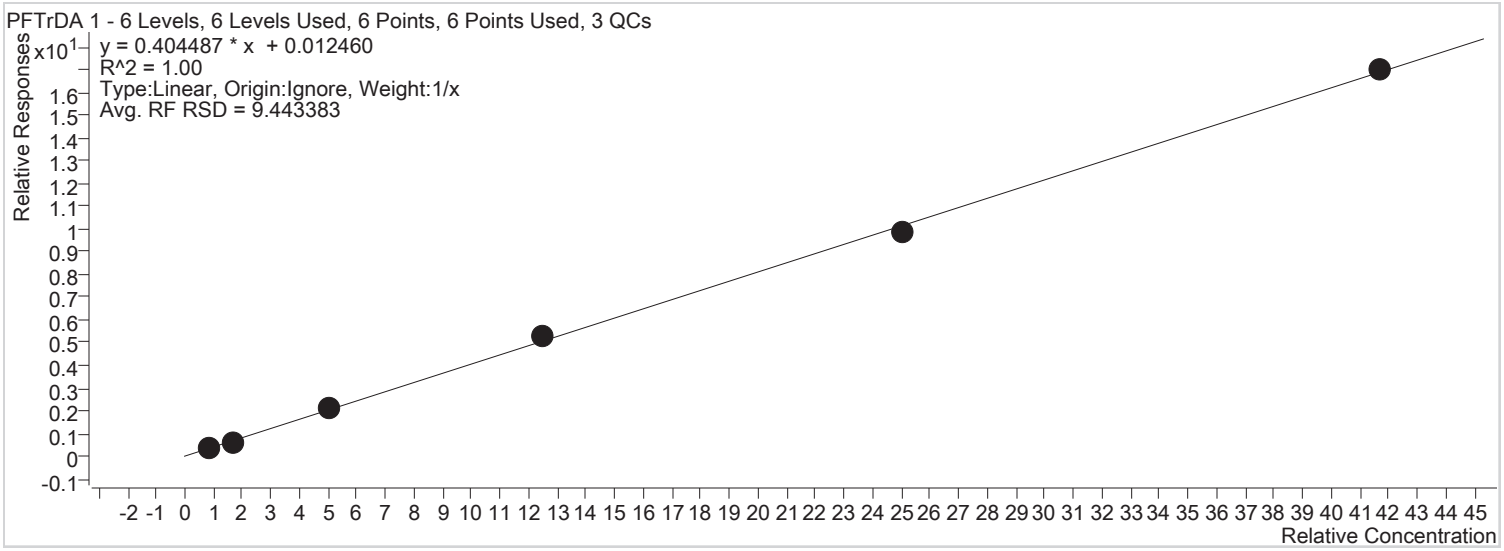
**Analyte:** PFDoA 1
**Internal Standard:** MPFDoA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.95 | 4275 | 0.4501 | 205 | 114.6 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.50 | 6898 | 0.3618 | 197 | 88.3 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 4.96 | 24541 | 0.4264 | 652 | 99.1 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 12.05 | 60873 | 0.4195 | 2479 | 96.4 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 25.16 | 115272 | 0.4401 | 2957 | 100.7 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 42.11 | 213116 | 0.4423 | 4821 | 101.0 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

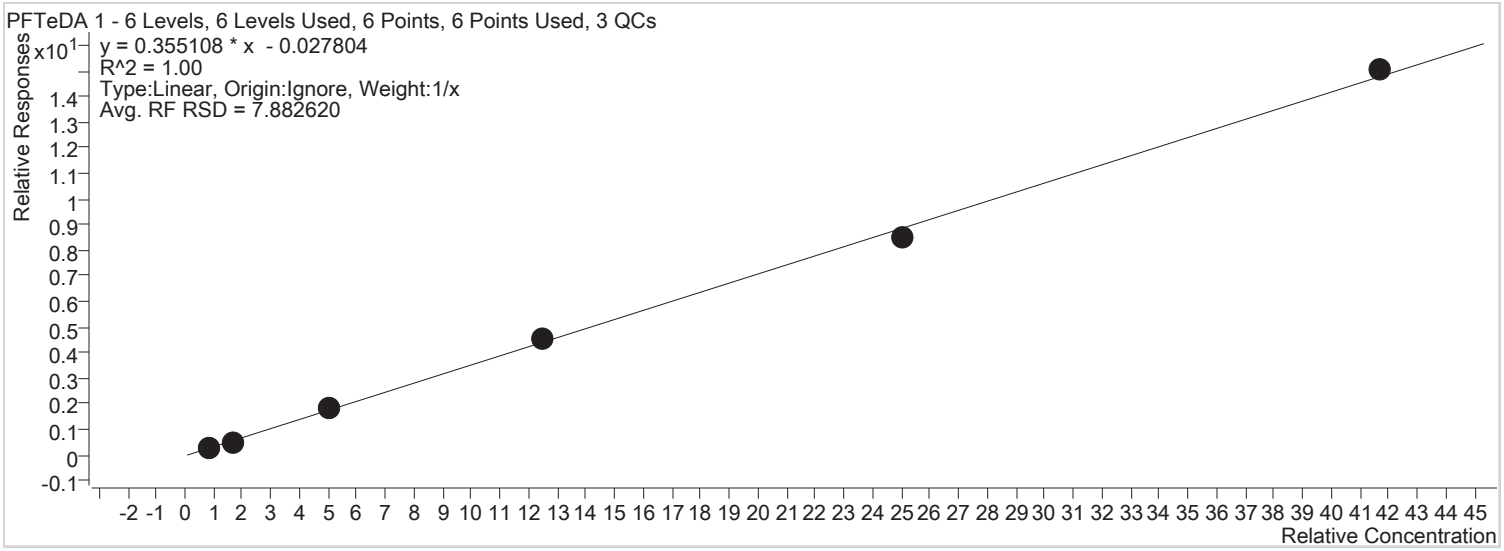
**Analyte:** PFTrDA 1
**Internal Standard:** MPFTeDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.93 | 5032 | 0.4661 | 40 | 111.5 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.43 | 7954 | 0.3478 | 56 | 84.2 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 5.13 | 27534 | 0.4178 | 100 | 102.7 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 12.98 | 66039 | 0.4209 | 127 | 103.8 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 24.30 | 126598 | 0.3937 | 162 | 97.2 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 41.96 | 234625 | 0.4073 | 143 | 100.6 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

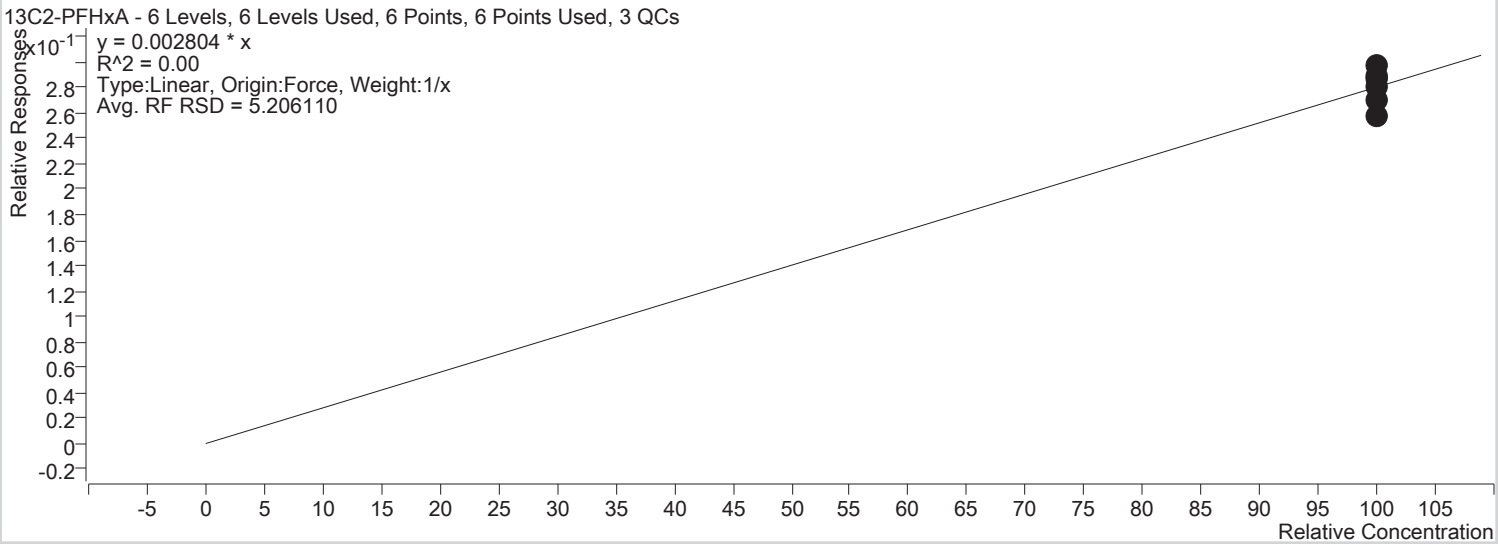
**Analyte:** PFTeDA 1
**Internal Standard:** MPFTeDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.91 | 3842 | 0.3559 | 15 | 109.6 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.48 | 6692 | 0.2926 | 27 | 87.0 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 5.18 | 23878 | 0.3623 | 86 | 103.6 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 12.78 | 56621 | 0.3609 | 129 | 102.2 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 23.92 | 108923 | 0.3387 | 121 | 95.7 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 42.46 | 207867 | 0.3609 | 144 | 101.8 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

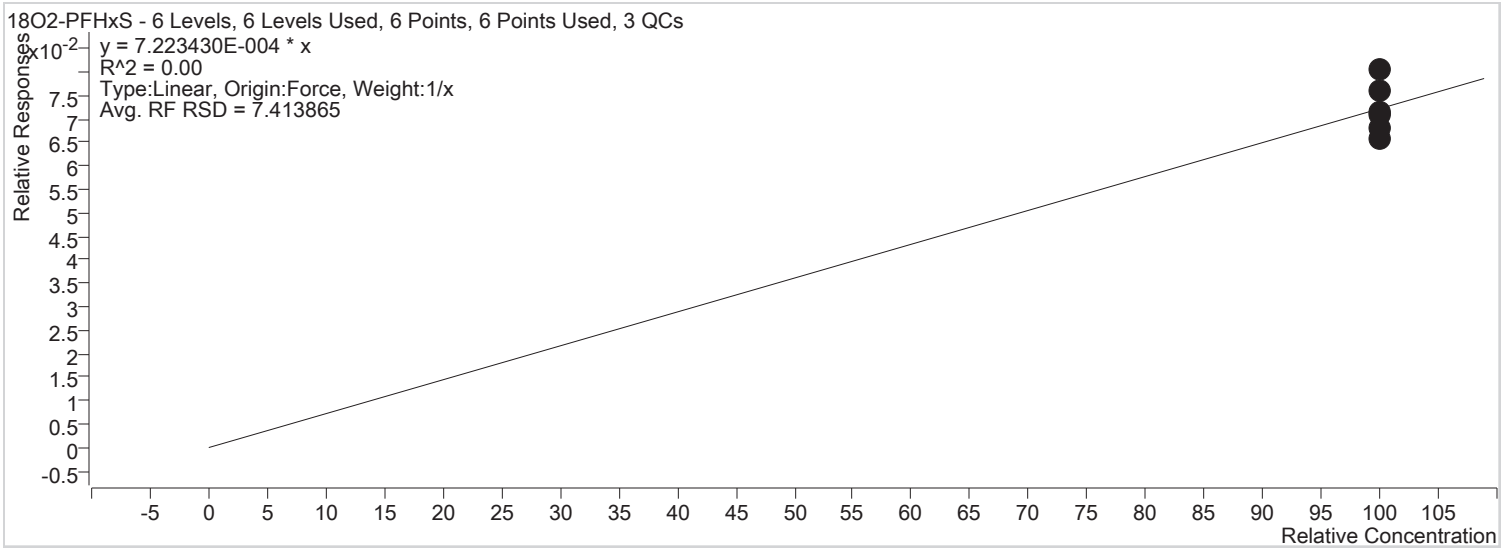
**Analyte:** 13C2-PFHxA
**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 100.00 | 91.64 | 5649 | 0.0026 | 182 | 91.6 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 100.00 | 105.96 | 5951 | 0.0030 | 206 | 106.0 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 100.00 | 99.96 | 6243 | 0.0028 | 177 | 100.0 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 100.00 | 96.51 | 5858 | 0.0027 | 477 | 96.5 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 100.00 | 102.51 | 5985 | 0.0029 | 253 | 102.5 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 100.00 | 103.42 | 6287 | 0.0029 | 103 | 103.4 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

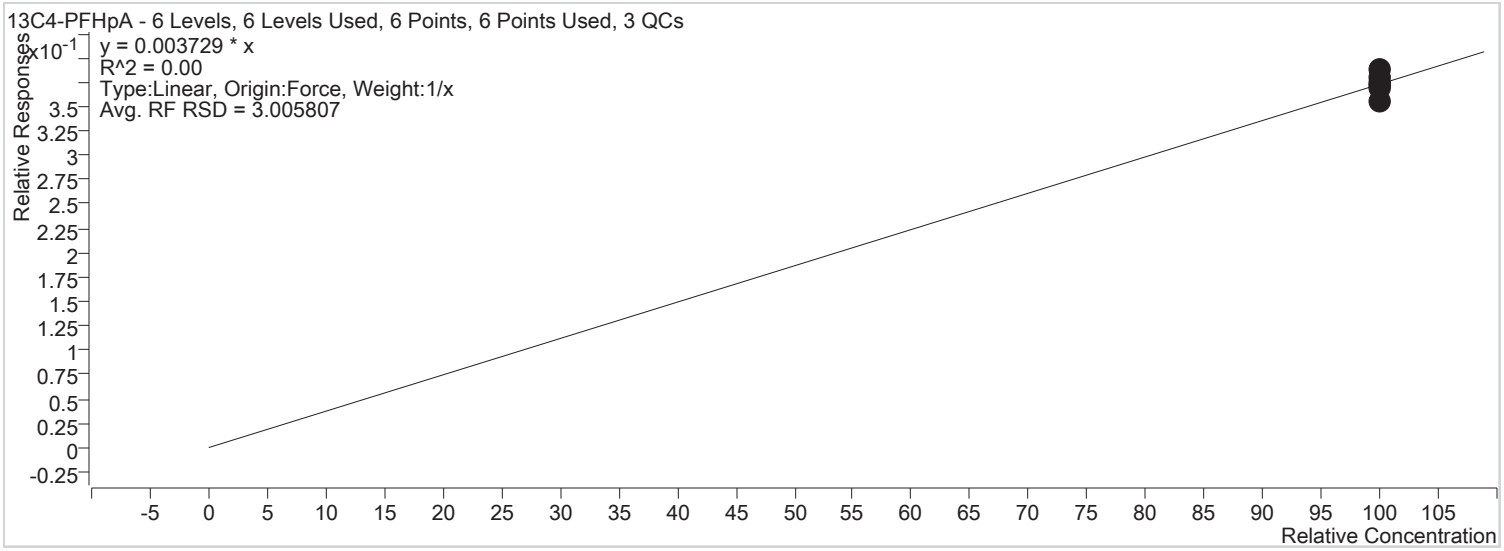
**Analyte:** 18O2-PFHxS
**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 100.00 | 98.98 | 1572 | 0.0007 | 184 | 99.0 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 100.00 | 111.47 | 1613 | 0.0008 | 159 | 111.5 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 100.00 | 94.33 | 1518 | 0.0007 | 205 | 94.3 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 100.00 | 91.25 | 1427 | 0.0007 | 532 | 91.3 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 100.00 | 105.57 | 1588 | 0.0008 | 164 | 105.6 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 100.00 | 98.39 | 1541 | 0.0007 | 277 | 98.4 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

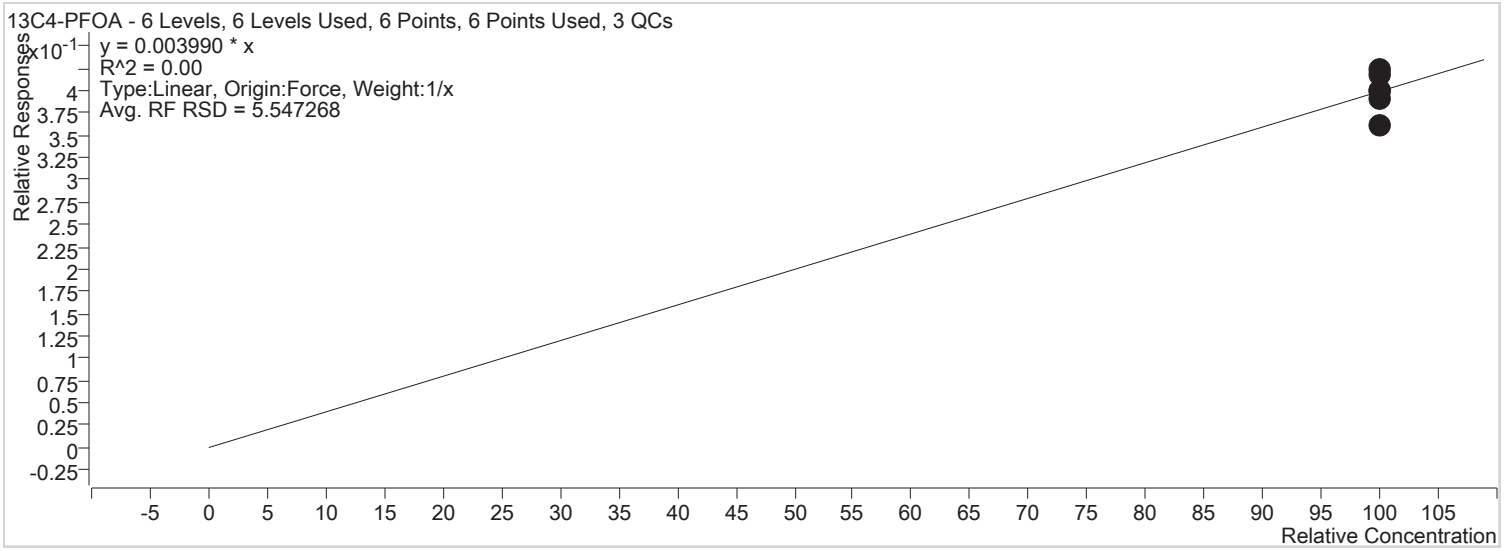
**Analyte:** 13C4-PFHpA
**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 100.00 | 99.64 | 8169 | 0.0037 | 255 | 99.6 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 100.00 | 101.98 | 7618 | 0.0038 | 232 | 102.0 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 100.00 | 103.94 | 8635 | 0.0039 | 355 | 103.9 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 100.00 | 95.03 | 7672 | 0.0035 | 186 | 95.0 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 100.00 | 99.11 | 7697 | 0.0037 | 242 | 99.1 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 100.00 | 100.30 | 8110 | 0.0037 | 215 | 100.3 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

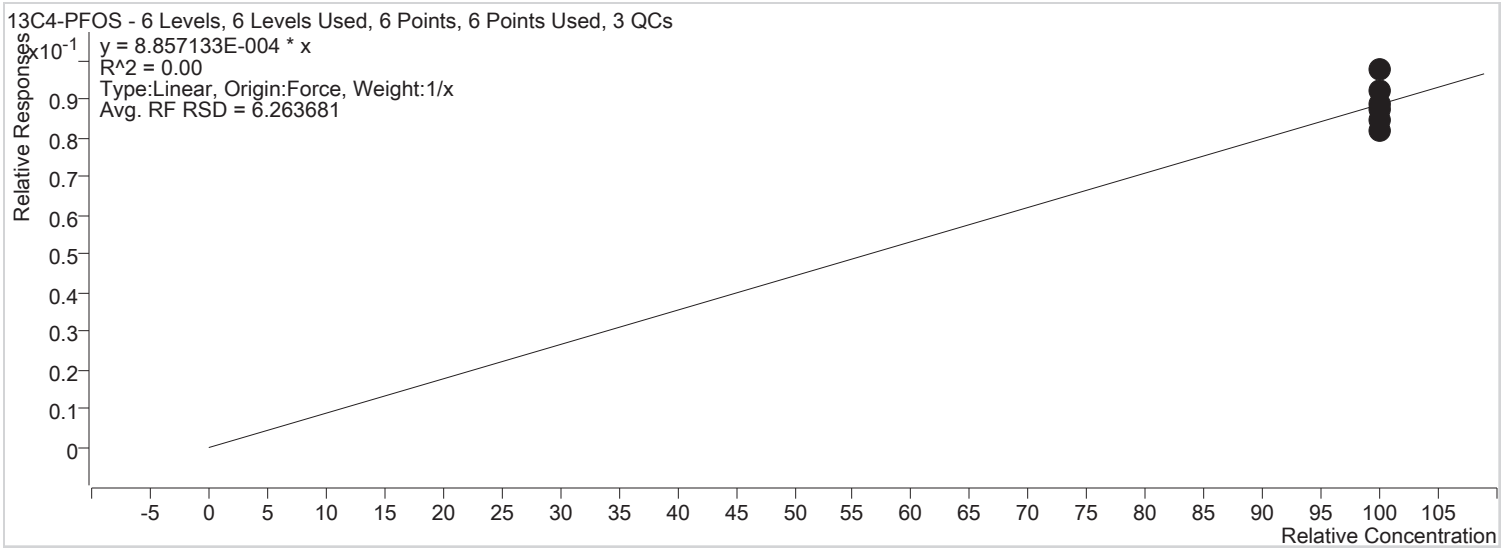
**Analyte:** 13C4-PFOA
**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 100.00 | 99.93 | 8766 | 0.0040 | 156 | 99.9 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 100.00 | 105.01 | 8393 | 0.0042 | 183 | 105.0 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 100.00 | 98.25 | 8733 | 0.0039 | 155 | 98.3 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 100.00 | 90.57 | 7823 | 0.0036 | 105 | 90.6 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 100.00 | 100.19 | 8325 | 0.0040 | 137 | 100.2 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 100.00 | 106.06 | 9175 | 0.0042 | 159 | 106.1 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

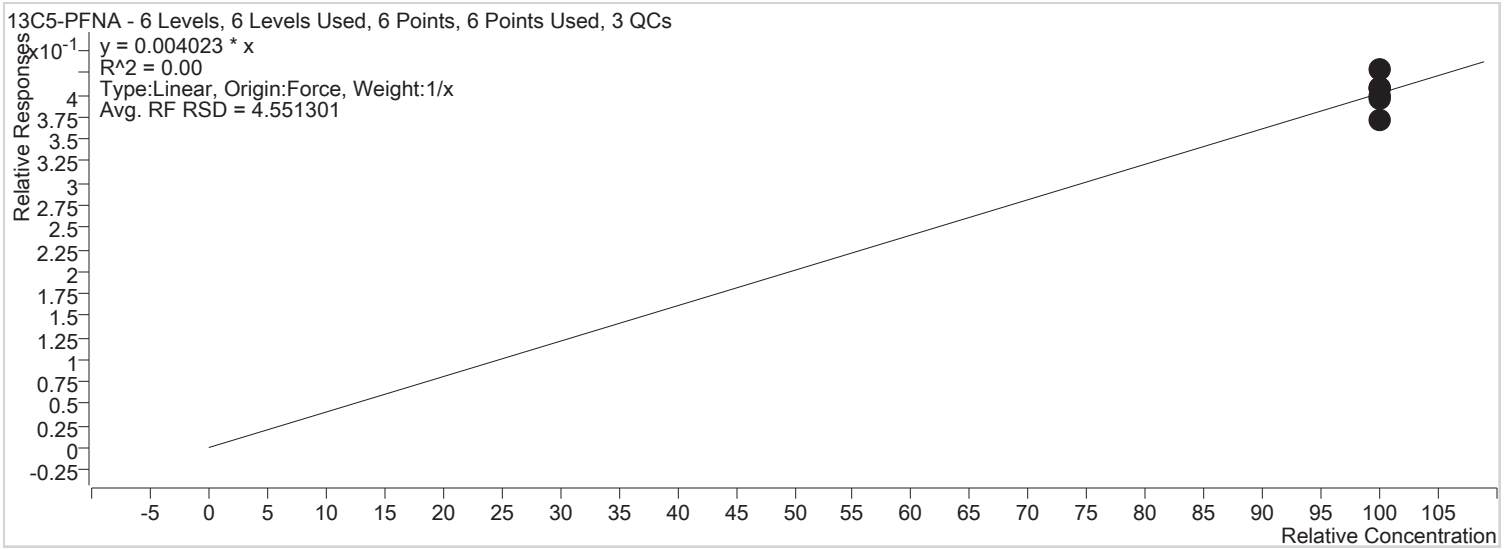
**Analyte:** 13C4-PFOS
**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 100.00 | 92.64 | 1804 | 0.0008 | 121 | 92.6 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 100.00 | 110.07 | 1953 | 0.0010 | 381 | 110.1 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 100.00 | 103.85 | 2049 | 0.0009 | 279 | 103.8 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 100.00 | 99.97 | 1917 | 0.0009 | 171 | 100.0 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 100.00 | 95.26 | 1757 | 0.0008 | 159 | 95.3 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 100.00 | 98.21 | 1886 | 0.0009 | 121 | 98.2 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

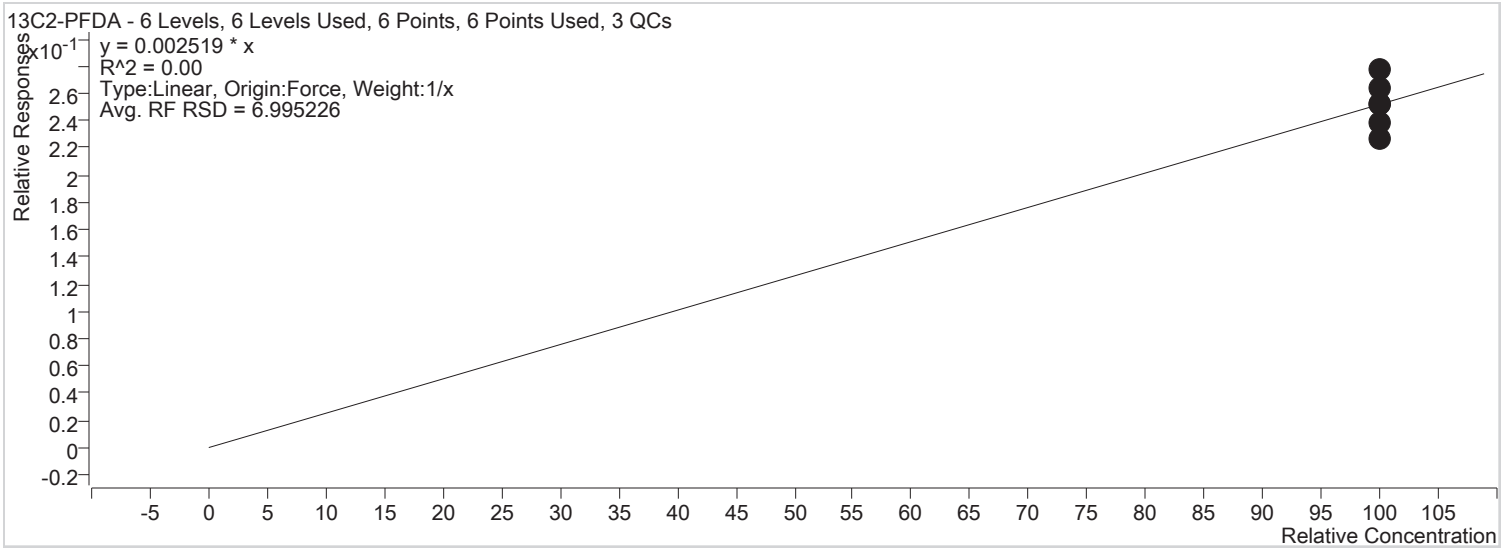
**Analyte:** 13C5-PFNA
**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 100.00 | 101.32 | 8961 | 0.0041 | 313 | 101.3 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 100.00 | 106.63 | 8592 | 0.0043 | 182 | 106.6 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 100.00 | 99.35 | 8903 | 0.0040 | 235 | 99.4 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 100.00 | 92.64 | 8067 | 0.0037 | 290 | 92.6 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 100.00 | 98.76 | 8273 | 0.0040 | 209 | 98.8 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 100.00 | 101.30 | 8835 | 0.0041 | 268 | 101.3 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

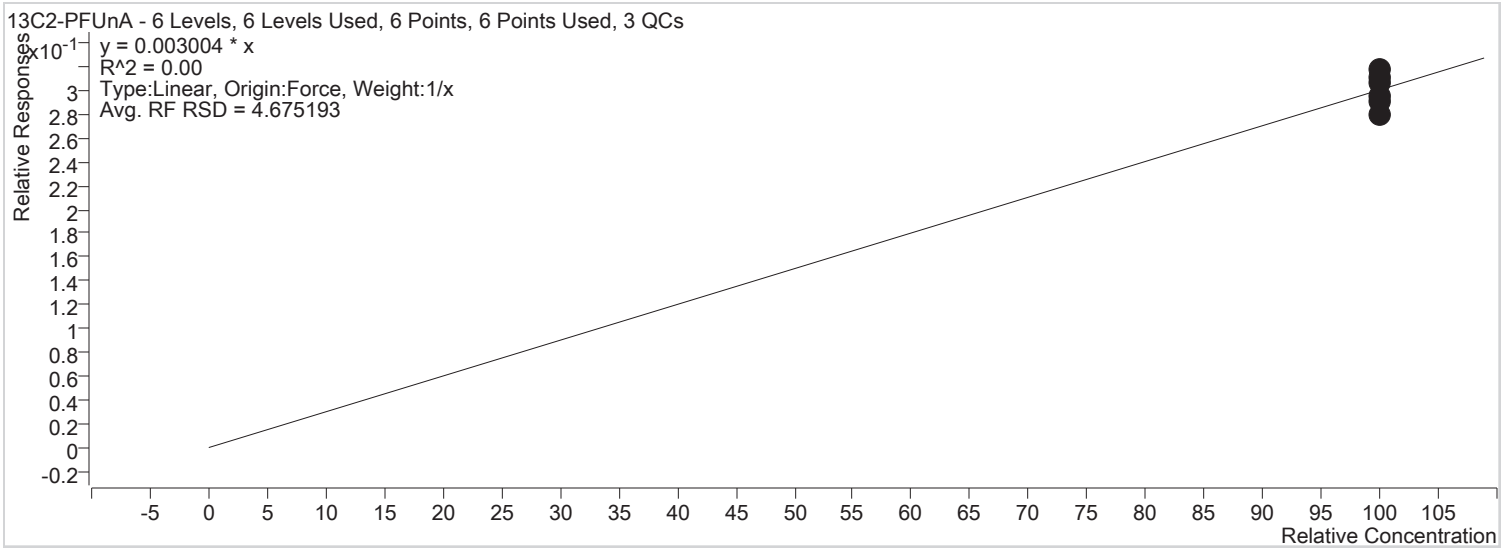
**Analyte:** 13C2-PFDA
**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 100.00 | 90.29 | 6916 | 0.0023 | 346 | 90.3 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 100.00 | 110.06 | 7300 | 0.0028 | 260 | 110.1 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 100.00 | 94.57 | 7332 | 0.0024 | 226 | 94.6 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 100.00 | 100.20 | 7177 | 0.0025 | 284 | 100.2 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 100.00 | 100.47 | 6772 | 0.0025 | 241 | 100.5 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 100.00 | 104.41 | 7561 | 0.0026 | 281 | 104.4 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

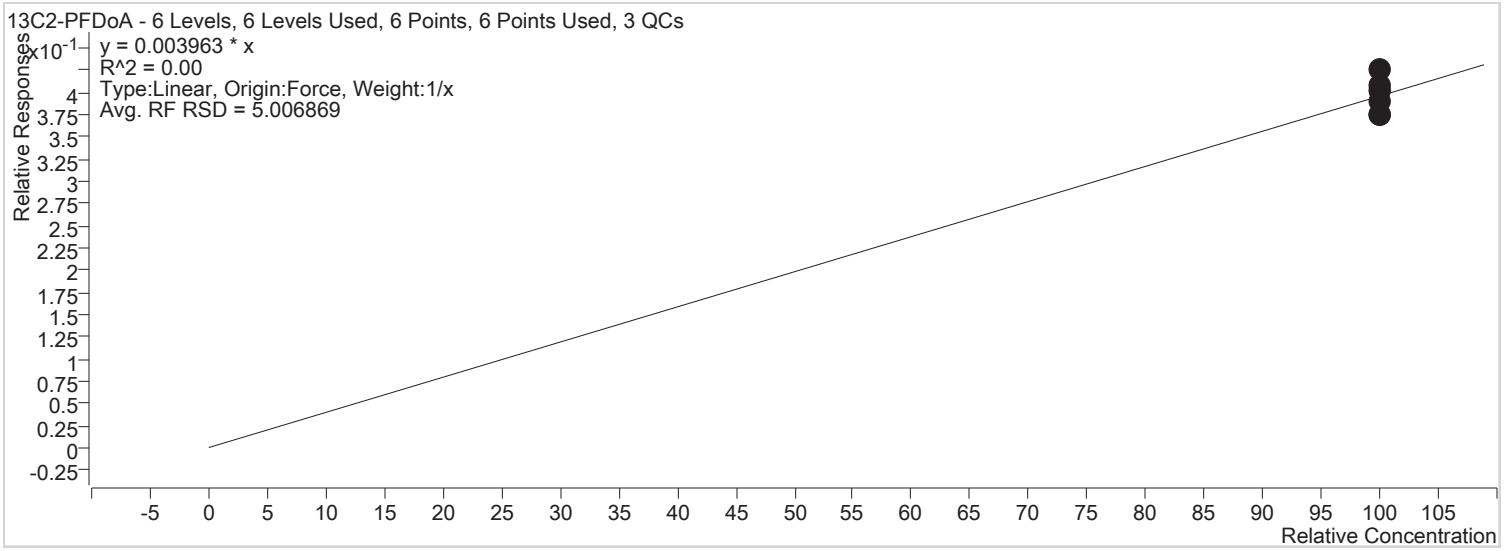
**Analyte:** 13C2-PFUnA
**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 100.00 | 93.42 | 8534 | 0.0028 | 276 | 93.4 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 100.00 | 105.61 | 8354 | 0.0032 | 288 | 105.6 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 100.00 | 96.46 | 8919 | 0.0029 | 237 | 96.5 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 100.00 | 98.44 | 8409 | 0.0030 | 174 | 98.4 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 100.00 | 102.32 | 8225 | 0.0031 | 243 | 102.3 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 100.00 | 103.76 | 8962 | 0.0031 | 319 | 103.8 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

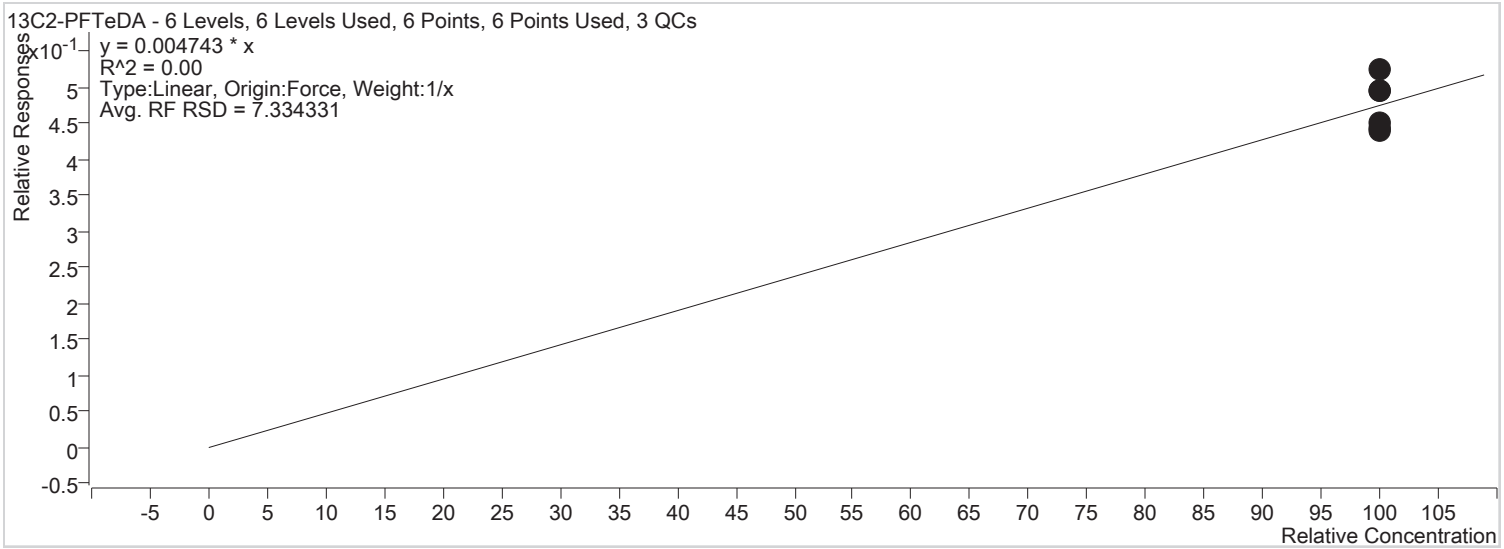
**Analyte:** 13C2-PFDoA
**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 100.00 | 94.96 | 11444 | 0.0038 | 255 | 95.0 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 100.00 | 107.46 | 11214 | 0.0043 | 171 | 107.5 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 100.00 | 94.36 | 11510 | 0.0037 | 255 | 94.4 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 100.00 | 103.00 | 11608 | 0.0041 | 290 | 103.0 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 100.00 | 98.79 | 10477 | 0.0039 | 342 | 98.8 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 100.00 | 101.41 | 11555 | 0.0040 | 169 | 101.4 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

**Analyte:** 13C2-PFTeDA
**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 100.00 | 93.11 | 13430 | 0.0044 | 516 | 93.1 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 100.00 | 110.41 | 13789 | 0.0052 | 514 | 110.4 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 100.00 | 92.71 | 13535 | 0.0044 | 402 | 92.7 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 100.00 | 95.18 | 12838 | 0.0045 | 458 | 95.2 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 100.00 | 104.51 | 13265 | 0.0050 | 628 | 104.5 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 100.00 | 104.07 | 14192 | 0.0049 | 605 | 104.1 |

# By Compound Report

Agilent Technologies

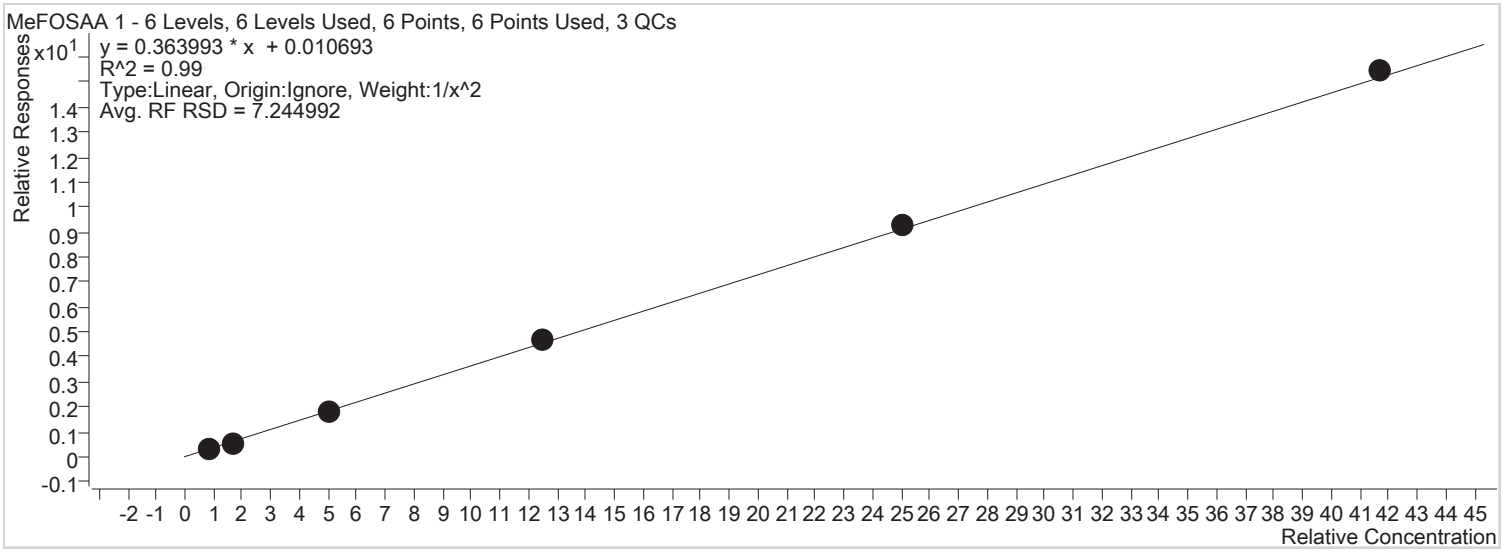
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/21 1:00:12 PM

**Instrument:** LCMS04

**Analyte:** MeFOSAA 1

**Internal Standard:** D3-MeFOSAA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 6:03:55 PM | 0.83 | 0.88 | 646 | 0.4002 | 186 | 106.4 |
| STD 2 | STD 2 | x | 2018/02/08 6:06:20 PM | 1.70 | 1.46 | 1054 | 0.3186 | 194 | 85.8 |
| STD 3 | STD 3 | x | 2018/02/08 6:08:45 PM | 5.00 | 5.08 | 3499 | 0.3718 | 235 | 101.6 |
| STD 4 | STD 4 | x | 2018/02/08 6:11:11 PM | 12.50 | 12.84 | 8486 | 0.3749 | 241 | 102.8 |
| STD 5 | STD 5 | x | 2018/02/08 6:13:35 PM | 25.00 | 25.43 | 16326 | 0.3706 | 222 | 101.7 |
| STD 6 | STD 6 | x | 2018/02/08 6:16:01 PM | 41.70 | 42.44 | 27826 | 0.3707 | 231 | 101.8 |

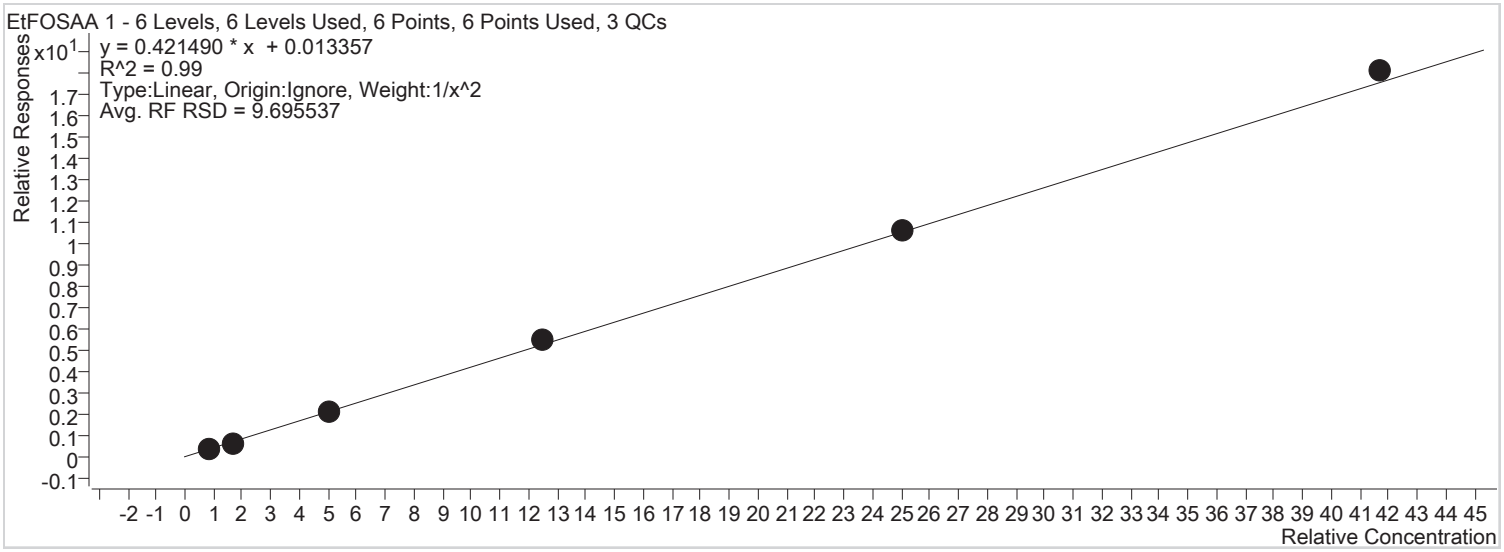
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/21 1:00:12 PM

**Instrument:** LCMS04

**Analyte:** EtFOSAA 1

**Internal Standard:** D5-EtFOSAA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 6:03:55 PM | 0.83 | 0.90 | 675 | 0.4736 | 132 | 108.6 |
| STD 2 | STD 2 | x | 2018/02/08 6:06:20 PM | 1.70 | 1.38 | 1039 | 0.3488 | 193 | 80.9 |
| STD 3 | STD 3 | x | 2018/02/08 6:08:45 PM | 5.00 | 5.13 | 3674 | 0.4348 | 537 | 102.5 |
| STD 4 | STD 4 | x | 2018/02/08 6:11:11 PM | 12.50 | 12.97 | 9022 | 0.4385 | 792 | 103.8 |
| STD 5 | STD 5 | x | 2018/02/08 6:13:35 PM | 25.00 | 25.27 | 17565 | 0.4266 | 1076 | 101.1 |
| STD 6 | STD 6 | x | 2018/02/08 6:16:01 PM | 41.70 | 43.02 | 30083 | 0.4351 | 2752 | 103.2 |

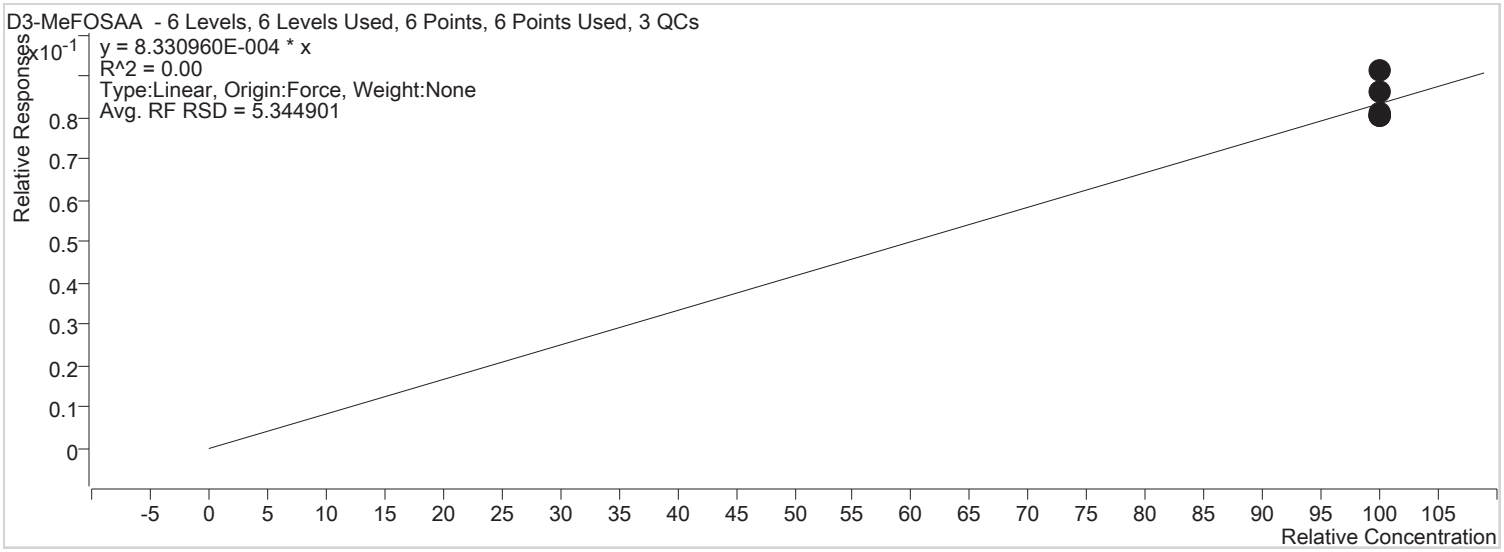
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/21 1:00:12 PM

**Instrument:** LCMS04

**Analyte:** D3-MeFOSAA

**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 6:03:55 PM | 100.00 | 96.57 | 1957 | 0.0008 | 125 | 96.6 |
| STD 2 | STD 2 | x | 2018/02/08 6:06:20 PM | 100.00 | 109.52 | 1964 | 0.0009 | 167 | 109.5 |
| STD 3 | STD 3 | x | 2018/02/08 6:08:45 PM | 100.00 | 96.79 | 1900 | 0.0008 | 228 | 96.8 |
| STD 4 | STD 4 | x | 2018/02/08 6:11:11 PM | 100.00 | 96.25 | 1815 | 0.0008 | 128 | 96.2 |
| STD 5 | STD 5 | x | 2018/02/08 6:13:35 PM | 100.00 | 97.64 | 1772 | 0.0008 | 194 | 97.6 |
| STD 6 | STD 6 | x | 2018/02/08 6:16:01 PM | 100.00 | 103.24 | 1800 | 0.0009 | 134 | 103.2 |

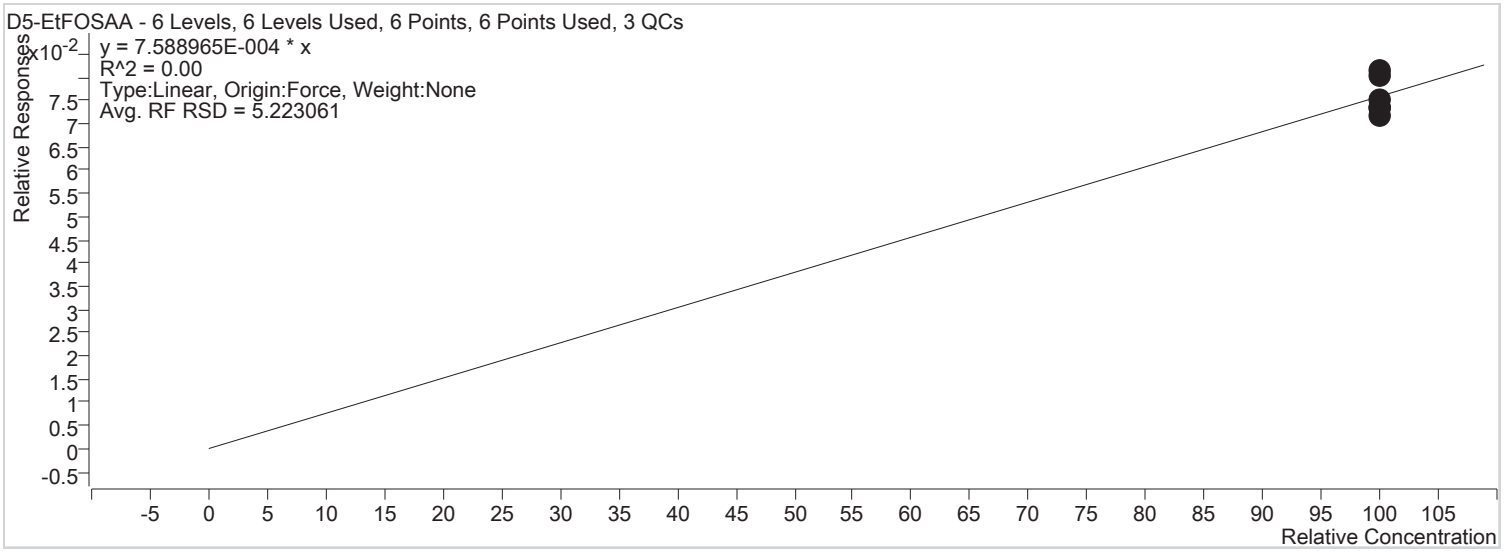
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/21 1:00:12 PM

**Instrument:** LCMS04

**Analyte:** D5-EtFOSAA

**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 6:03:55 PM | 100.00 | 94.58 | 1746 | 0.0007 | 291 | 94.6 |
| STD 2 | STD 2 | x | 2018/02/08 6:06:20 PM | 100.00 | 107.25 | 1752 | 0.0008 | 121 | 107.2 |
| STD 3 | STD 3 | x | 2018/02/08 6:08:45 PM | 100.00 | 96.80 | 1731 | 0.0007 | 203 | 96.8 |
| STD 4 | STD 4 | x | 2018/02/08 6:11:11 PM | 100.00 | 96.46 | 1657 | 0.0007 | 167 | 96.5 |
| STD 5 | STD 5 | x | 2018/02/08 6:13:35 PM | 100.00 | 99.32 | 1642 | 0.0008 | 296 | 99.3 |
| STD 6 | STD 6 | x | 2018/02/08 6:16:01 PM | 100.00 | 105.59 | 1677 | 0.0008 | 270 | 105.6 |

Agilent Technologies

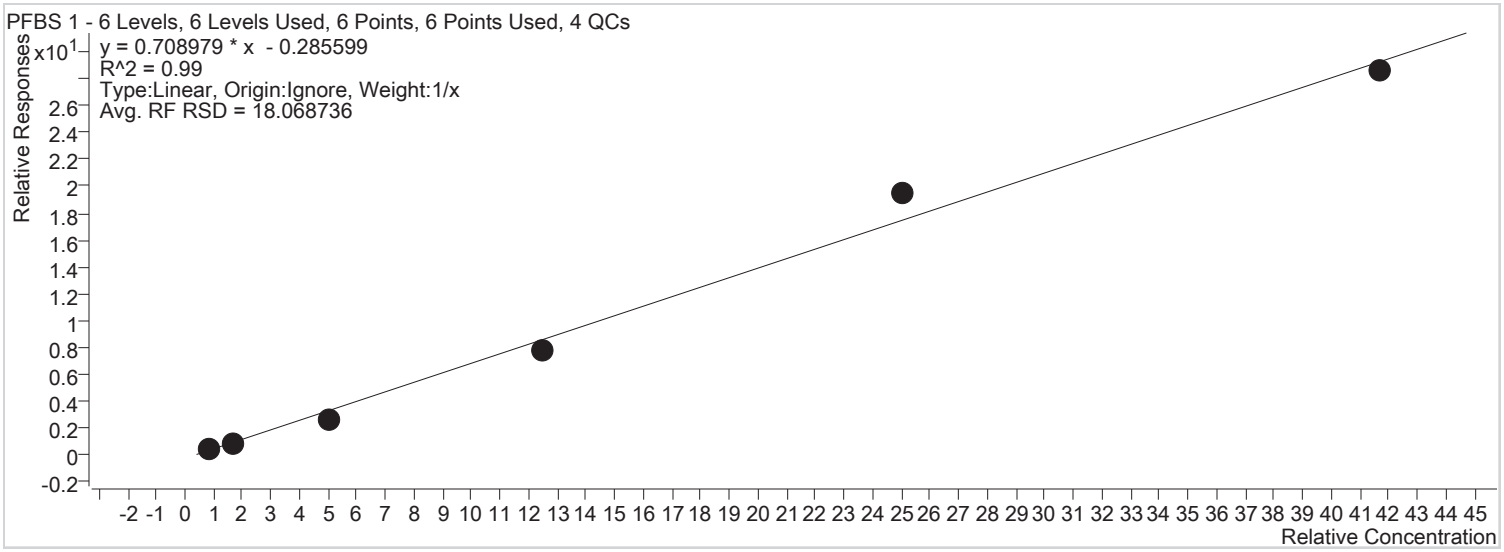
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFBS 1

**Internal Standard:** MPFHxS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 1.03 | 618 | 0.5337 | 94 | 123.8 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.59 | 1211 | 0.4954 | 94 | 93.6 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.12 | 3621 | 0.5271 | 288 | 82.4 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 11.38 | 10141 | 0.6226 | 165 | 91.0 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 27.86 | 23344 | 0.7788 | 240 | 111.5 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 40.75 | 39072 | 0.6859 | 266 | 97.7 |

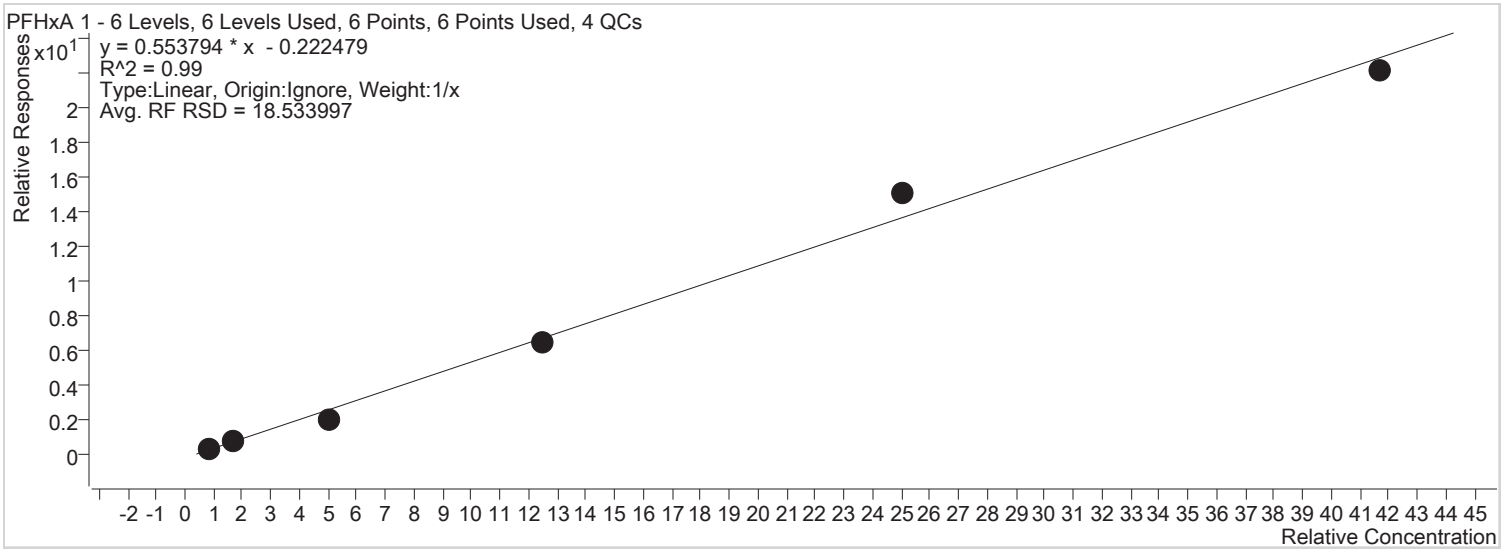
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFHxA 1

**Internal Standard:** MPFHxA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.97 | 1923 | 0.3804 | 127 | 117.1 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.65 | 3875 | 0.4065 | 135 | 97.0 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.12 | 12228 | 0.4119 | 662 | 82.4 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 12.03 | 36651 | 0.5153 | 1672 | 96.3 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 27.62 | 82811 | 0.6029 | 2442 | 110.5 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 40.34 | 136428 | 0.5303 | 7991 | 96.7 |

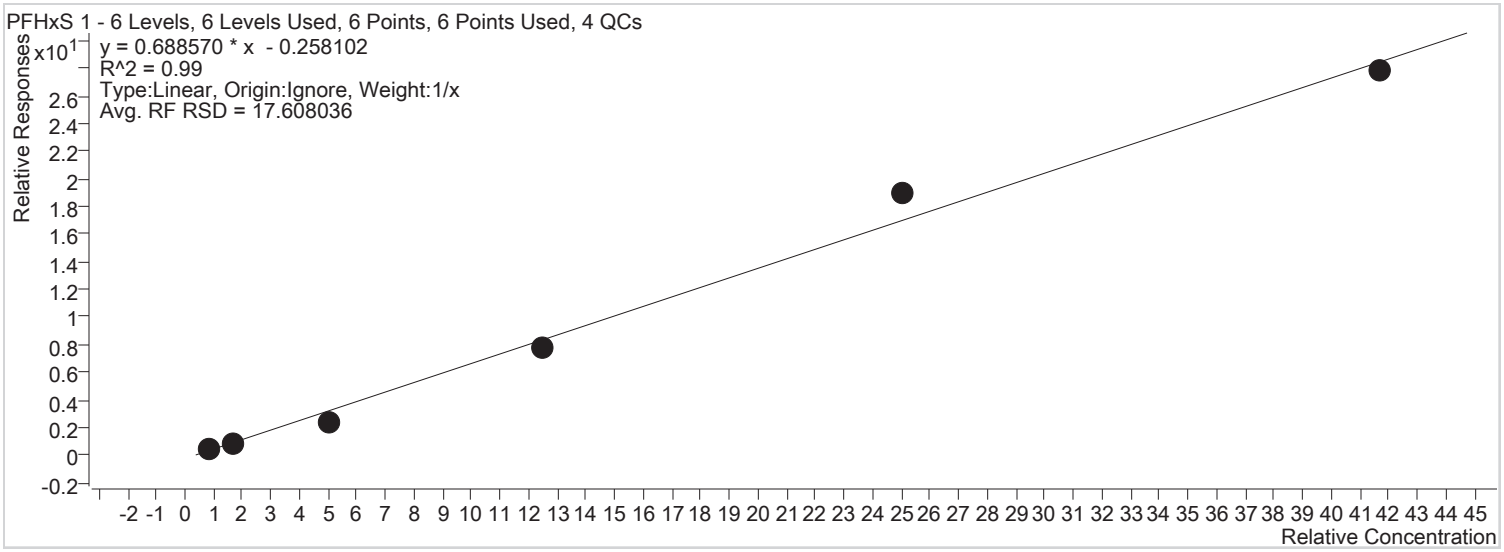
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFHxS 1

**Internal Standard:** MPFHxS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 1.05 | 647 | 0.5588 | 87 | 126.3 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.60 | 1218 | 0.4982 | 81 | 94.4 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 3.89 | 3323 | 0.4837 | 323 | 77.7 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 11.52 | 10001 | 0.6140 | 718 | 92.2 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 27.90 | 22723 | 0.7581 | 1073 | 111.6 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 40.77 | 37995 | 0.6670 | 1347 | 97.8 |

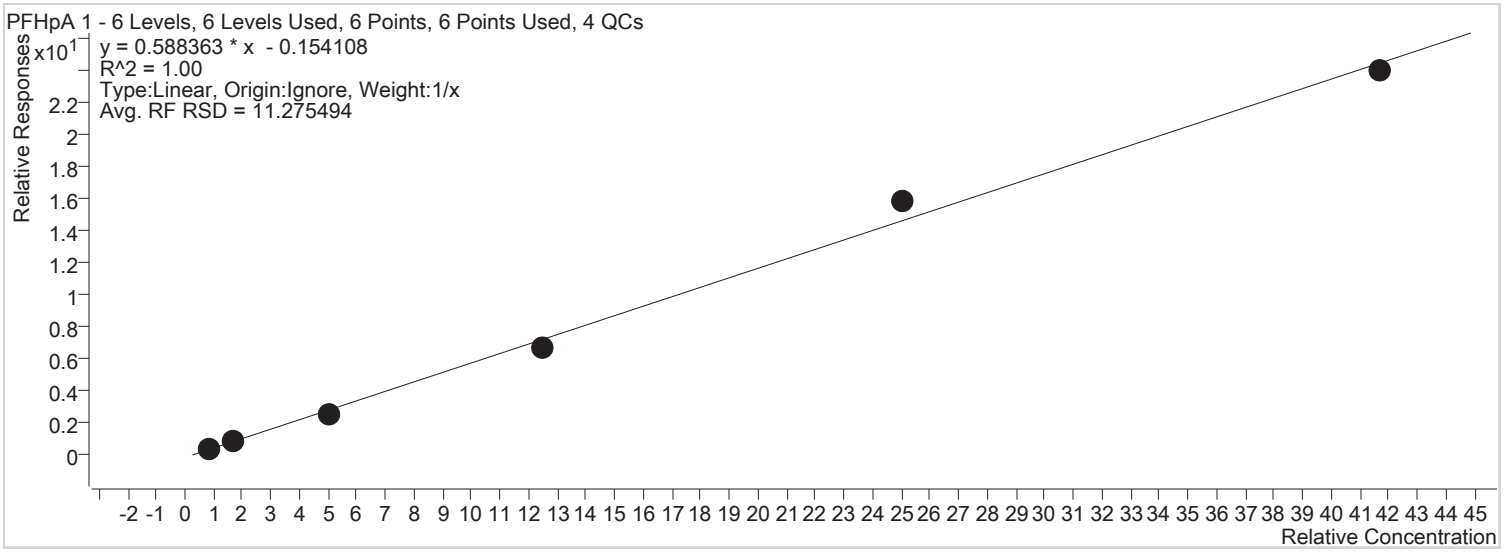
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFHpA 1

**Internal Standard:** MPFHpA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.94 | 2918 | 0.4833 | 24 | 113.7 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.64 | 5438 | 0.4768 | 107 | 96.4 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.51 | 16809 | 0.5000 | 189 | 90.2 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 11.65 | 45851 | 0.5360 | 313 | 93.2 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 27.10 | 103083 | 0.6317 | 377 | 108.4 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 40.88 | 172246 | 0.5731 | 445 | 98.0 |

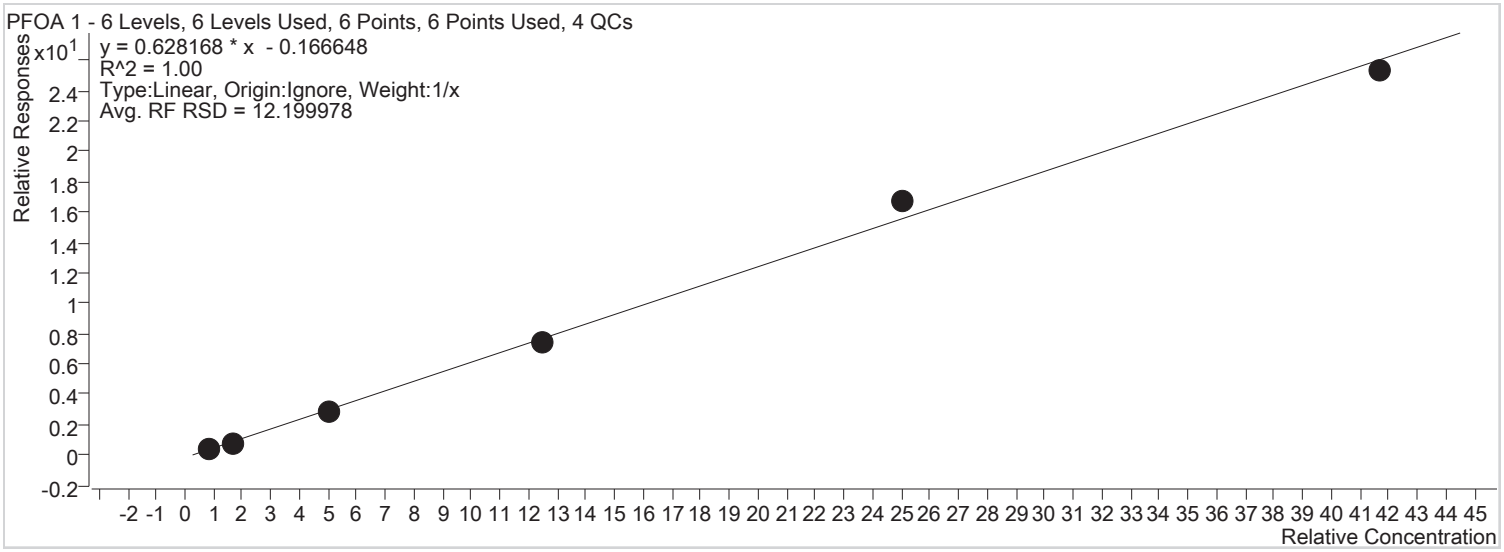
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFOA 1

**Internal Standard:** MPFOA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.94 | 2877 | 0.5099 | 30 | 113.1 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.56 | 5513 | 0.4794 | 78 | 91.9 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.67 | 17004 | 0.5530 | 156 | 93.3 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 12.08 | 46233 | 0.5936 | 433 | 96.6 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 26.94 | 104689 | 0.6703 | 1067 | 107.8 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 40.54 | 177302 | 0.6067 | 1805 | 97.2 |

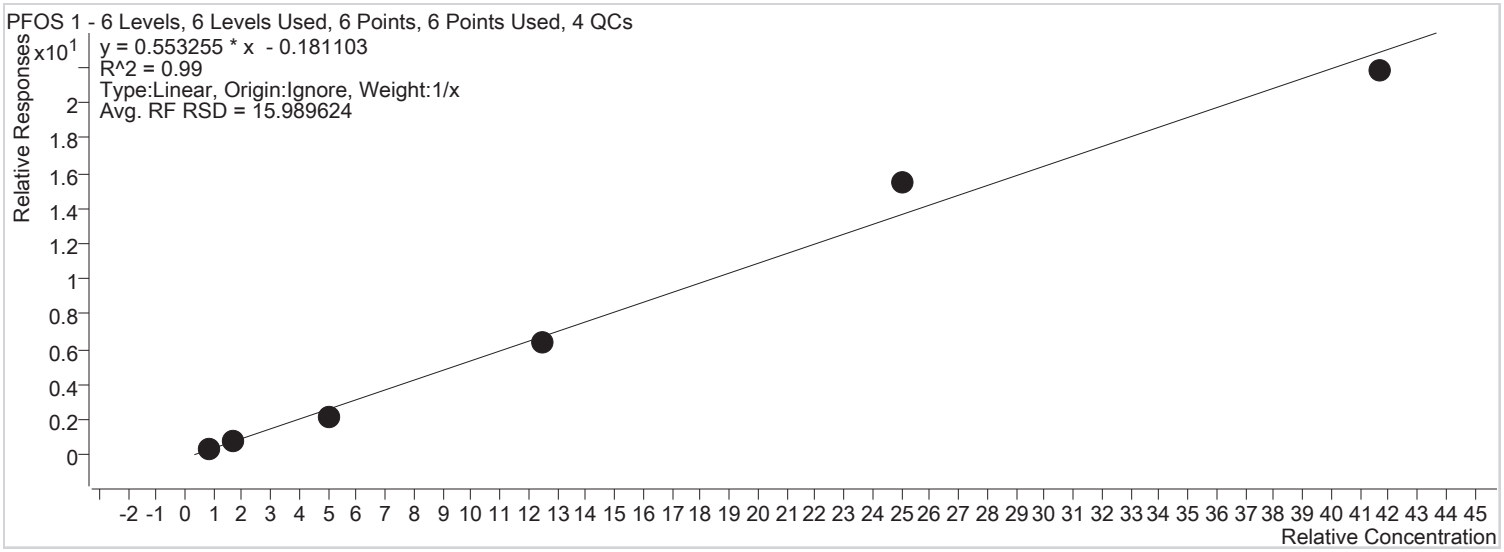
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFOS 1

**Internal Standard:** MPFOS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.96 | 607 | 0.4218 | 124 | 115.7 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.67 | 1119 | 0.4359 | 175 | 98.0 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.14 | 3052 | 0.4221 | 148 | 82.8 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 11.83 | 9097 | 0.5093 | 500 | 94.7 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 28.34 | 21090 | 0.6198 | 368 | 113.3 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 39.79 | 34737 | 0.5236 | 349 | 95.4 |

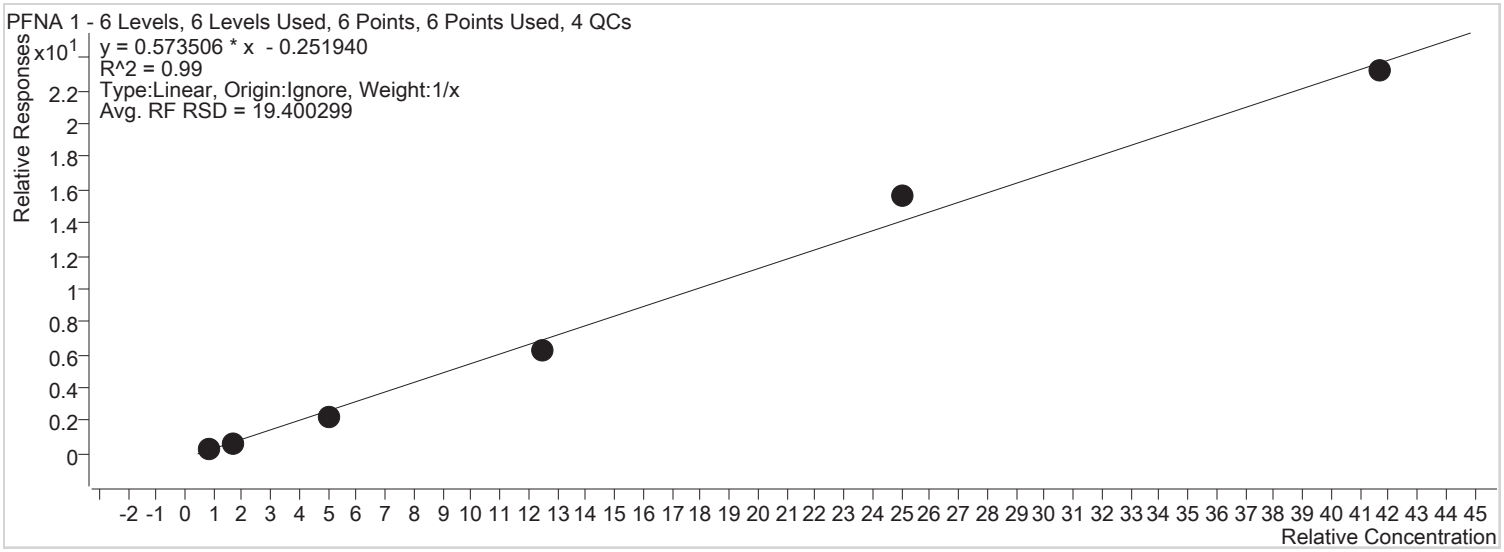
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFNA 1

**Internal Standard:** MPFNA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 1.01 | 2216 | 0.3948 | 33 | 121.8 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.61 | 4138 | 0.3943 | 65 | 94.6 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.22 | 12817 | 0.4333 | 343 | 84.3 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 11.30 | 36842 | 0.4985 | 809 | 90.4 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 27.71 | 86783 | 0.6256 | 1216 | 110.8 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 40.88 | 145867 | 0.5562 | 2414 | 98.0 |

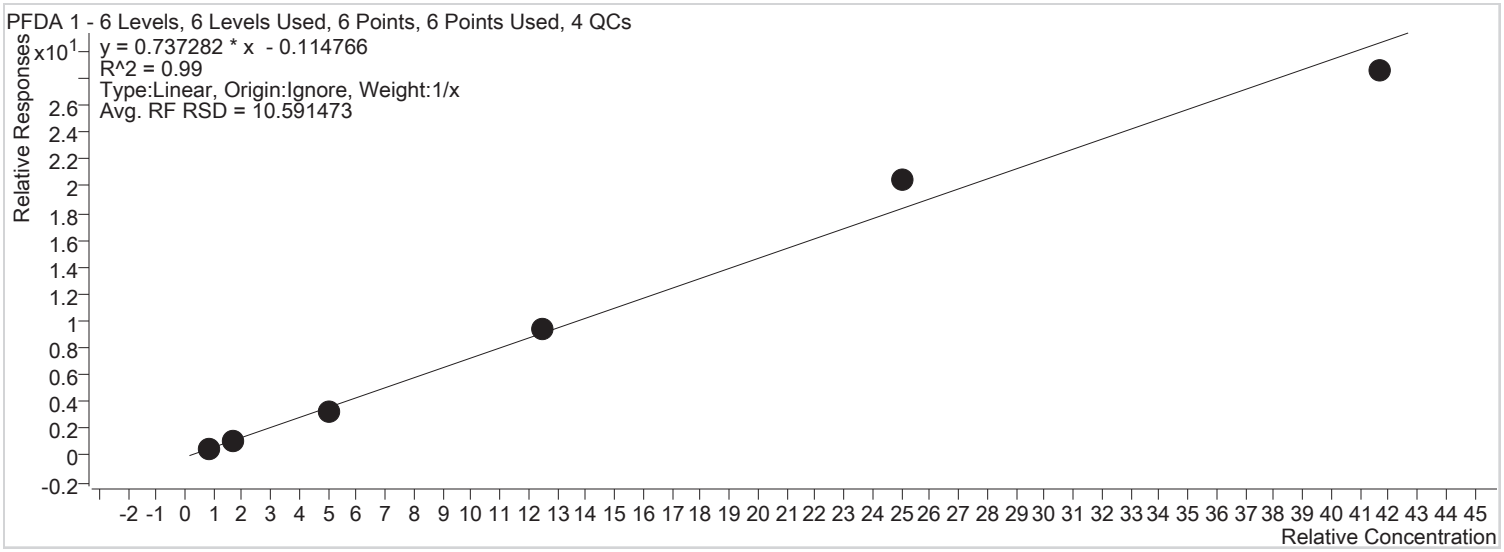
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFDA 1

**Internal Standard:** MPFDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.87 | 2473 | 0.6322 | 30 | 104.5 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.65 | 4803 | 0.6501 | 61 | 97.3 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.52 | 13300 | 0.6434 | 172 | 90.4 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 12.83 | 41124 | 0.7475 | 430 | 102.6 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 27.97 | 84831 | 0.8204 | 647 | 111.9 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 38.88 | 142114 | 0.6848 | 1538 | 93.2 |

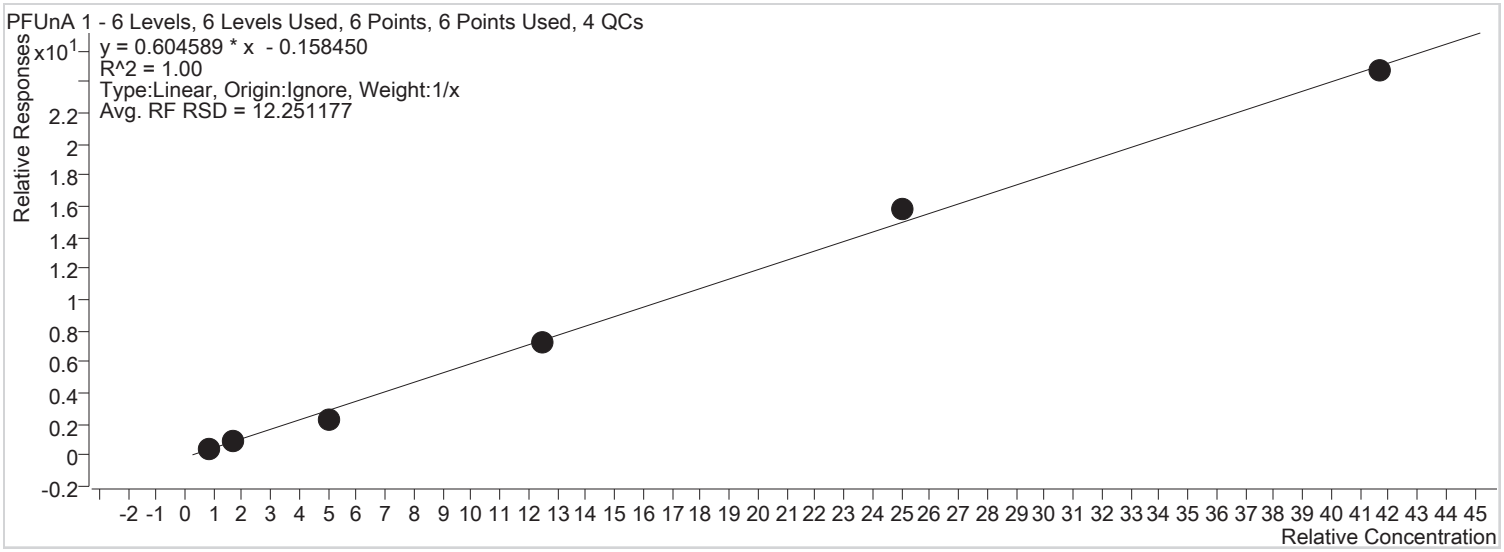
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFUnA 1

**Internal Standard:** MPFUnA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.94 | 2510 | 0.4903 | 27 | 112.7 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.75 | 4875 | 0.5287 | 33 | 102.9 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.05 | 13534 | 0.4579 | 87 | 81.0 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 12.37 | 39617 | 0.5854 | 132 | 98.9 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 26.45 | 87768 | 0.6334 | 184 | 105.8 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 41.18 | 144868 | 0.5932 | 189 | 98.8 |

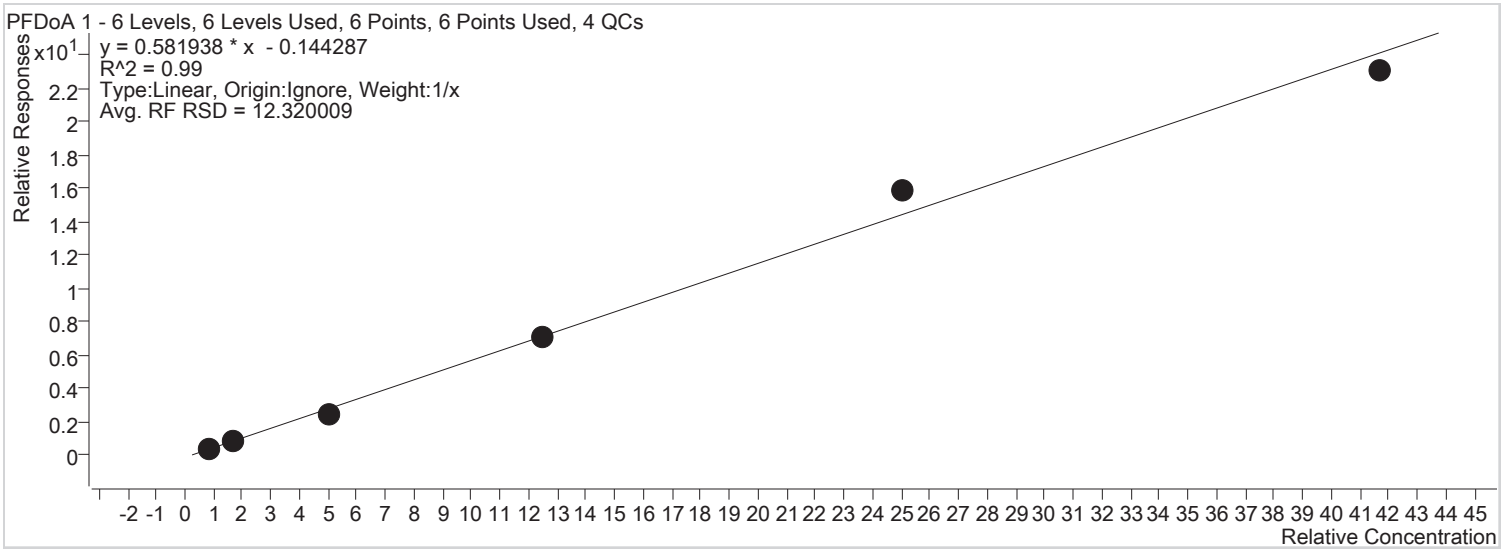
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFDoA 1

**Internal Standard:** MPFDoA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.91 | 2949 | 0.4611 | 42 | 109.1 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.64 | 5881 | 0.4780 | 164 | 96.7 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.47 | 17518 | 0.4912 | 199 | 89.4 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 12.45 | 50698 | 0.5681 | 1115 | 99.6 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 27.40 | 114607 | 0.6321 | 3116 | 109.6 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 39.86 | 187876 | 0.5527 | 11140 | 95.6 |

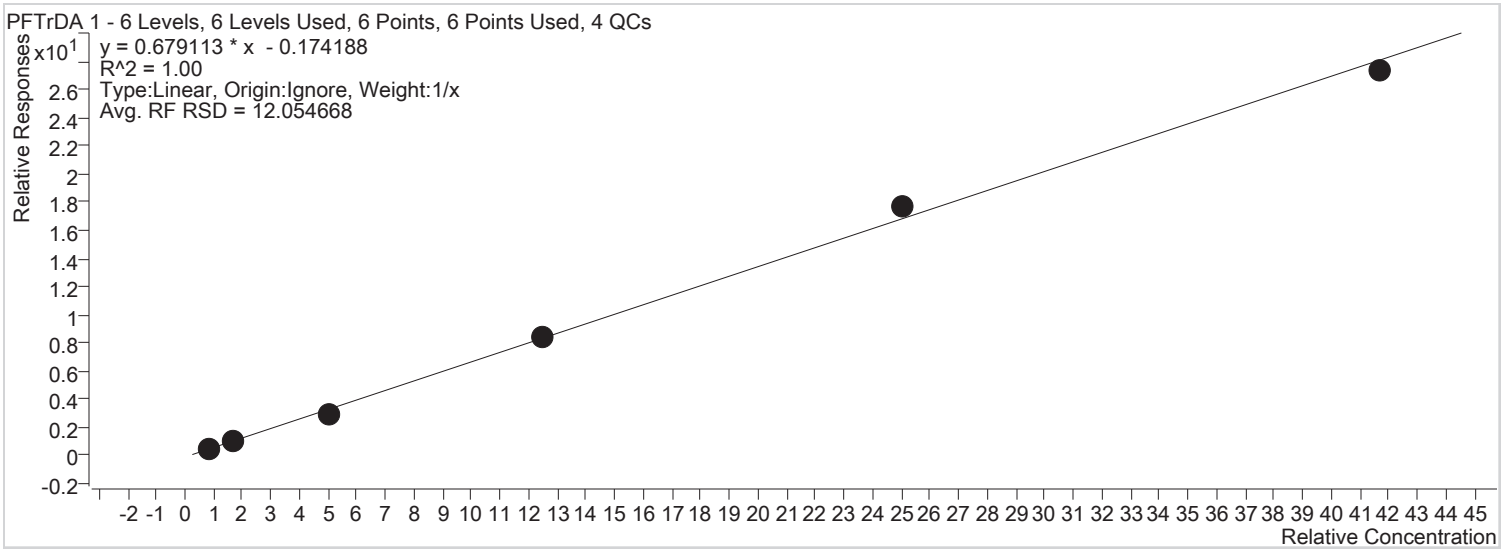
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFTrDA 1

**Internal Standard:** MPFTeDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.89 | 2946 | 0.5169 | 26 | 107.0 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.67 | 5994 | 0.5666 | 51 | 98.5 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.51 | 18012 | 0.5780 | 126 | 90.2 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 12.65 | 51716 | 0.6735 | 212 | 101.2 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 26.43 | 117011 | 0.7109 | 248 | 105.7 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 40.58 | 195943 | 0.6566 | 318 | 97.3 |

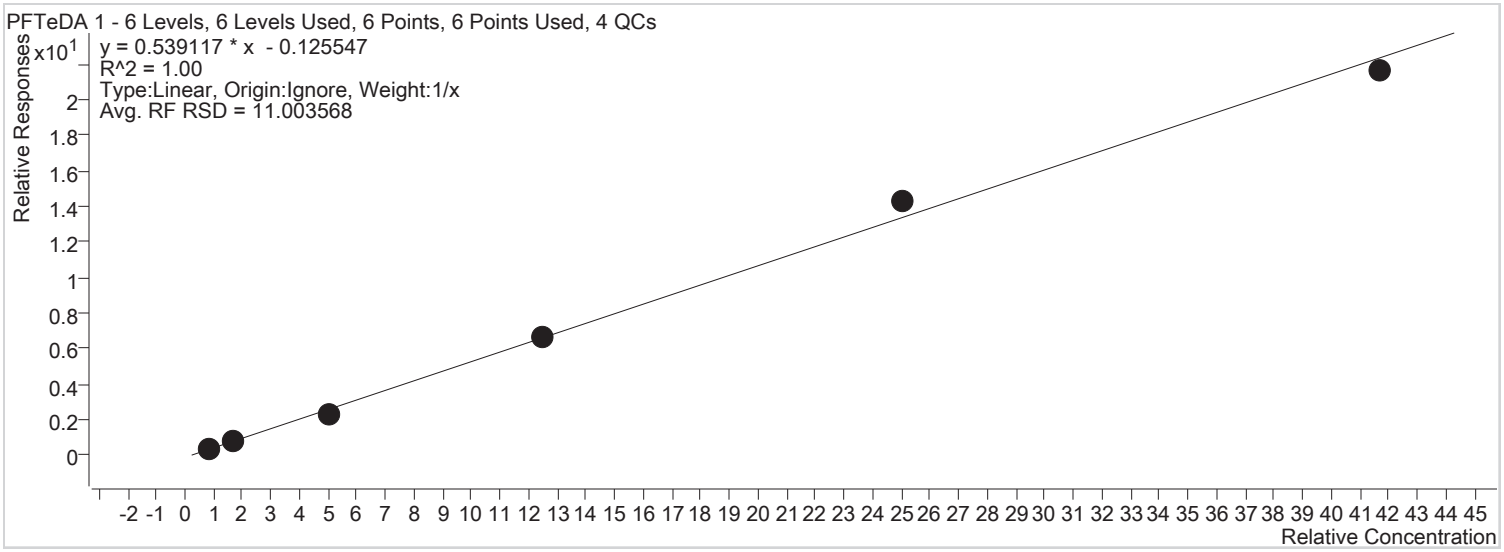
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFTeDA 1

**Internal Standard:** MPFTeDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.92 | 2545 | 0.4465 | 21 | 110.9 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.62 | 4651 | 0.4396 | 37 | 95.2 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.48 | 14263 | 0.4577 | 103 | 89.5 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 12.53 | 40717 | 0.5303 | 197 | 100.2 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 26.83 | 94425 | 0.5737 | 337 | 107.3 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 40.35 | 154772 | 0.5187 | 334 | 96.8 |

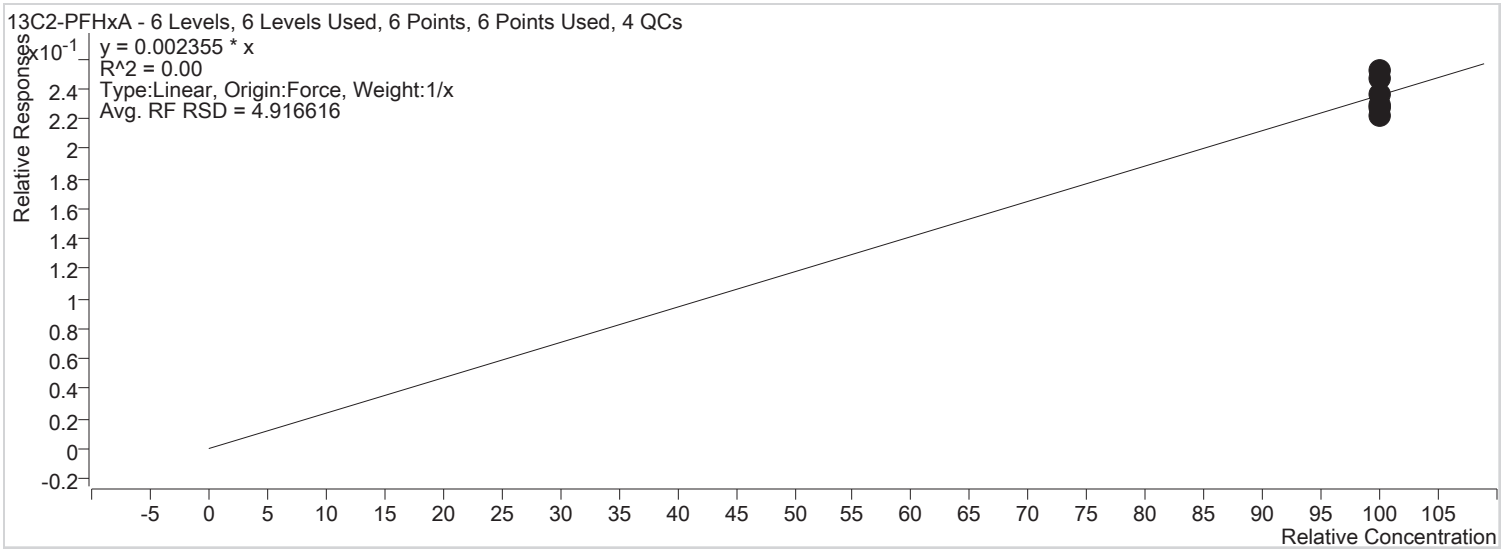
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** 13C2-PFHxA

**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 100.00 | 100.03 | 6059 | 0.0024 | 486 | 100.0 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 100.00 | 94.43 | 5564 | 0.0022 | 254 | 94.4 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 100.00 | 97.52 | 5873 | 0.0023 | 323 | 97.5 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 100.00 | 104.76 | 5648 | 0.0025 | 374 | 104.8 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 100.00 | 96.35 | 5440 | 0.0023 | 348 | 96.3 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 100.00 | 106.91 | 6033 | 0.0025 | 212 | 106.9 |

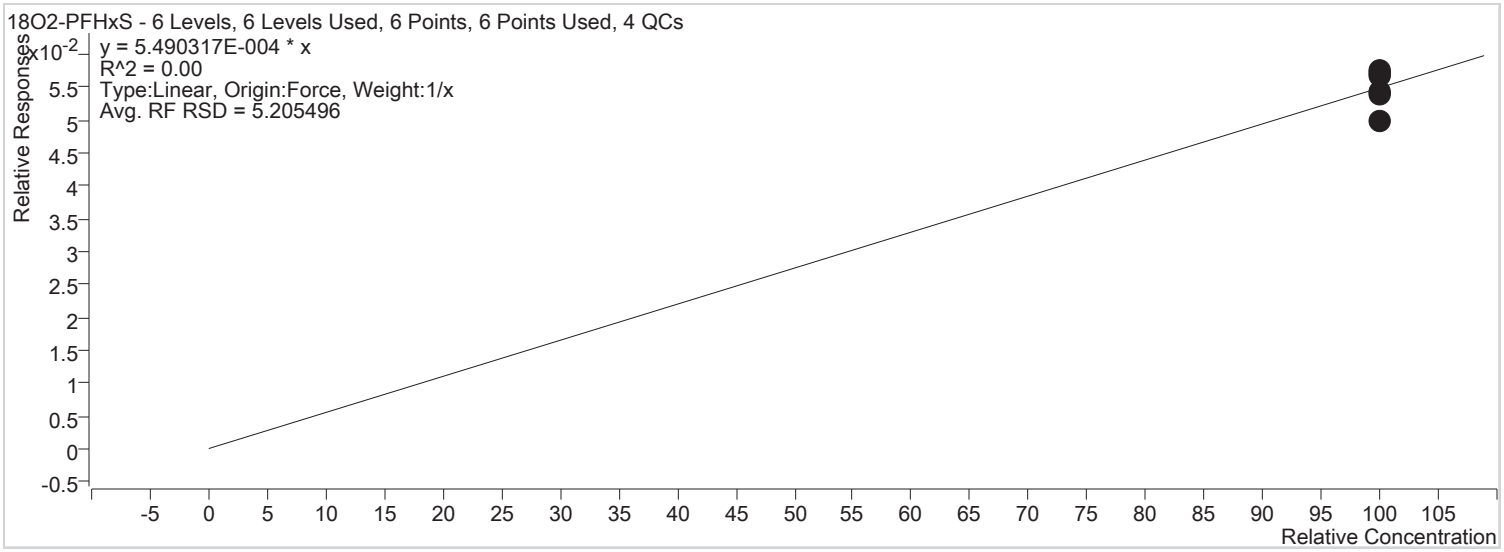
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** 18O2-PFHxS

**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 100.00 | 98.80 | 1395 | 0.0005 | 344 | 98.8 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 100.00 | 104.70 | 1438 | 0.0006 | 205 | 104.7 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 100.00 | 97.88 | 1374 | 0.0005 | 262 | 97.9 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 100.00 | 103.68 | 1303 | 0.0006 | 172 | 103.7 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 100.00 | 91.10 | 1199 | 0.0005 | 177 | 91.1 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 100.00 | 103.84 | 1366 | 0.0006 | 199 | 103.8 |

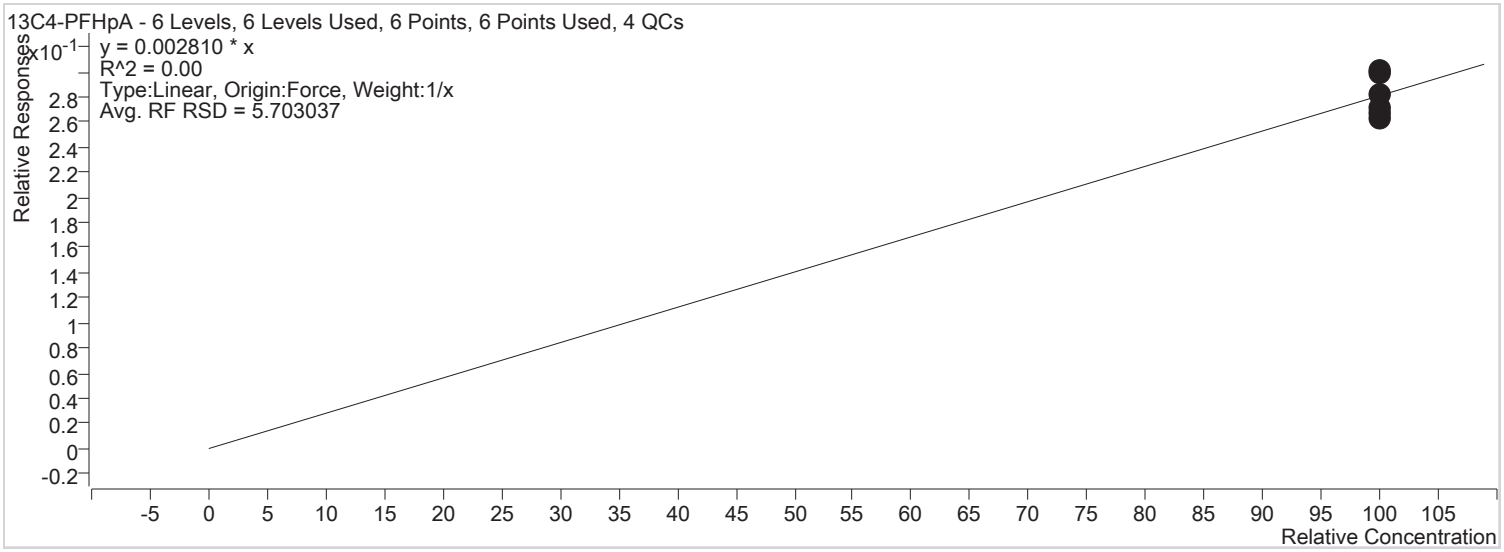
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** 13C4-PFHpA

**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 100.00 | 100.67 | 7275 | 0.0028 | 208 | 100.7 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 100.00 | 95.43 | 6709 | 0.0027 | 264 | 95.4 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 100.00 | 93.58 | 6724 | 0.0026 | 218 | 93.6 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 100.00 | 106.39 | 6844 | 0.0030 | 245 | 106.4 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 100.00 | 96.89 | 6527 | 0.0027 | 180 | 96.9 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 100.00 | 107.04 | 7207 | 0.0030 | 219 | 107.0 |

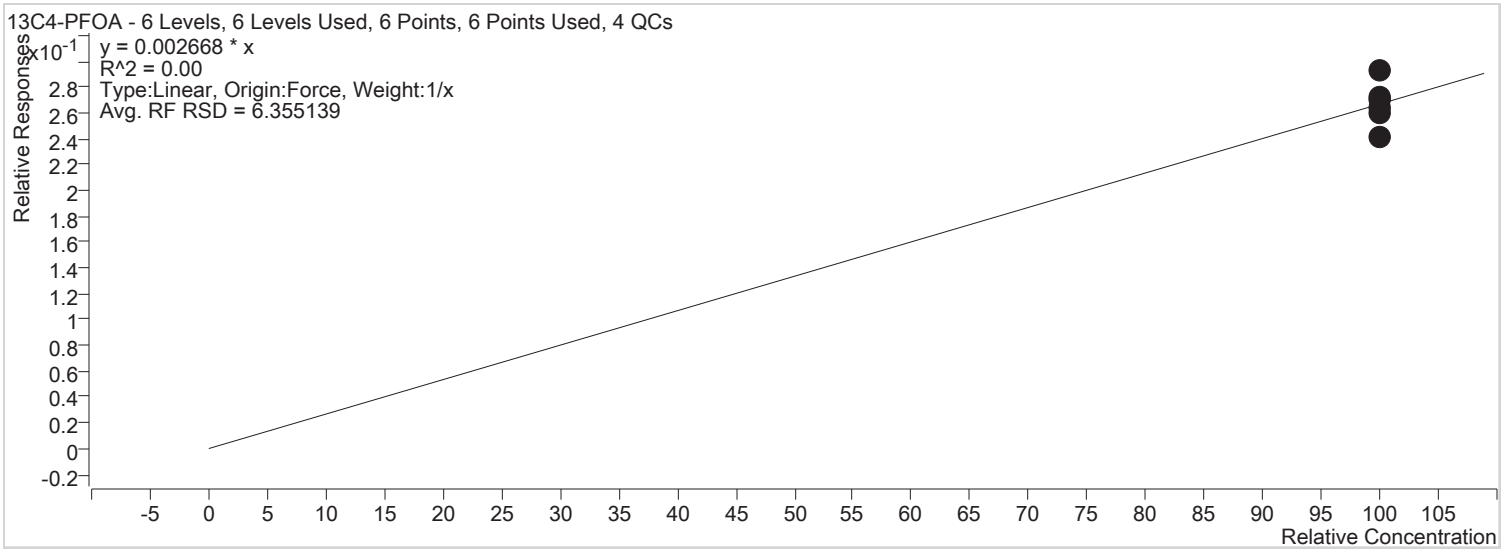
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** 13C4-PFOA

**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 100.00 | 99.09 | 6798 | 0.0026 | 292 | 99.1 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 100.00 | 101.37 | 6765 | 0.0027 | 188 | 101.4 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 100.00 | 90.17 | 6150 | 0.0024 | 119 | 90.2 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 100.00 | 102.04 | 6231 | 0.0027 | 345 | 102.0 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 100.00 | 97.69 | 6247 | 0.0026 | 151 | 97.7 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 100.00 | 109.65 | 7008 | 0.0029 | 212 | 109.6 |

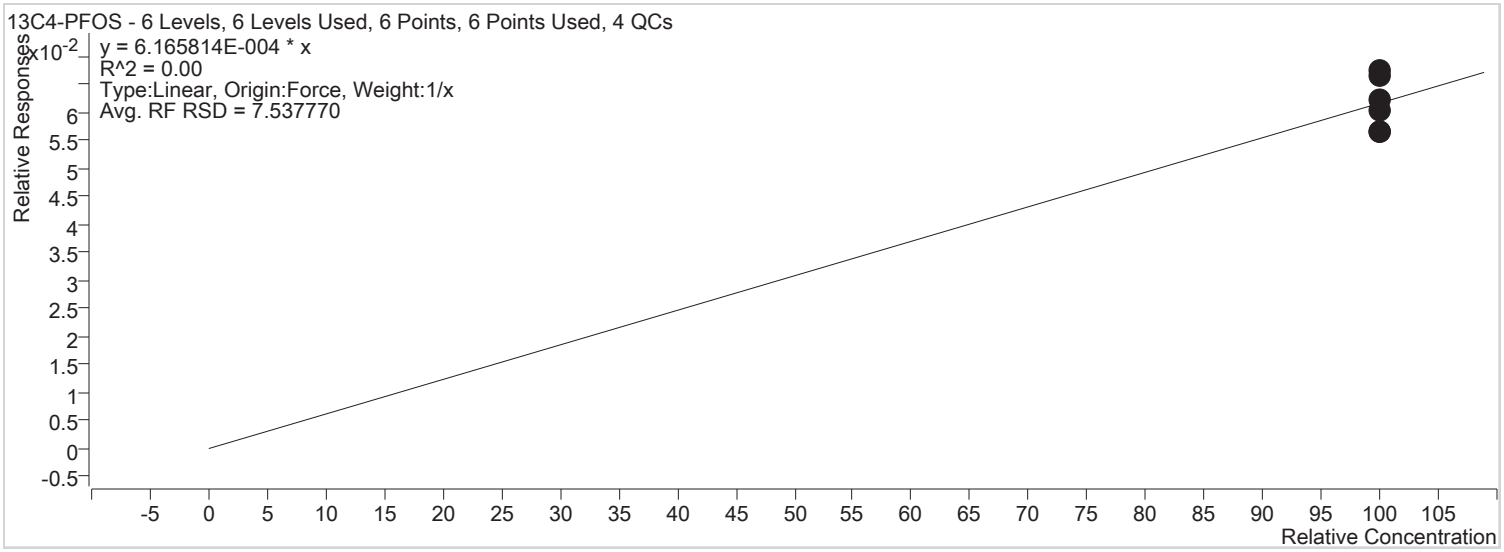
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** 13C4-PFOS

**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 100.00 | 109.36 | 1734 | 0.0007 | 307 | 109.4 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 100.00 | 97.89 | 1510 | 0.0006 | 136 | 97.9 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 100.00 | 91.72 | 1446 | 0.0006 | 129 | 91.7 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 100.00 | 101.25 | 1429 | 0.0006 | 216 | 101.2 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 100.00 | 92.08 | 1361 | 0.0006 | 178 | 92.1 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 100.00 | 107.70 | 1591 | 0.0007 | 145 | 107.7 |

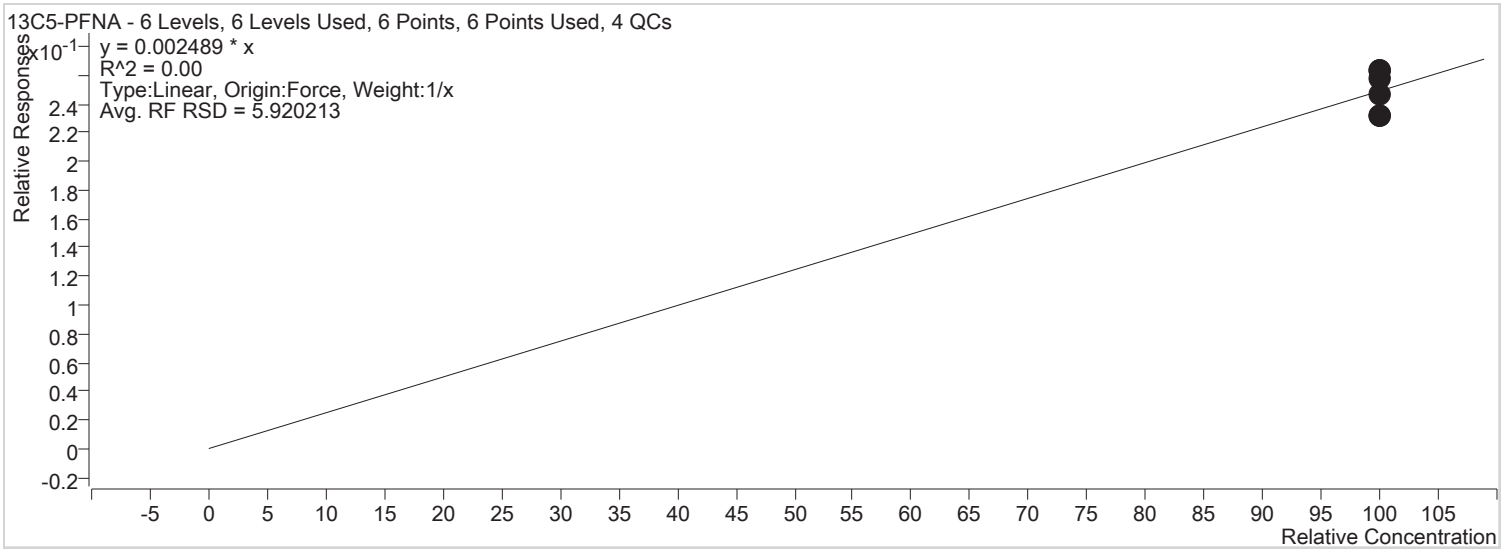
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** 13C5-PFNA

**Internal Standard:** 13C6-PFHxA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 100.00 | 105.65 | 6762 | 0.0026 | 268 | 105.6 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 100.00 | 99.14 | 6173 | 0.0025 | 324 | 99.1 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 100.00 | 92.96 | 5916 | 0.0023 | 298 | 93.0 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 100.00 | 103.78 | 5913 | 0.0026 | 307 | 103.8 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 100.00 | 93.00 | 5549 | 0.0023 | 378 | 93.0 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 100.00 | 105.46 | 6289 | 0.0026 | 265 | 105.5 |

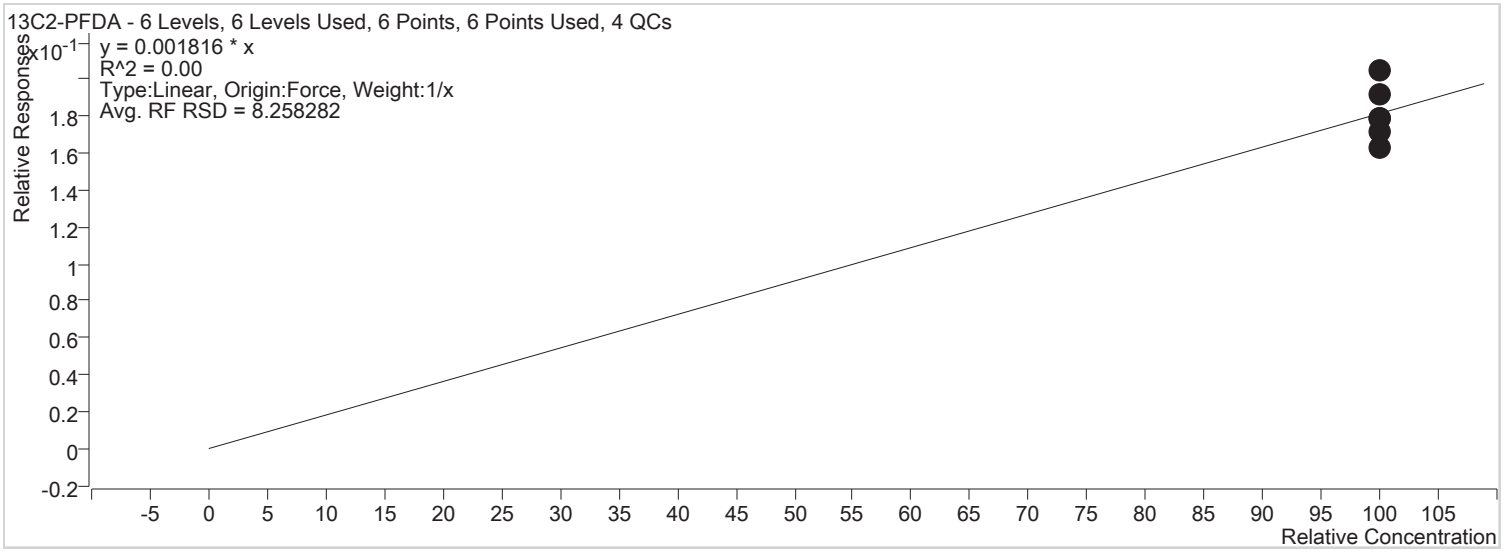
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** 13C2-PFDA

**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 100.00 | 98.75 | 4649 | 0.0018 | 169 | 98.7 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 100.00 | 94.73 | 4295 | 0.0017 | 219 | 94.7 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 100.00 | 89.42 | 4127 | 0.0016 | 229 | 89.4 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 100.00 | 105.90 | 4337 | 0.0019 | 235 | 105.9 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 100.00 | 98.46 | 4106 | 0.0018 | 384 | 98.5 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 100.00 | 112.75 | 4964 | 0.0020 | 271 | 112.7 |

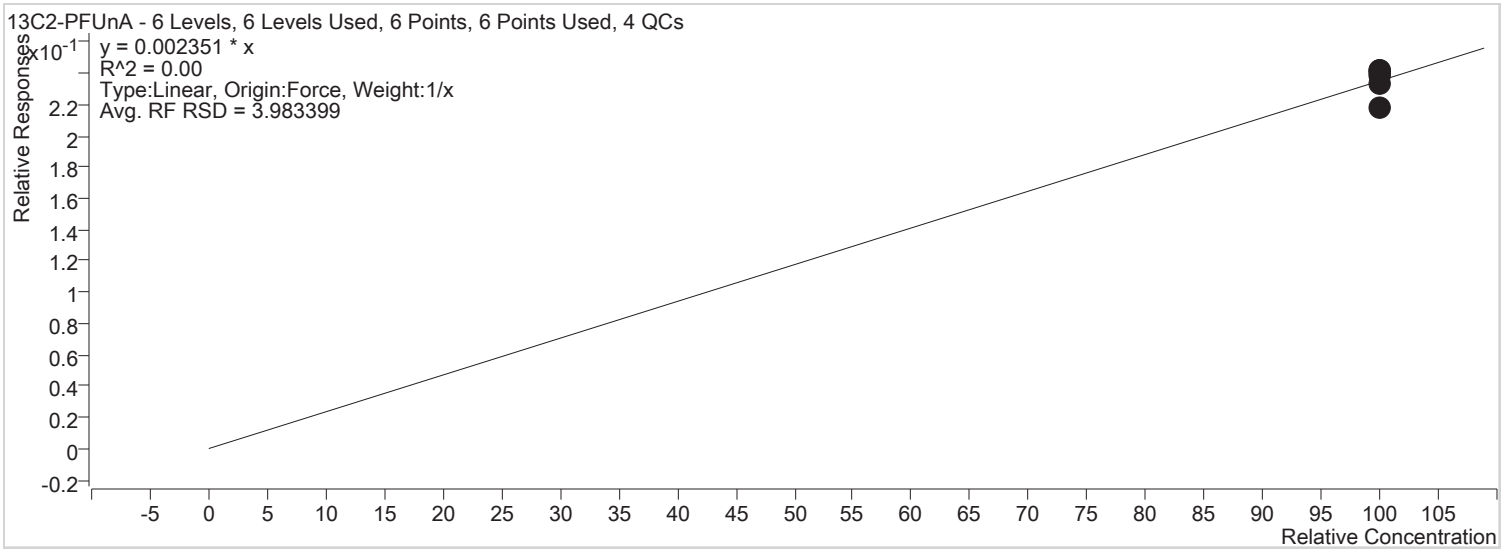
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** 13C2-PFUnA

**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 100.00 | 101.19 | 6168 | 0.0024 | 395 | 101.2 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 100.00 | 92.40 | 5424 | 0.0022 | 198 | 92.4 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 100.00 | 98.92 | 5911 | 0.0023 | 161 | 98.9 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 100.00 | 102.10 | 5414 | 0.0024 | 112 | 102.1 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 100.00 | 102.66 | 5543 | 0.0024 | 149 | 102.7 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 100.00 | 102.73 | 5856 | 0.0024 | 96 | 102.7 |

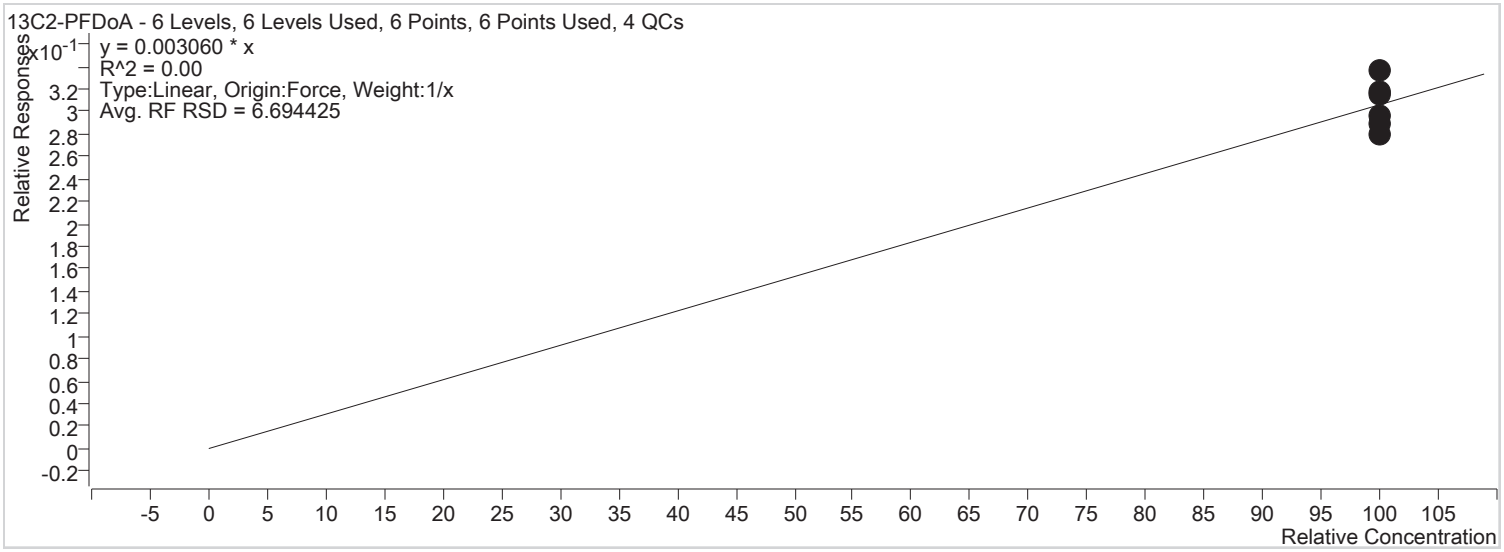
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** 13C2-PFDoA

**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 100.00 | 97.12 | 7706 | 0.0030 | 327 | 97.1 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 100.00 | 94.71 | 7237 | 0.0029 | 297 | 94.7 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 100.00 | 91.70 | 7133 | 0.0028 | 379 | 91.7 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 100.00 | 103.43 | 7139 | 0.0032 | 254 | 103.4 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 100.00 | 103.18 | 7252 | 0.0032 | 348 | 103.2 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 100.00 | 109.85 | 8151 | 0.0034 | 481 | 109.9 |

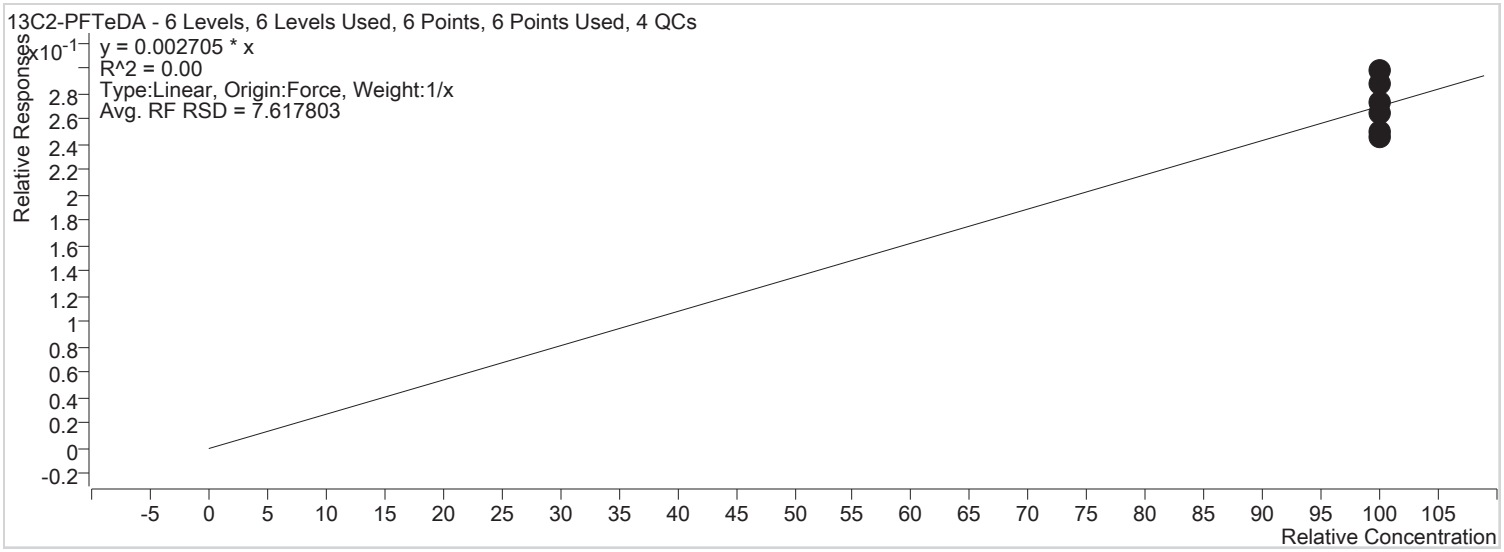
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** 13C2-PFTeDA

**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 100.00 | 98.11 | 6881 | 0.0027 | 261 | 98.1 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 100.00 | 92.81 | 6269 | 0.0025 | 282 | 92.8 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 100.00 | 90.96 | 6254 | 0.0025 | 205 | 91.0 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 100.00 | 101.08 | 6167 | 0.0027 | 265 | 101.1 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 100.00 | 106.72 | 6630 | 0.0029 | 198 | 106.7 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 100.00 | 110.34 | 7237 | 0.0030 | 235 | 110.3 |

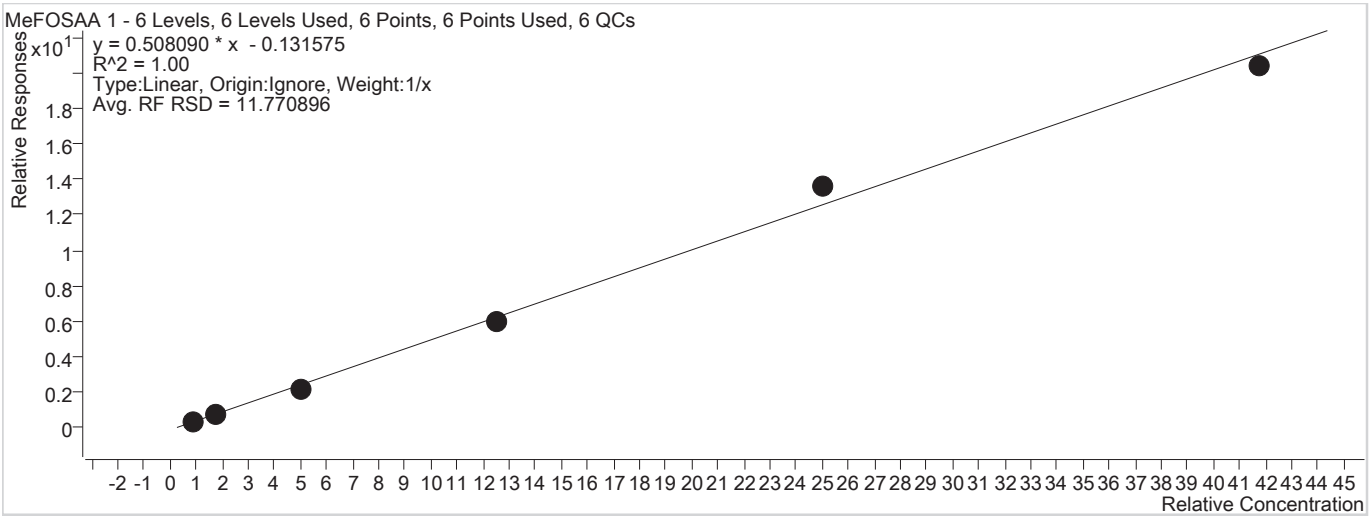
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:41:16 AM

**Instrument:** LCMS04

**Analyte:** MeFOSAA 1

**Internal Standard:** D3-MeFOSAA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 10:39:10 AM | 0.83 | 0.92 | 476 | 0.4067 | 143 | 111.3 |
| STD 2 | STD 2 | x | 2018/02/15 10:41:35 AM | 1.70 | 1.64 | 1031 | 0.4131 | 168 | 96.5 |
| STD 3 | STD 3 | x | 2018/02/15 10:44:00 AM | 5.00 | 4.49 | 3138 | 0.4302 | 294 | 89.8 |
| STD 4 | STD 4 | x | 2018/02/15 10:46:25 AM | 12.50 | 12.10 | 8714 | 0.4814 | 319 | 96.8 |
| STD 5 | STD 5 | x | 2018/02/15 10:48:50 AM | 25.00 | 27.16 | 19911 | 0.5466 | 355 | 108.6 |
| STD 6 | STD 6 | x | 2018/02/15 10:51:15 AM | 41.70 | 40.41 | 32114 | 0.4893 | 353 | 96.9 |

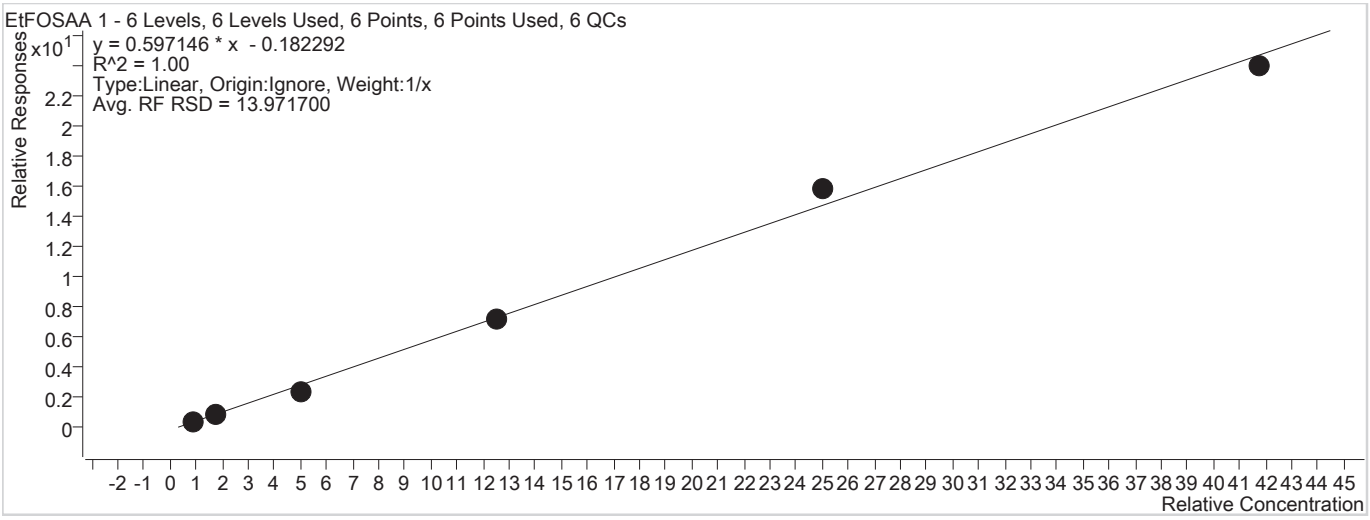
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:41:16 AM

**Instrument:** LCMS04

**Analyte:** EtFOSAA 1

**Internal Standard:** D5-EtFOSAA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 10:39:10 AM | 0.83 | 0.94 | 472 | 0.4575 | 72 | 113.4 |
| STD 2 | STD 2 | x | 2018/02/15 10:41:35 AM | 1.70 | 1.65 | 1008 | 0.4717 | 130 | 97.0 |
| STD 3 | STD 3 | x | 2018/02/15 10:44:00 AM | 5.00 | 4.26 | 3049 | 0.4727 | 411 | 85.3 |
| STD 4 | STD 4 | x | 2018/02/15 10:46:25 AM | 12.50 | 12.45 | 8968 | 0.5800 | 575 | 99.6 |
| STD 5 | STD 5 | x | 2018/02/15 10:48:50 AM | 25.00 | 26.91 | 20560 | 0.6355 | 2666 | 107.7 |
| STD 6 | STD 6 | x | 2018/02/15 10:51:15 AM | 41.70 | 40.52 | 33330 | 0.5759 | 2755 | 97.2 |

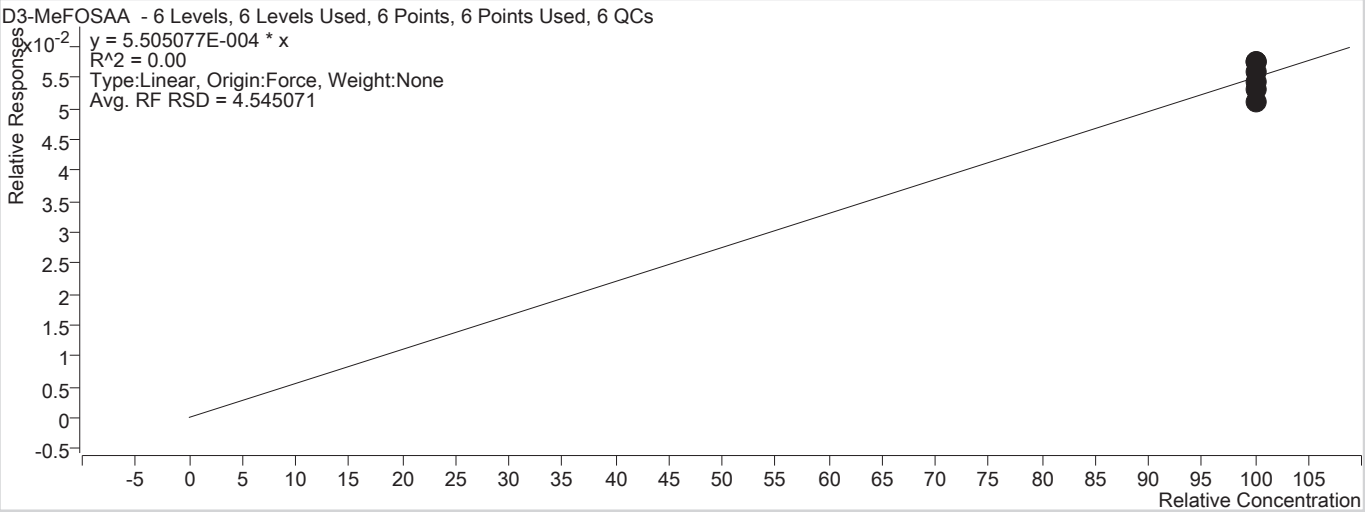
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:41:16 AM

**Instrument:** LCMS04

**Analyte:** D3-MeFOSAA

**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 10:39:10 AM | 100.00 | 93.19 | 1420 | 0.0005 | 233 | 93.2 |
| STD 2 | STD 2 | x | 2018/02/15 10:41:35 AM | 100.00 | 96.76 | 1474 | 0.0005 | 172 | 96.8 |
| STD 3 | STD 3 | x | 2018/02/15 10:44:00 AM | 100.00 | 98.91 | 1484 | 0.0005 | 150 | 98.9 |
| STD 4 | STD 4 | x | 2018/02/15 10:46:25 AM | 100.00 | 104.50 | 1484 | 0.0006 | 126 | 104.5 |
| STD 5 | STD 5 | x | 2018/02/15 10:48:50 AM | 100.00 | 102.09 | 1483 | 0.0006 | 126 | 102.1 |
| STD 6 | STD 6 | x | 2018/02/15 10:51:15 AM | 100.00 | 104.55 | 1577 | 0.0006 | 161 | 104.5 |

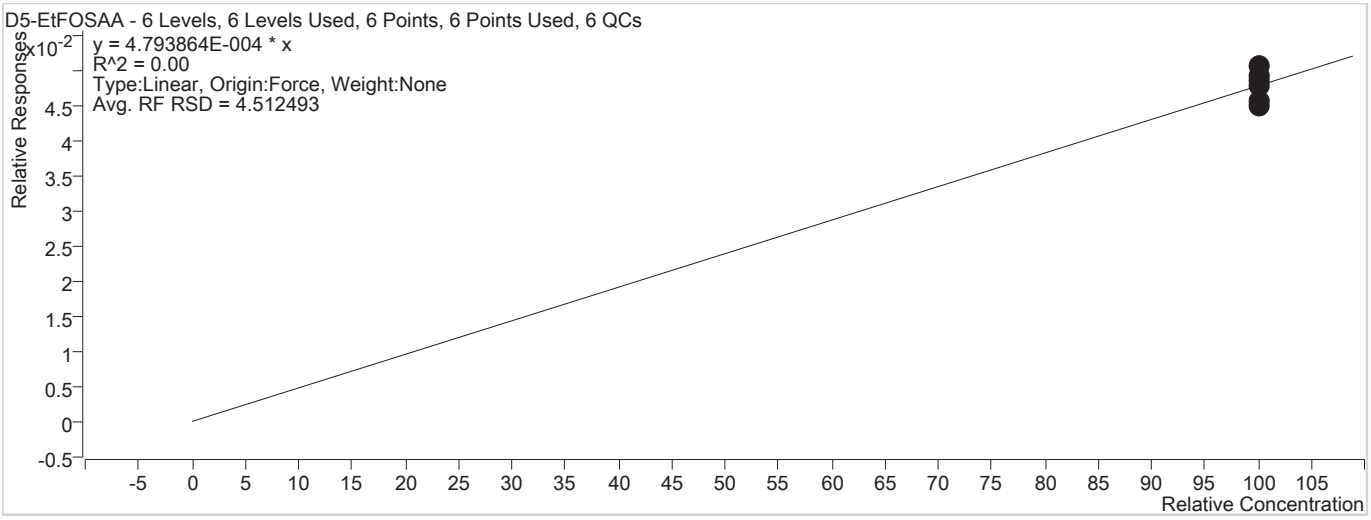
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:41:16 AM

**Instrument:** LCMS04

**Analyte:** D5-EtFOSAA

**Internal Standard:** 13C9-PFDA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 10:39:10 AM | 100.00 | 94.21 | 1250 | 0.0005 | 123 | 94.2 |
| STD 2 | STD 2 | x | 2018/02/15 10:41:35 AM | 100.00 | 95.29 | 1264 | 0.0005 | 106 | 95.3 |
| STD 3 | STD 3 | x | 2018/02/15 10:44:00 AM | 100.00 | 100.03 | 1307 | 0.0005 | 227 | 100.0 |
| STD 4 | STD 4 | x | 2018/02/15 10:46:25 AM | 100.00 | 101.65 | 1257 | 0.0005 | 206 | 101.6 |
| STD 5 | STD 5 | x | 2018/02/15 10:48:50 AM | 100.00 | 102.92 | 1302 | 0.0005 | 223 | 102.9 |
| STD 6 | STD 6 | x | 2018/02/15 10:51:15 AM | 100.00 | 105.90 | 1391 | 0.0005 | 151 | 105.9 |



# 6. Continuing Calibration

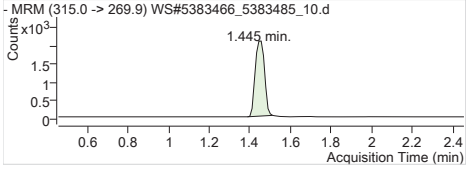
Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

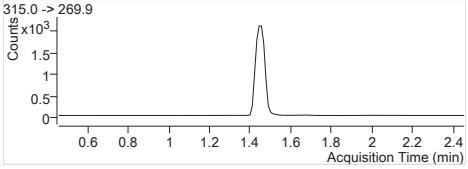
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A2 |
| **Acq. Date** | 2018/02/06 6:51:16 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

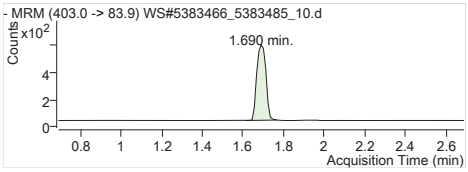
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6584 | 1.44 | 1 µg/L | | |
| MPFHxS | 1727 | 1.69 | 1 µg/L | | |
| MPFHpA | 8753 | 1.71 | 1 µg/L | | |
| MPFOA | 9011 | 1.89 | 1 µg/L | | |
| MPFOS | 2012 | 1.99 | 1 µg/L | | |
| MPFNA | 9174 | 2.04 | 1 µg/L | | |
| MPFDA | 7976 | 2.15 | 1 µg/L | | |
| MPFUnA | 8831 | 2.25 | 1 µg/L | | |
| MPFDoA | 11268 | 2.33 | 1 µg/L | | |
| MPFTeDA | 13509 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 26497 | 1.44 | 1 µg/L | | |
| 13C9-PFDA IS | 34805 | 2.15 | 1 µg/L | | |

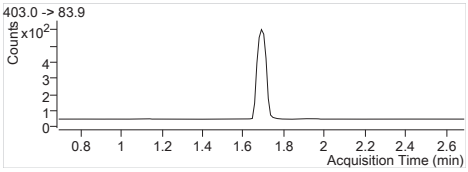
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 578 | 1.11 | 0.83 | 0.90 µg/L | 108.98 |
| PFHxA 1 | 1948 | 1.46 | 0.83 | 1.05 µg/L | 126.87 |
| PFHxS 1 | 567 | 1.69 | 0.83 | 0.99 µg/L | 118.71 |
| PFHpA 1 | 2703 | 1.71 | 0.83 | 0.93 µg/L | 111.51 |
| PFOA 1 | 2981 | 1.89 | 0.83 | 0.95 µg/L | 115.04 |
| PFOS 1 | 550 | 1.98 | 0.83 | 0.85 µg/L | 102.71 |
| PFNA 1 | 2344 | 2.04 | 0.83 | 0.79 µg/L | 94.69 |
| PFDA 1 | 2847 | 2.15 | 0.83 | 0.84 µg/L | 101.62 |
| PFUnA 1 | 3094 | 2.25 | 0.83 | 0.82 µg/L | 98.81 |
| PFDoA 1 | 4022 | 2.33 | 0.83 | 0.99 µg/L | 119.52 |
| PFTrDA 1 | 4356 | 2.41 | 0.83 | 0.82 µg/L | 98.22 |
| PFTeDA 1 | 3525 | 2.48 | 0.83 | 0.80 µg/L | 96.28 |
| 13C2-PFHxA | 6584 | 1.44 | 100.00 | 104.88 µg/L | 104.88 |
| 18O2-PFHxS | 1727 | 1.69 | 100.00 | 112.16 µg/L | 112.16 |
| 13C4-PFHpA | 8753 | 1.71 | 100.00 | 113.07 µg/L | 113.07 |
| 13C4-PFOA | 9011 | 1.89 | 100.00 | 108.34 µg/L | 108.34 |
| 13C4-PFOS | 2012 | 1.99 | 100.00 | 110.01 µg/L | 110.01 |
| 13C5-PFNA | 9154 | 2.04 | 100.00 | 111.70 µg/L | 111.70 |
| 13C2-PFDA | 7930 | 2.15 | 100.00 | 113.54 µg/L | 113.54 |
| 13C2-PFUnA | 8831 | 2.25 | 100.00 | 104.90 µg/L | 104.90 |
| 13C2-PFDoA | 11268 | 2.33 | 100.00 | 100.57 µg/L | 100.57 |
| 13C2-PFTeDA | 13849 | 2.48 | 100.00 | 108.48 µg/L | 108.48 |
| 13C6-PFHxA | 26497 | 1.44 | 100.00 | 93.20 µg/L | 93.20 |
| 13C9-PFDA | 34805 | 2.15 | 100.00 | 97.29 µg/L | 97.29 |



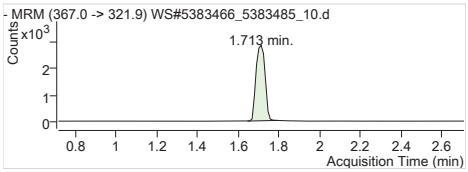



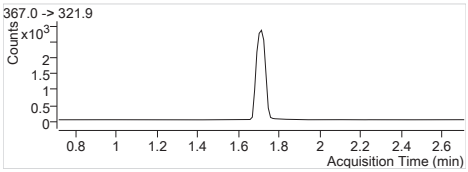

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.445 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



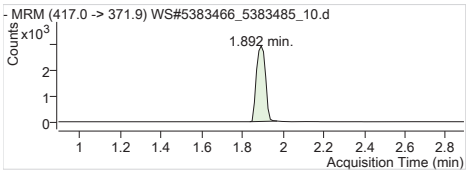



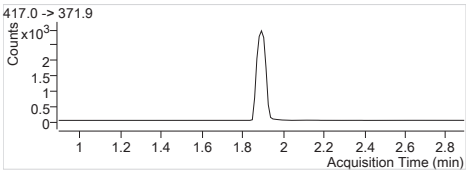

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: CC



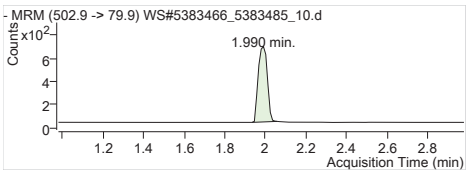



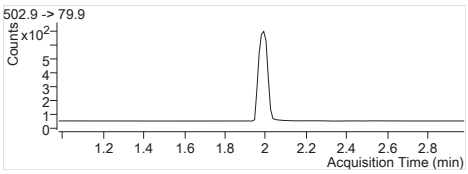

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: CC



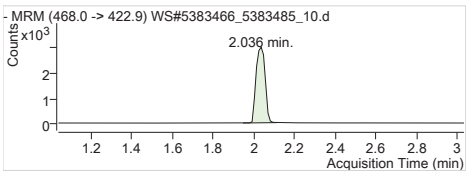



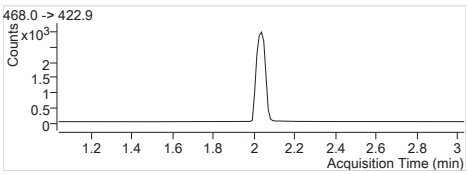

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: CC



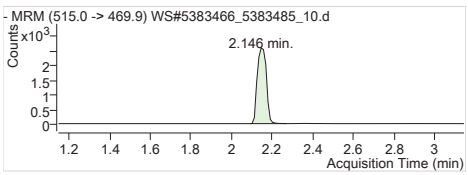



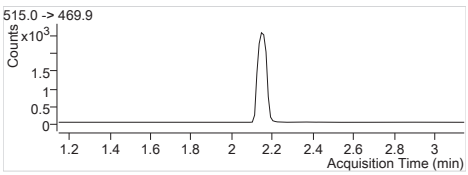

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: CC



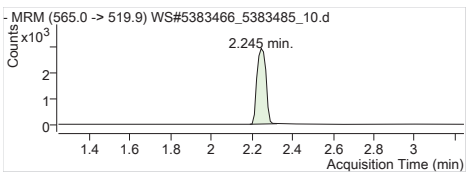



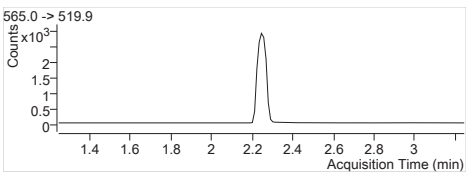

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: CC



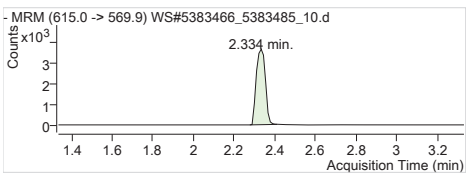



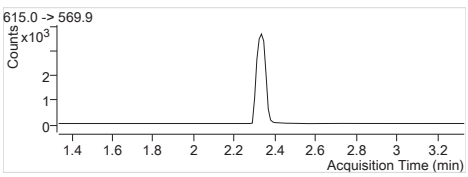

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



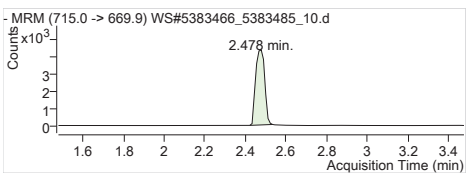



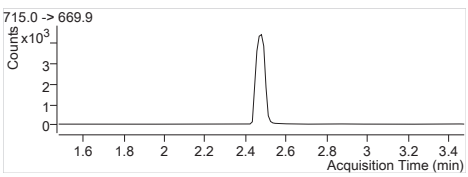

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: CC



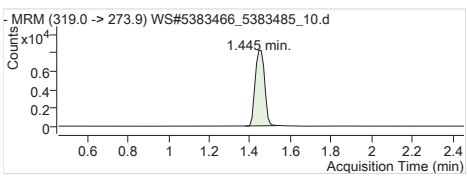



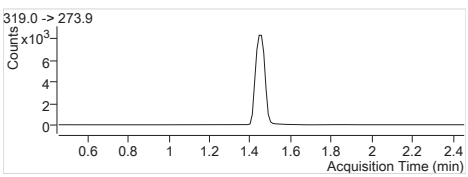

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: CC



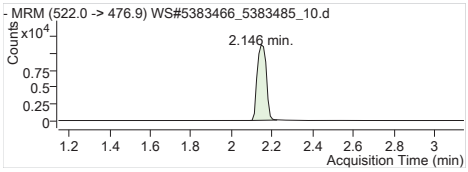



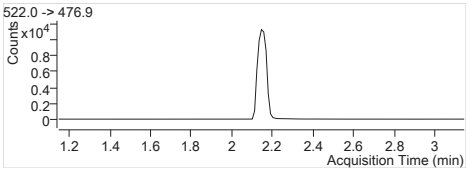

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: CC



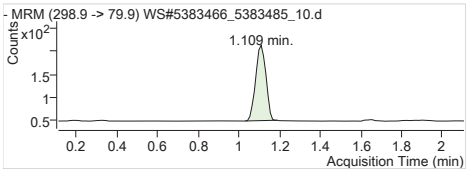



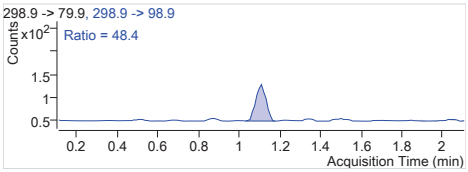

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.445 (1.456)
Concentration: 1 µg/L
Sample type: CC



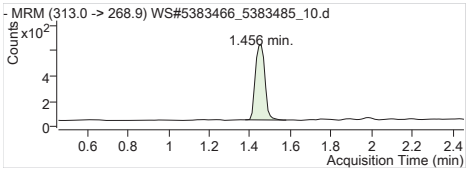



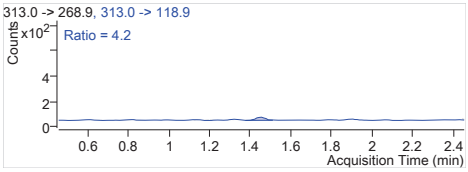

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



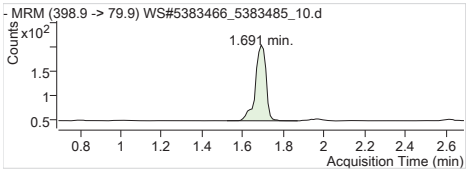



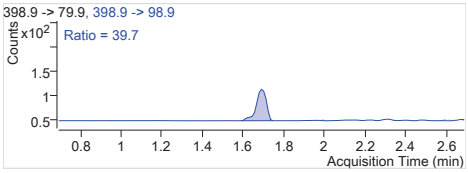

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 0.90 µg/L
Area ratio: 0.33468
Sample type: CC



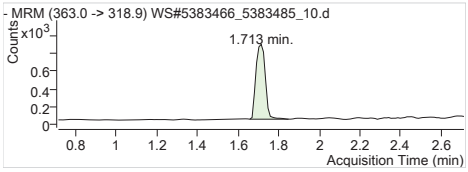



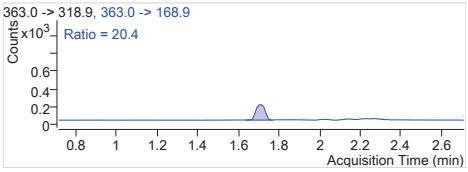

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 1.05 µg/L
Area ratio: 0.29587
Sample type: CC



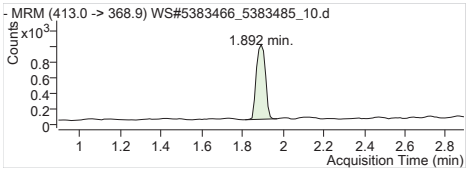



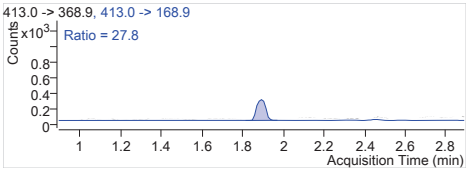

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.99 µg/L
Area ratio: 0.32831
Sample type: CC



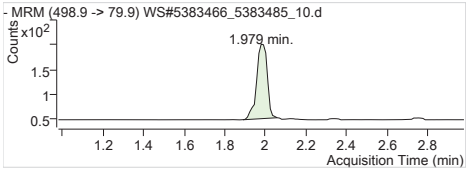



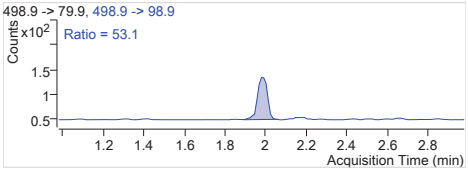

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 0.93 µg/L
Area ratio: 0.30881
Sample type: CC



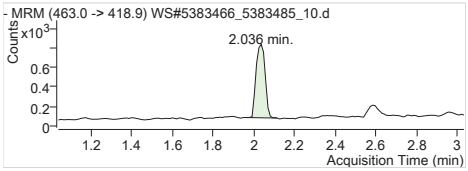



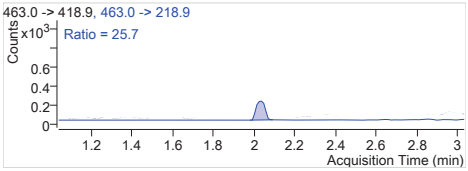

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 0.95 µg/L
Area ratio: 0.33082
Sample type: CC



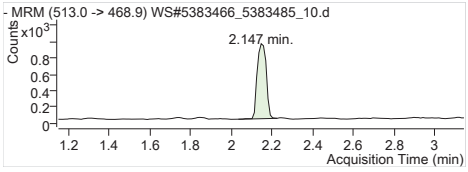



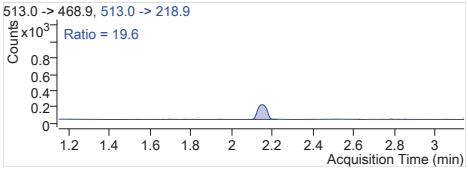

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 0.85 µg/L
Area ratio: 0.27336
Sample type: CC



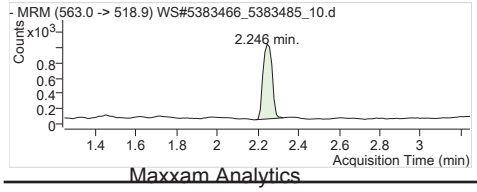



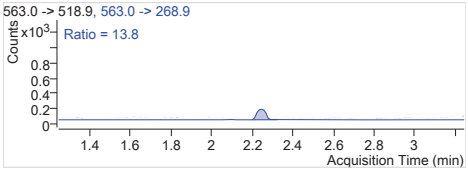

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 0.79 µg/L
Area ratio: 0.25550
Sample type: CC



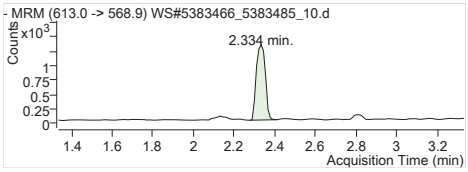



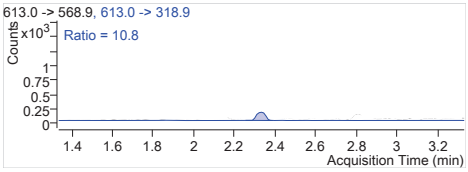

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.147)
Calc. conc. 0.84 µg/L
Area ratio: 0.35695
Sample type: CC



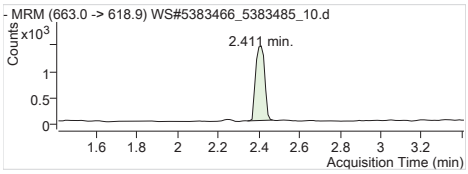



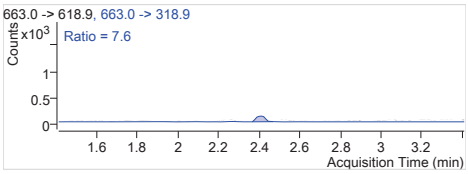

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 0.82 µg/L
Area ratio: 0.35036
Sample type: CC



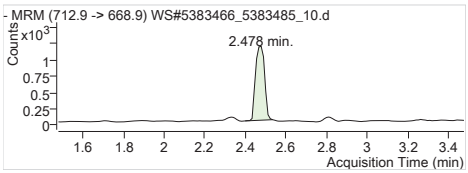



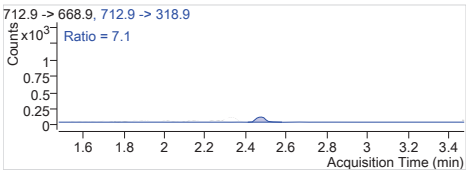

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 0.99 µg/L
Area ratio: 0.35694
Sample type: CC



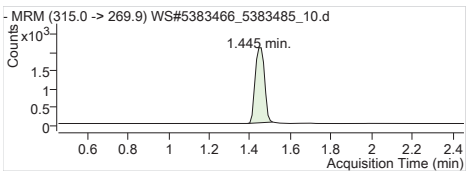



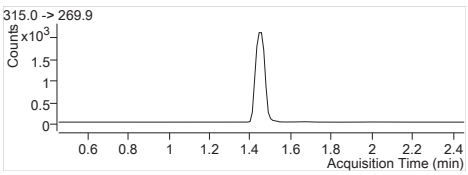

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.411 (2.411)
Calc. conc. 0.82 µg/L
Area ratio: 0.32245
Sample type: CC



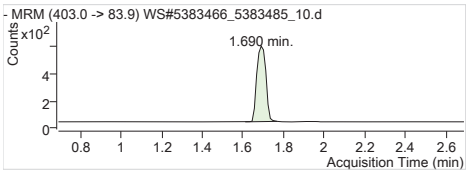



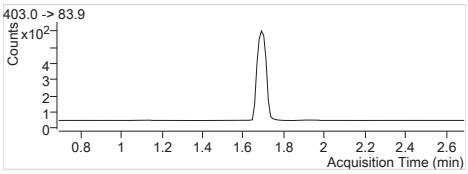

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 0.80 µg/L
Area ratio: 0.26094
Sample type: CC



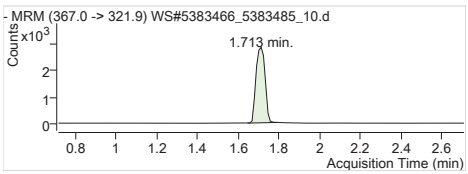



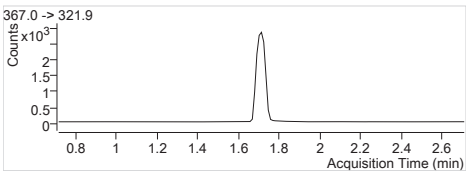

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.445 (1.456)
Calc. conc. 104.88 µg/L
Area ratio: 0.24848
Sample type: CC



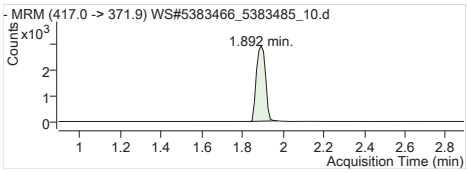



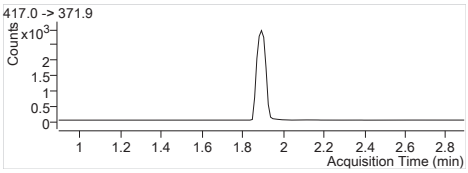

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 112.16 µg/L
Area ratio: 0.06518
Sample type: CC



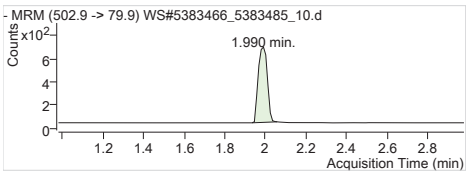



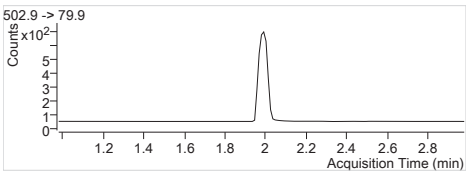

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 113.07 µg/L
Area ratio: 0.33034
Sample type: CC



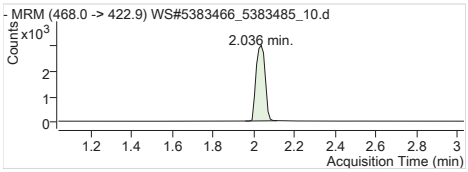



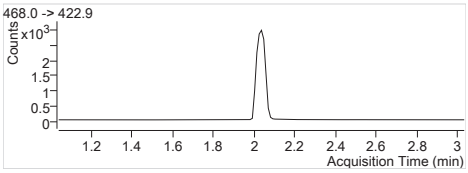

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 108.34 µg/L
Area ratio: 0.34008
Sample type: CC



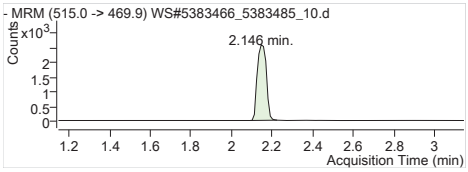



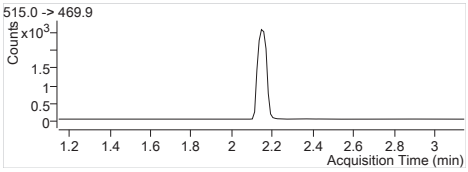

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.990 (1.979)
Calc. conc. 110.01 µg/L
Area ratio: 0.07593
Sample type: CC



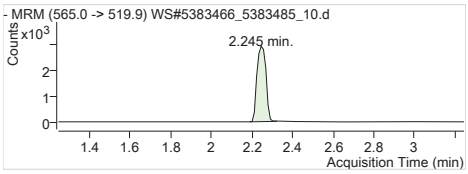



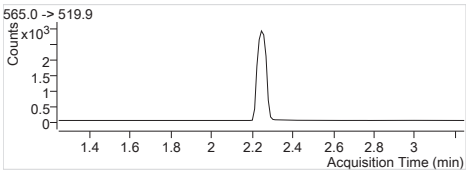

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 111.70 µg/L
Area ratio: 0.34547
Sample type: CC



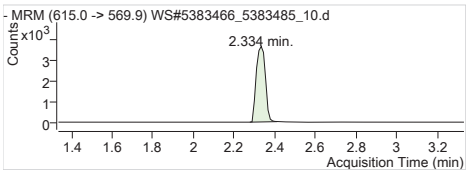



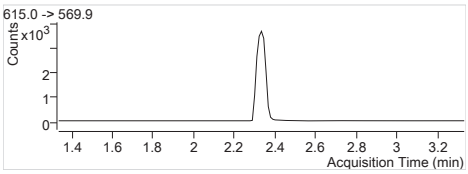

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 113.54 µg/L
Area ratio: 0.22784
Sample type: CC



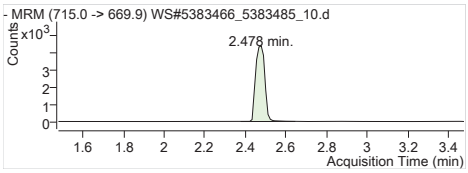



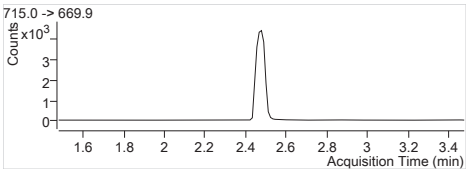

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 104.90 µg/L
Area ratio: 0.25373
Sample type: CC



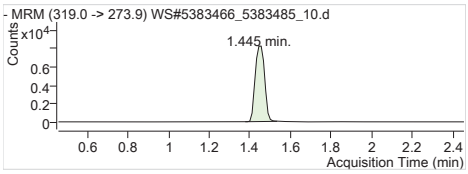



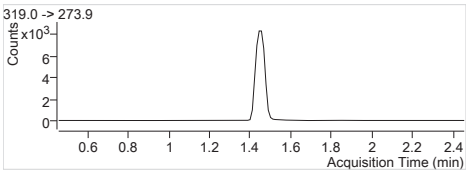

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 100.57 µg/L
Area ratio: 0.32375
Sample type: CC



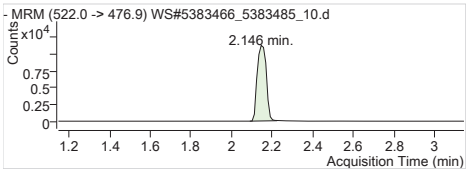



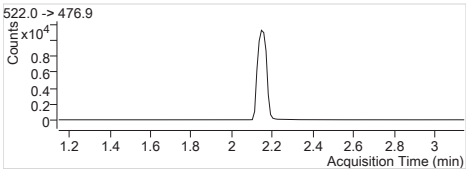

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 108.48 µg/L
Area ratio: 0.39790
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.445 (1.456)
Calc. conc. 93.20 µg/L
Area ratio: 0
Sample type: CC



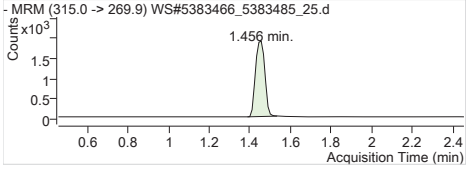

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 97.29 µg/L
Area ratio: 0
Sample type: CC

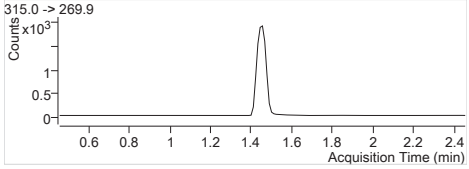
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_25.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/06 8:05:24 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

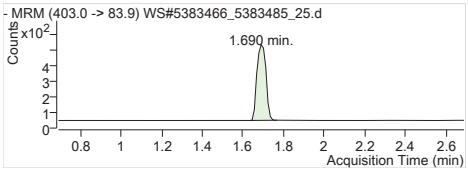
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6023 | 1.46 | 1 µg/L | | |
| MPFHxS | 1496 | 1.69 | 1 µg/L | | |
| MPFHpA | 8389 | 1.71 | 1 µg/L | | |
| MPFOA | 8761 | 1.89 | 1 µg/L | | |
| MPFOS | 1951 | 1.99 | 1 µg/L | | |
| MPFNA | 8720 | 2.04 | 1 µg/L | | |
| MPFDA | 6932 | 2.15 | 1 µg/L | | |
| MPFUnA | 8831 | 2.25 | 1 µg/L | | |
| MPFDoA | 10652 | 2.33 | 1 µg/L | | |
| MPFTeDA | 13187 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 26693 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 36124 | 2.15 | 1 µg/L | | |

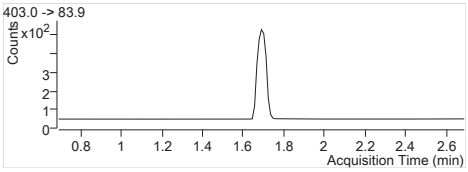
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 7974 | 1.11 | 12.50 | 12.21 µg/L | 97.66 |
| PFHxA 1 | 28486 | 1.46 | 12.50 | 12.00 µg/L | 95.96 |
| PFHxS 1 | 7934 | 1.69 | 12.50 | 12.11 µg/L | 96.89 |
| PFHpA 1 | 38973 | 1.71 | 12.50 | 11.21 µg/L | 89.71 |
| PFOA 1 | 43942 | 1.89 | 12.50 | 11.93 µg/L | 95.45 |
| PFOS 1 | 7815 | 1.98 | 12.50 | 11.69 µg/L | 93.48 |
| PFNA 1 | 37389 | 2.04 | 12.50 | 11.54 µg/L | 92.29 |
| PFDA 1 | 38777 | 2.15 | 12.50 | 11.93 µg/L | 95.48 |
| PFUnA 1 | 43664 | 2.25 | 12.50 | 11.67 µg/L | 93.38 |
| PFDoA 1 | 56352 | 2.33 | 12.50 | 12.99 µg/L | 103.94 |
| PFTrDA 1 | 62695 | 2.41 | 12.50 | 11.52 µg/L | 92.12 |
| PFTeDA 1 | 54785 | 2.48 | 12.50 | 12.09 µg/L | 96.69 |
| 13C2-PFHxA | 6023 | 1.46 | 100.00 | 95.24 µg/L | 95.24 |
| 18O2-PFHxS | 1496 | 1.69 | 100.00 | 96.45 µg/L | 96.45 |
| 13C4-PFHpA | 8389 | 1.71 | 100.00 | 107.57 µg/L | 107.57 |
| 13C4-PFOA | 8761 | 1.89 | 100.00 | 104.56 µg/L | 104.56 |
| 13C4-PFOS | 1951 | 1.99 | 100.00 | 105.89 µg/L | 105.89 |
| 13C5-PFNA | 8646 | 2.04 | 100.00 | 104.73 µg/L | 104.73 |
| 13C2-PFDA | 6832 | 2.15 | 100.00 | 94.25 µg/L | 94.25 |
| 13C2-PFUnA | 8831 | 2.25 | 100.00 | 101.07 µg/L | 101.07 |
| 13C2-PFDoA | 10652 | 2.33 | 100.00 | 91.60 µg/L | 91.60 |
| 13C2-PFTeDA | 13522 | 2.48 | 100.00 | 102.05 µg/L | 102.05 |
| 13C6-PFHxA | 26693 | 1.46 | 100.00 | 93.89 µg/L | 93.89 |
| 13C9-PFDA | 36124 | 2.15 | 100.00 | 100.98 µg/L | 100.98 |



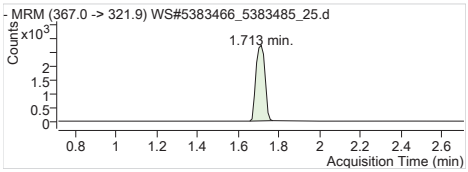



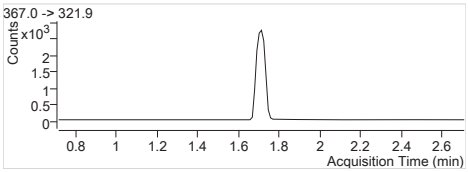

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



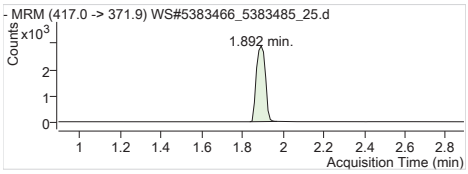



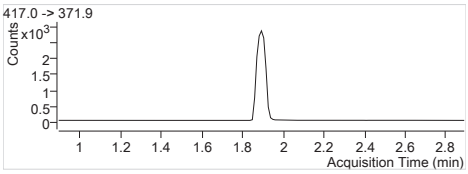

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: CC



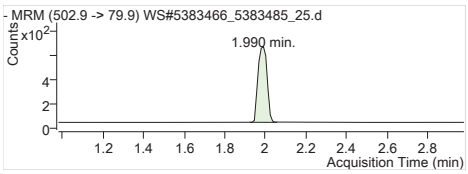



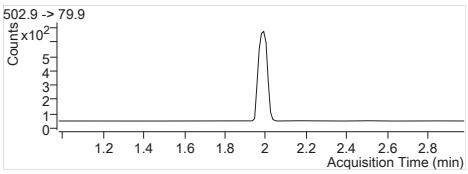

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: CC



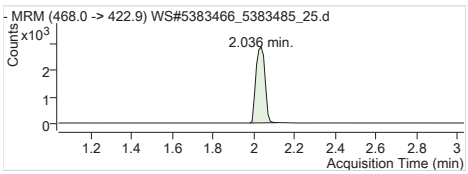



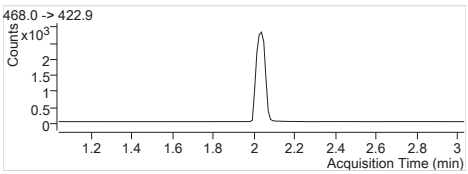

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: CC



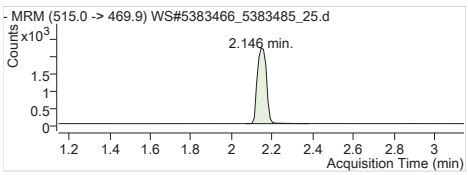



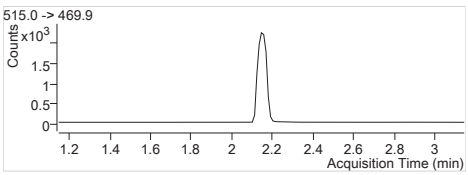

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: CC



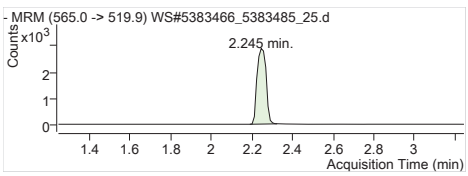



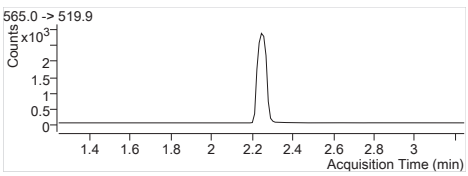

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: CC



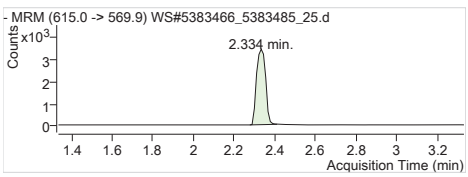



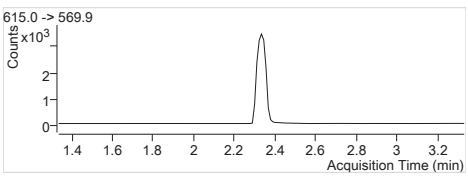

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



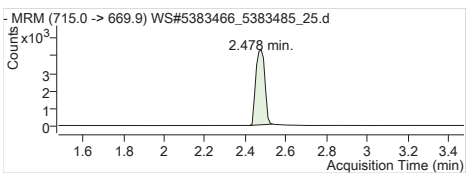



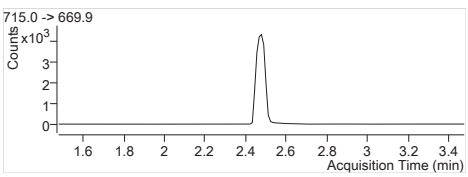

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: CC



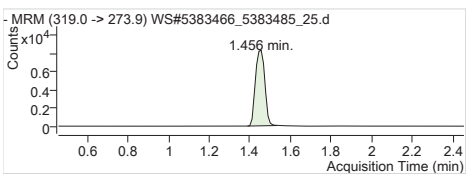



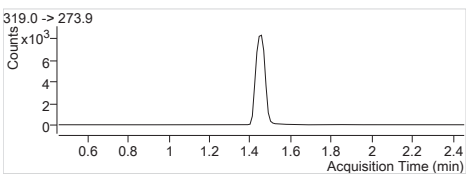

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: CC



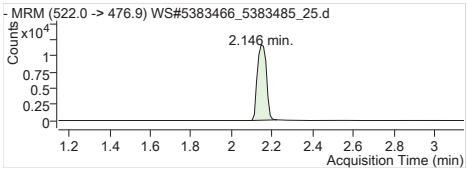



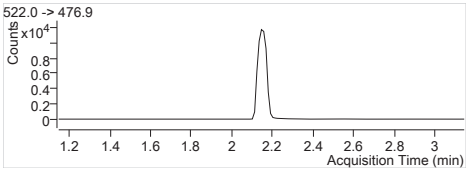

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: CC



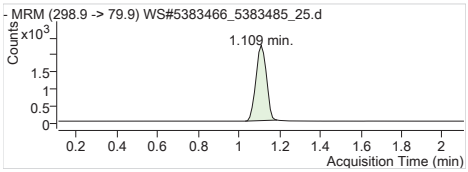



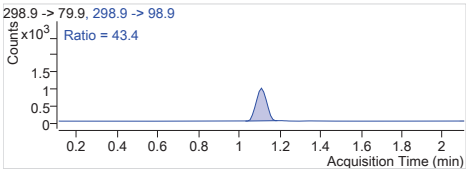

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: CC



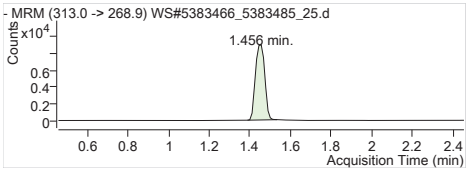



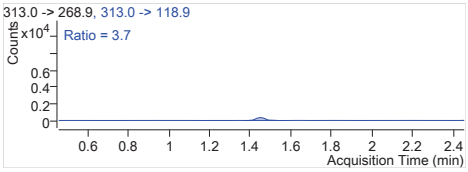

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



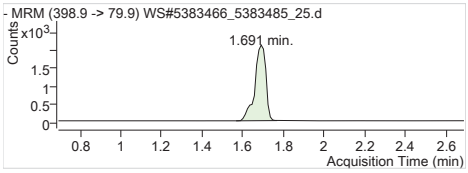



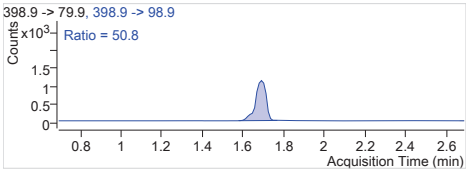

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 12.21 µg/L
Area ratio: 5.33021
Sample type: CC



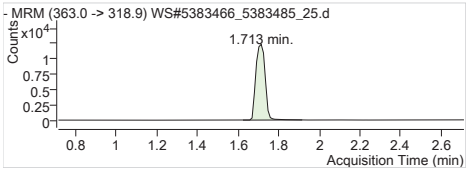



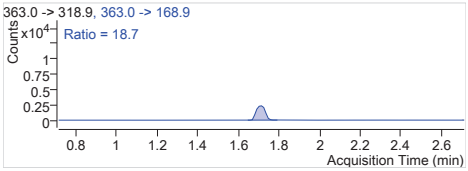

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 12.00 µg/L
Area ratio: 4.72954
Sample type: CC



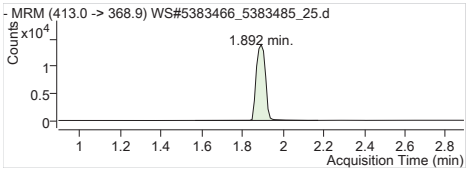



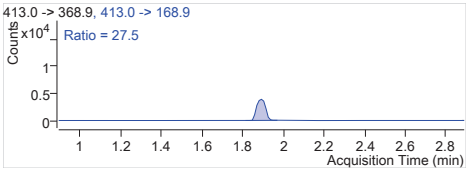

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.11 µg/L
Area ratio: 5.30348
Sample type: CC



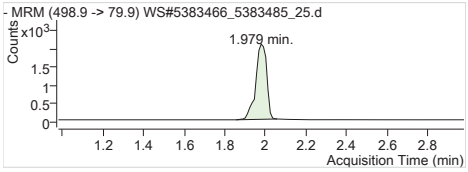



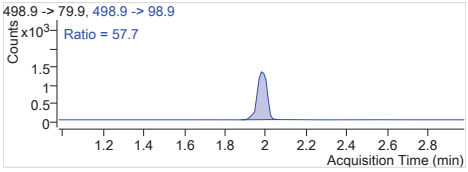

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 11.21 µg/L
Area ratio: 4.64573
Sample type: CC



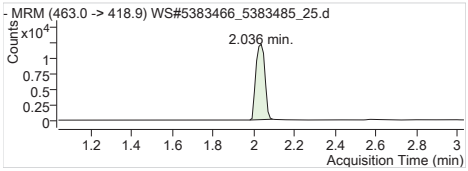



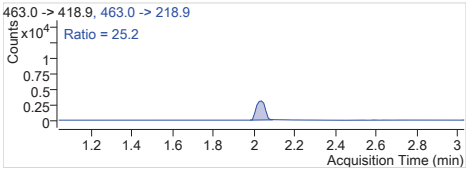

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 11.93 µg/L
Area ratio: 5.01564
Sample type: CC



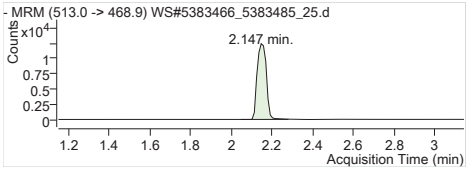



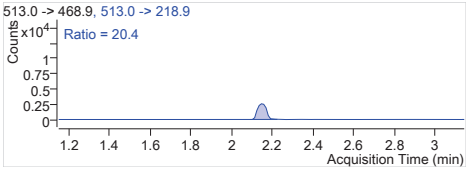

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 11.69 µg/L
Area ratio: 4.00564
Sample type: CC



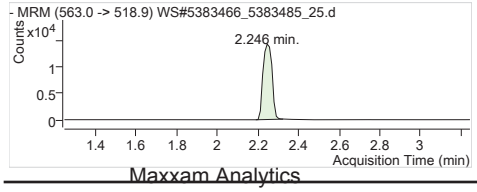



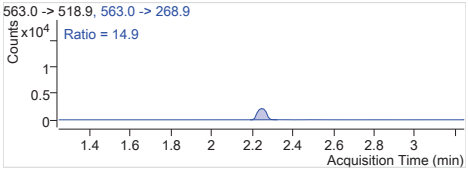

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 11.54 µg/L
Area ratio: 4.28773
Sample type: CC



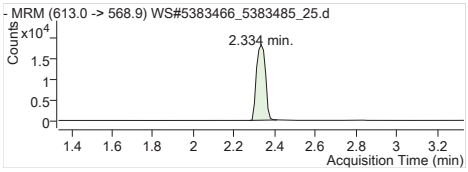



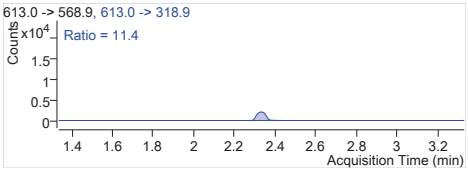

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.147)
Calc. conc. 11.93 µg/L
Area ratio: 5.59391
Sample type: CC



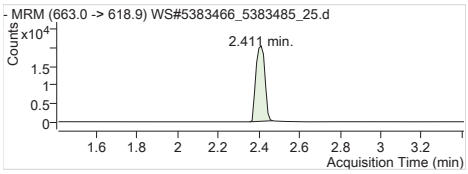



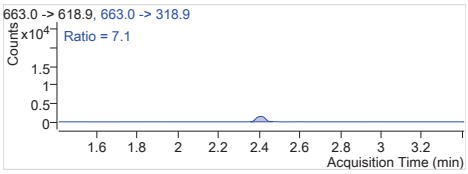

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 11.67 µg/L
Area ratio: 4.94440
Sample type: CC



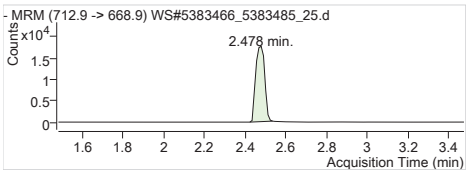



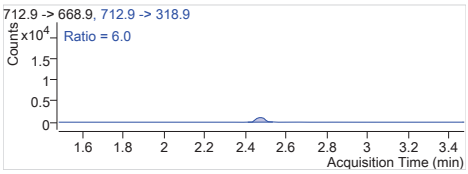

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 12.99 µg/L
Area ratio: 5.29027
Sample type: CC



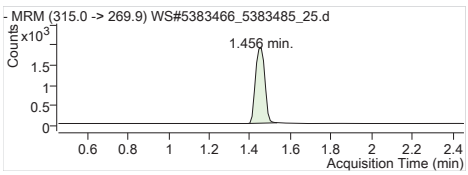



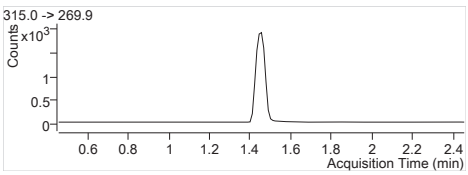

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.411 (2.411)
Calc. conc. 11.52 µg/L
Area ratio: 4.75430
Sample type: CC



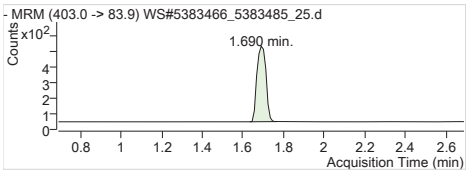



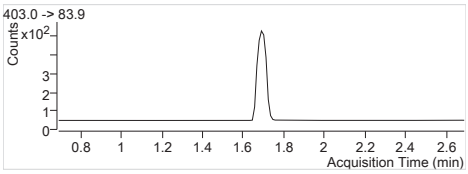

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 12.09 µg/L
Area ratio: 4.15447
Sample type: CC



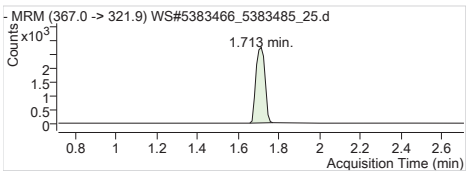



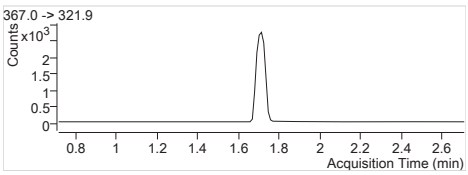

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 95.24 µg/L
Area ratio: 0.22564
Sample type: CC



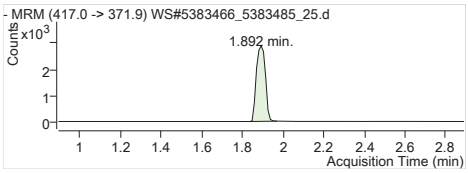



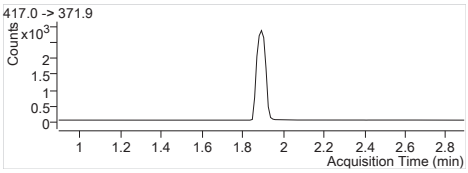

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 96.45 µg/L
Area ratio: 0.05604
Sample type: CC



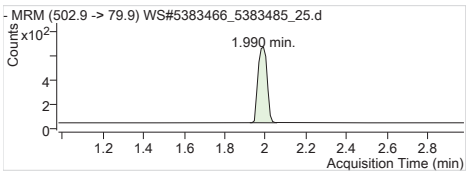



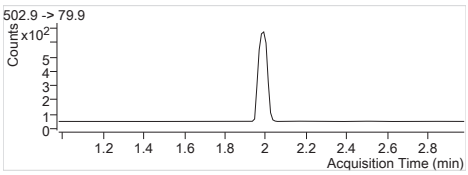

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 107.57 µg/L
Area ratio: 0.31428
Sample type: CC



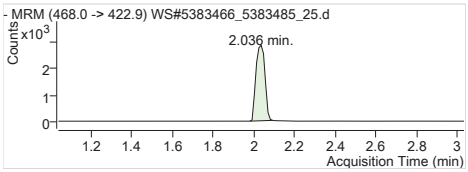



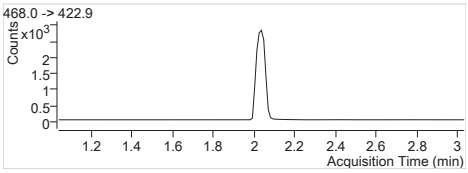

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 104.56 µg/L
Area ratio: 0.32821
Sample type: CC



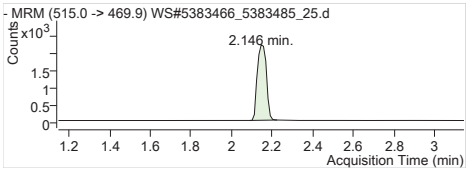



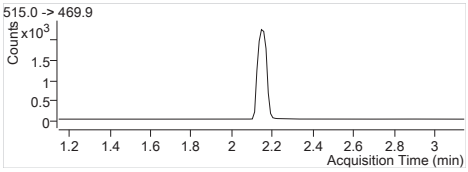

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.990 (1.979)
Calc. conc. 105.89 µg/L
Area ratio: 0.07309
Sample type: CC



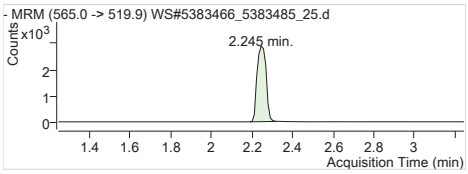



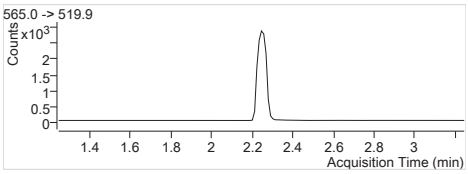

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 104.73 µg/L
Area ratio: 0.32391
Sample type: CC



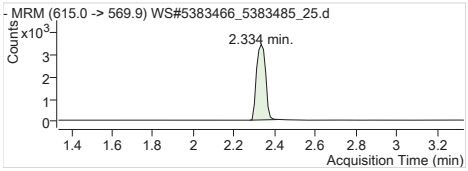



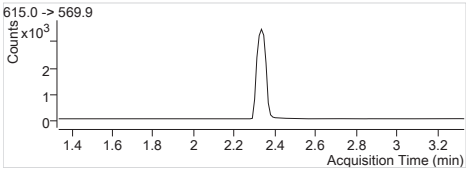

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 94.25 µg/L
Area ratio: 0.18913
Sample type: CC



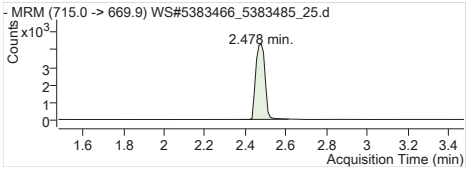



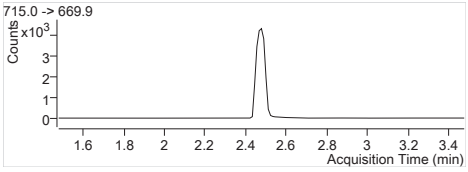

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 101.07 µg/L
Area ratio: 0.24446
Sample type: CC



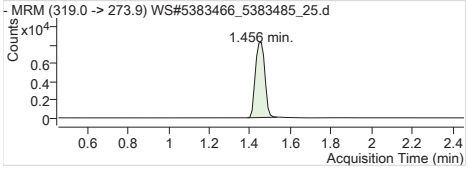



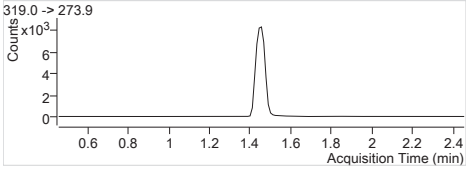

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 91.60 µg/L
Area ratio: 0.29487
Sample type: CC



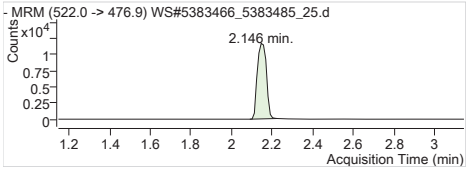



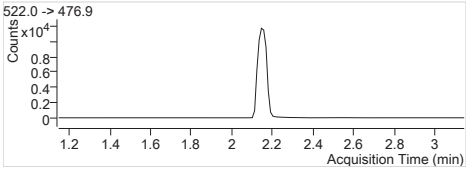

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 102.05 µg/L
Area ratio: 0.37432
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 93.89 µg/L
Area ratio: 0
Sample type: CC



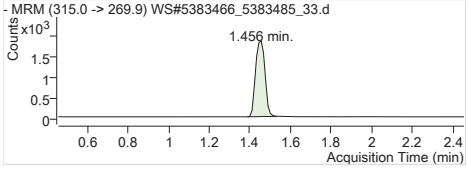

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 100.98 µg/L
Area ratio: 0
Sample type: CC

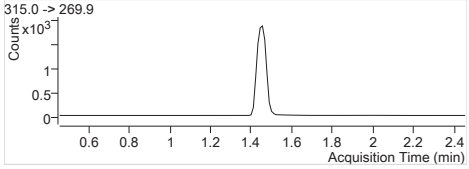
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_33.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/06 8:44:52 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

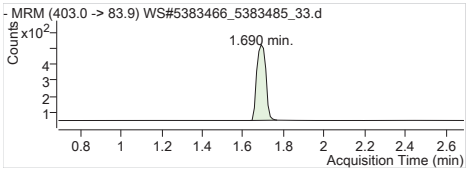
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5952 | 1.46 | 1 µg/L | | |
| MPFHxS | 1479 | 1.69 | 1 µg/L | | |
| MPFHpA | 8195 | 1.71 | 1 µg/L | | |
| MPFOA | 8316 | 1.89 | 1 µg/L | | |
| MPFOS | 1991 | 1.99 | 1 µg/L | | |
| MPFNA | 8403 | 2.04 | 1 µg/L | | |
| MPFDA | 7326 | 2.15 | 1 µg/L | | |
| MPFUnA | 8523 | 2.25 | 1 µg/L | | |
| MPFDoA | 11402 | 2.33 | 1 µg/L | | |
| MPFTeDA | 12531 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 27441 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 35024 | 2.15 | 1 µg/L | | |

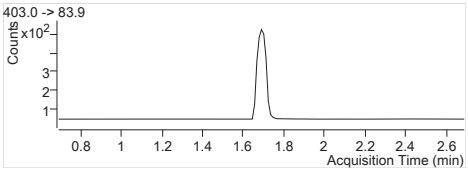
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 7494 | 1.11 | 12.50 | 11.61 µg/L | 92.89 |
| PFHxA 1 | 28156 | 1.46 | 12.50 | 12.00 µg/L | 95.98 |
| PFHxS 1 | 7812 | 1.69 | 12.50 | 12.06 µg/L | 96.51 |
| PFHpA 1 | 37324 | 1.71 | 12.50 | 11.00 µg/L | 87.98 |
| PFOA 1 | 41978 | 1.89 | 12.50 | 12.01 µg/L | 96.06 |
| PFOS 1 | 8158 | 1.98 | 12.50 | 11.95 µg/L | 95.61 |
| PFNA 1 | 38160 | 2.04 | 12.50 | 12.21 µg/L | 97.69 |
| PFDA 1 | 39337 | 2.15 | 12.50 | 11.46 µg/L | 91.68 |
| PFUnA 1 | 41560 | 2.25 | 12.50 | 11.51 µg/L | 92.09 |
| PFDoA 1 | 54433 | 2.33 | 12.50 | 11.74 µg/L | 93.90 |
| PFTrDA 1 | 61489 | 2.41 | 12.50 | 11.88 µg/L | 95.07 |
| PFTeDA 1 | 54112 | 2.48 | 12.50 | 12.56 µg/L | 100.48 |
| 13C2-PFHxA | 5952 | 1.46 | 100.00 | 91.55 µg/L | 91.55 |
| 18O2-PFHxS | 1479 | 1.69 | 100.00 | 92.75 µg/L | 92.75 |
| 13C4-PFHpA | 8195 | 1.71 | 100.00 | 102.22 µg/L | 102.22 |
| 13C4-PFOA | 8316 | 1.89 | 100.00 | 96.54 µg/L | 96.54 |
| 13C4-PFOS | 1991 | 1.99 | 100.00 | 105.12 µg/L | 105.12 |
| 13C5-PFNA | 8349 | 2.04 | 100.00 | 98.37 µg/L | 98.37 |
| 13C2-PFDA | 7211 | 2.15 | 100.00 | 102.60 µg/L | 102.60 |
| 13C2-PFUnA | 8523 | 2.25 | 100.00 | 100.61 µg/L | 100.61 |
| 13C2-PFDoA | 11402 | 2.33 | 100.00 | 101.13 µg/L | 101.13 |
| 13C2-PFTeDA | 12767 | 2.48 | 100.00 | 99.38 µg/L | 99.38 |
| 13C6-PFHxA | 27441 | 1.46 | 100.00 | 96.52 µg/L | 96.52 |
| 13C9-PFDA | 35024 | 2.15 | 100.00 | 97.90 µg/L | 97.90 |



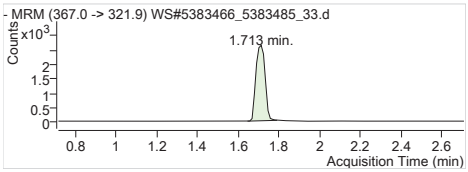



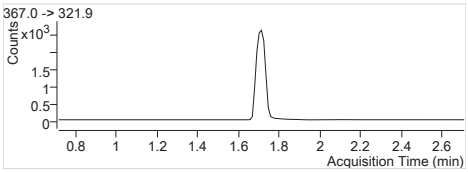

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



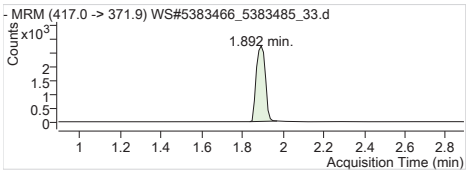



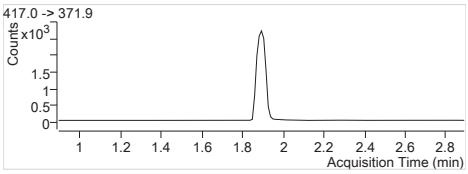

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: CC



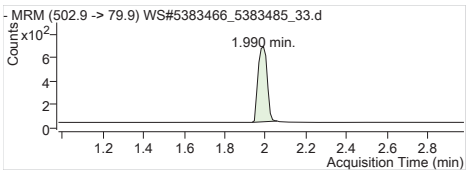



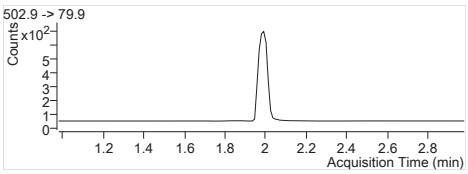

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: CC



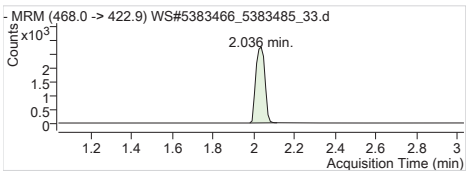



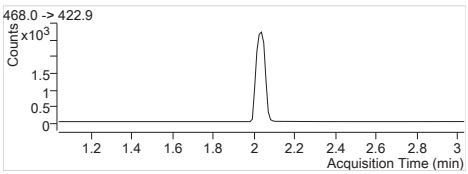

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: CC



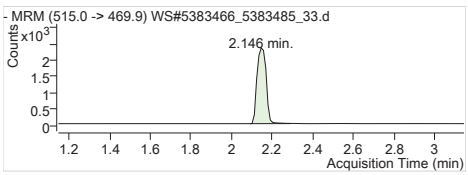



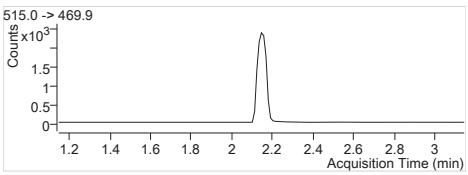

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: CC



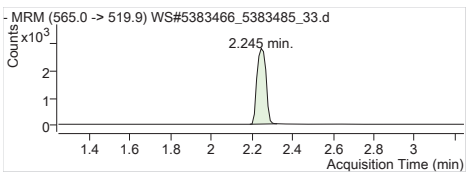



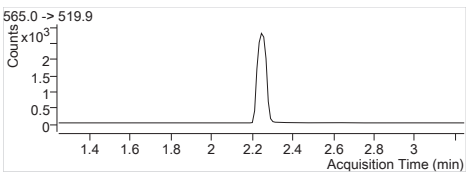

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: CC



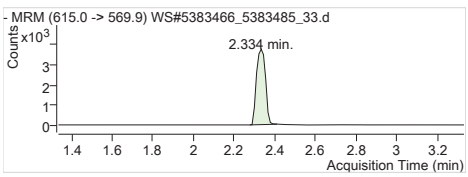



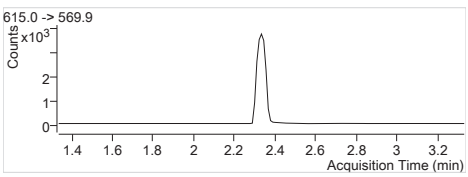

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



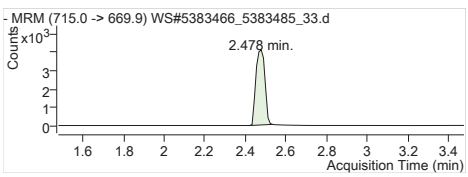



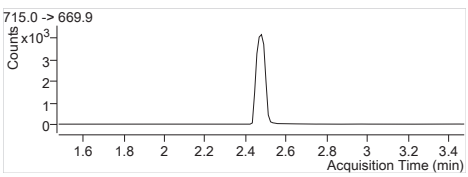

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: CC



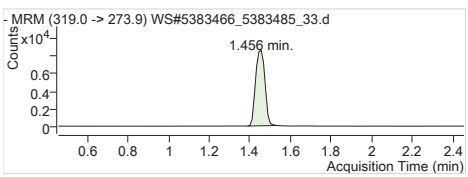



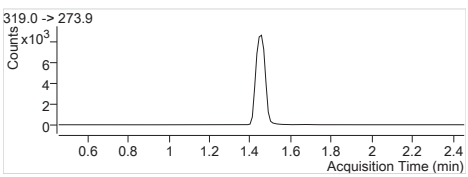

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: CC



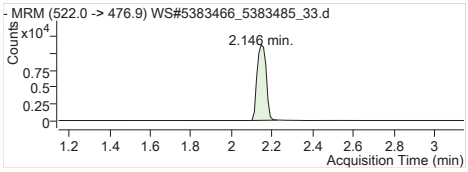



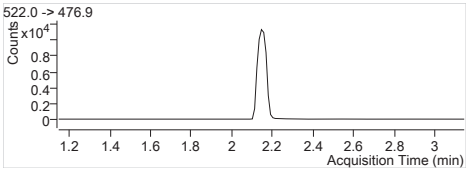

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: CC



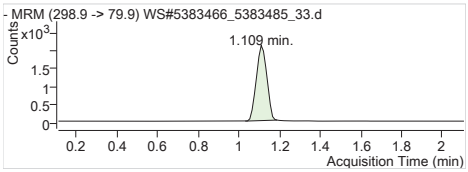



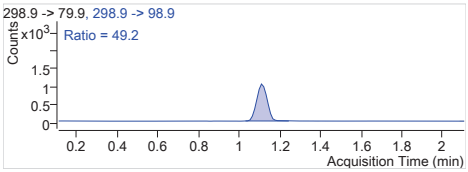

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: CC



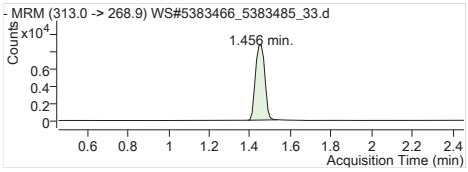



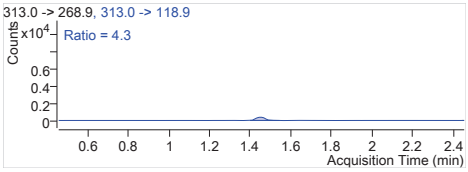

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



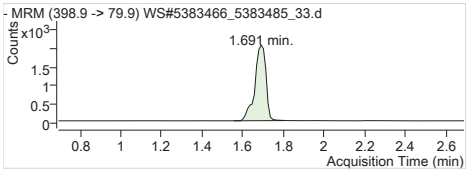



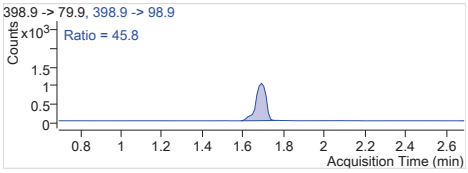

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 11.61 µg/L
Area ratio: 5.06694
Sample type: CC



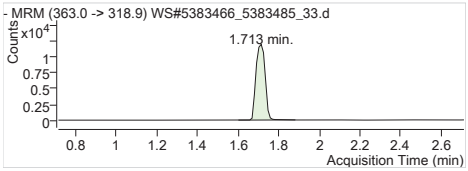



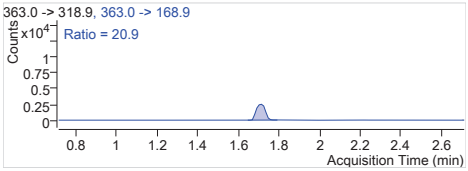

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 12.00 µg/L
Area ratio: 4.73051
Sample type: CC



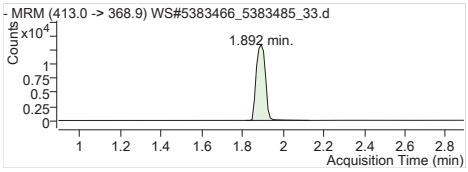



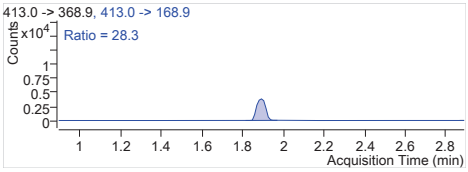

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.06 µg/L
Area ratio: 5.28195
Sample type: CC



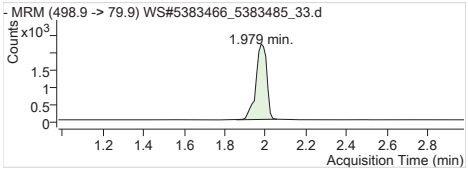



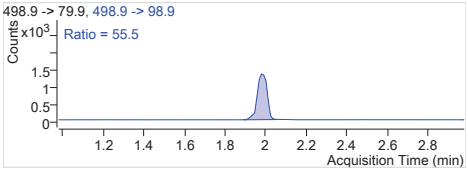

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 11.00 µg/L
Area ratio: 4.55448
Sample type: CC



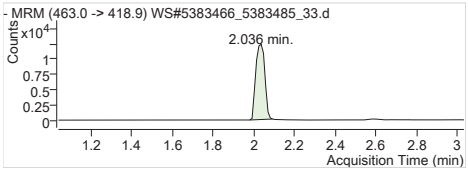



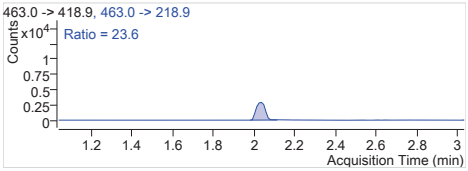

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 12.01 µg/L
Area ratio: 5.04786
Sample type: CC



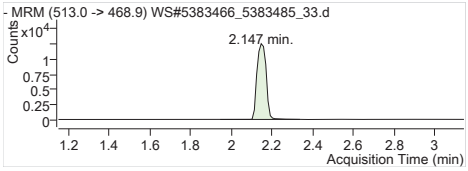



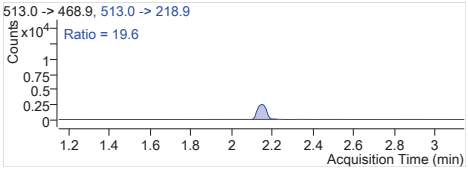

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 11.95 µg/L
Area ratio: 4.09744
Sample type: CC



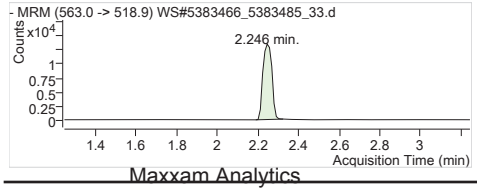



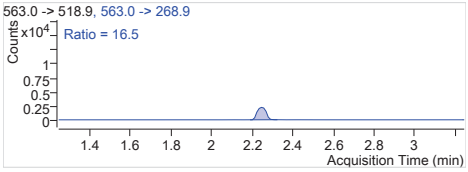

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 12.21 µg/L
Area ratio: 4.54124
Sample type: CC



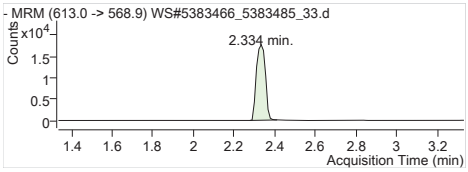



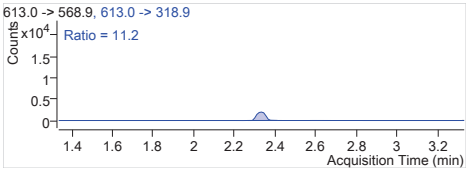

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.147)
Calc. conc. 11.46 µg/L
Area ratio: 5.36951
Sample type: CC



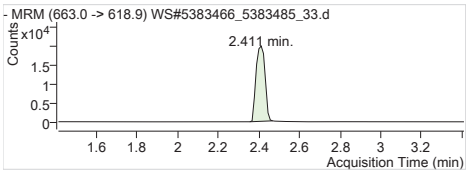



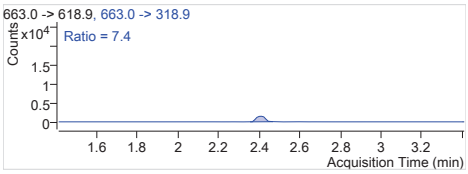

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 11.51 µg/L
Area ratio: 4.87622
Sample type: CC



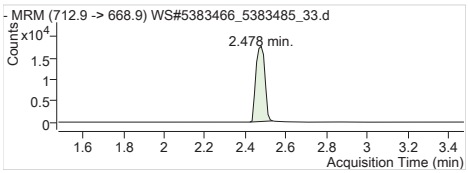



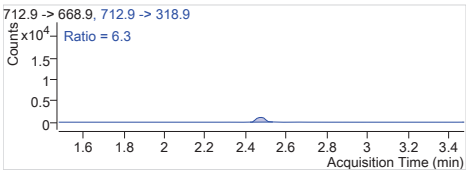

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 11.74 µg/L
Area ratio: 4.77399
Sample type: CC



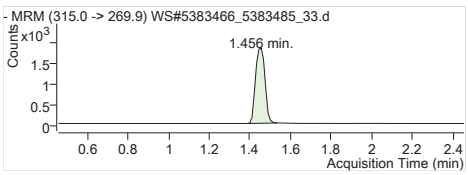



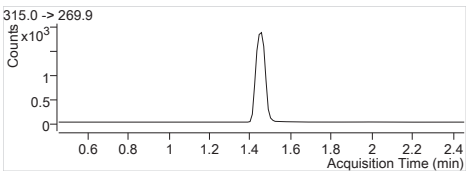

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.411 (2.411)
Calc. conc. 11.88 µg/L
Area ratio: 4.90695
Sample type: CC



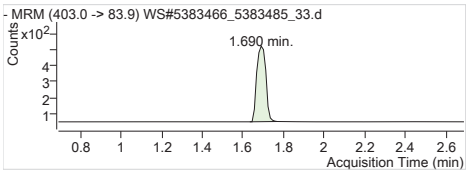



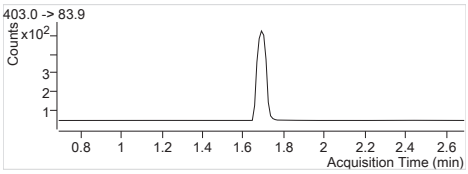

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 12.56 µg/L
Area ratio: 4.31825
Sample type: CC



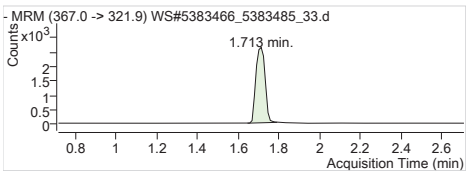



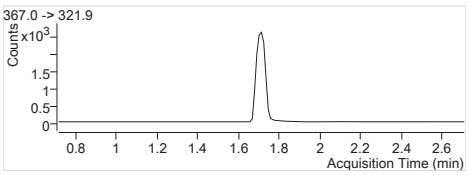

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 91.55 µg/L
Area ratio: 0.21690
Sample type: CC



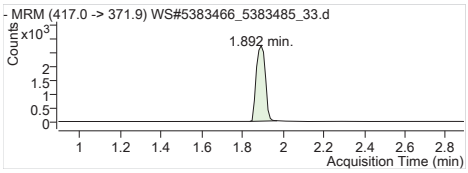



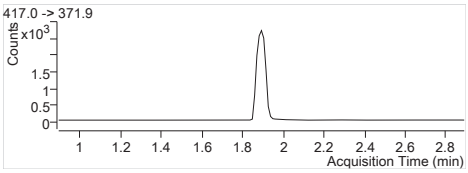

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 92.75 µg/L
Area ratio: 0.05390
Sample type: CC



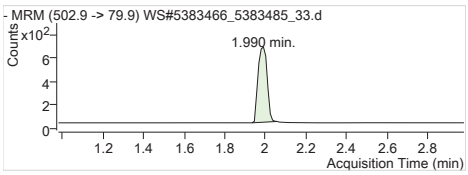



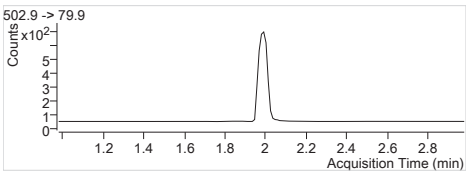

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 102.22 µg/L
Area ratio: 0.29864
Sample type: CC



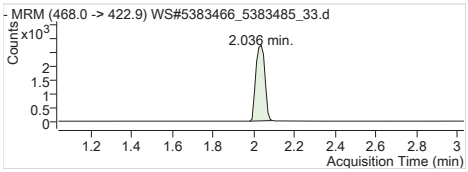



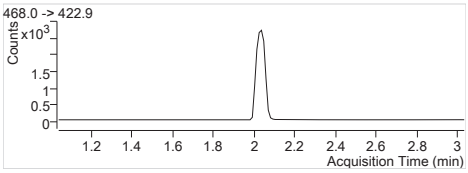

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 96.54 µg/L
Area ratio: 0.30305
Sample type: CC



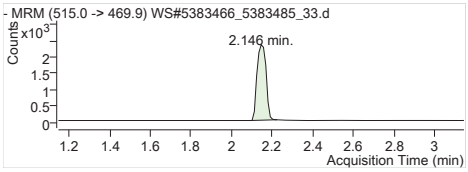



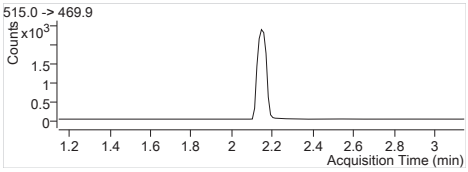

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.990 (1.979)
Calc. conc. 105.12 µg/L
Area ratio: 0.07256
Sample type: CC



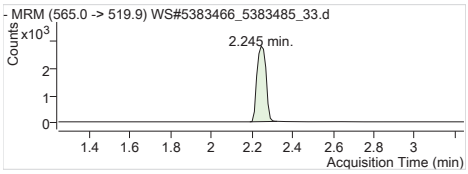



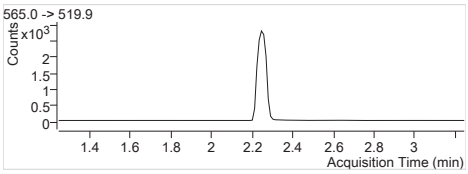

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 98.37 µg/L
Area ratio: 0.30425
Sample type: CC



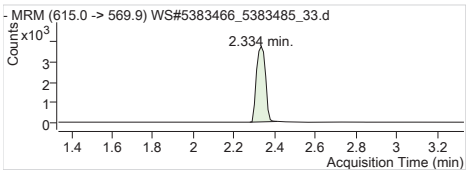



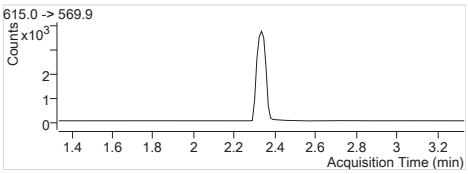

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 102.60 µg/L
Area ratio: 0.20589
Sample type: CC



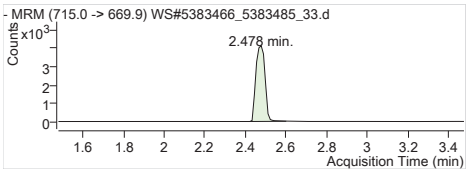



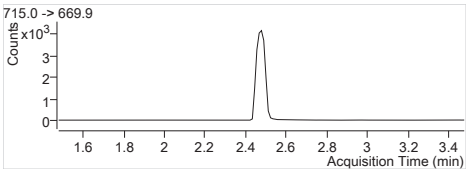

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 100.61 µg/L
Area ratio: 0.24335
Sample type: CC



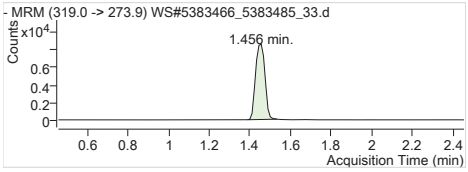



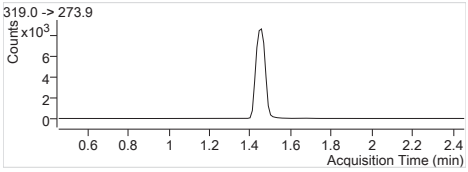

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 101.13 µg/L
Area ratio: 0.32555
Sample type: CC



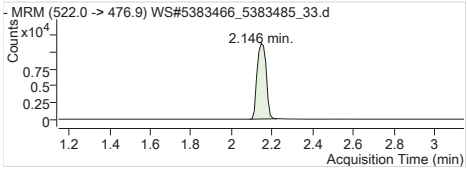



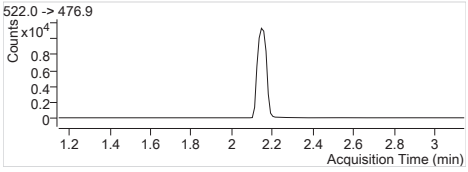

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 99.38 µg/L
Area ratio: 0.36452
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 96.52 µg/L
Area ratio: 0
Sample type: CC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 97.90 µg/L
Area ratio: 0
Sample type: CC

# Quantitation Results

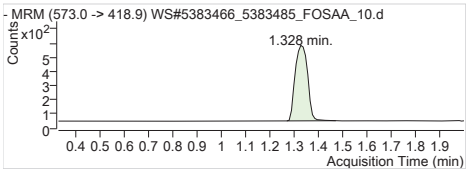
Agilent Technologies

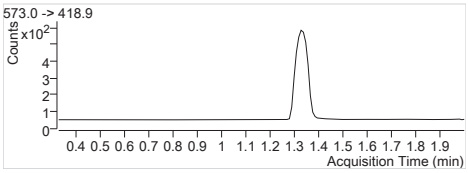
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A2 |
| **Acq. Date** | 2018/02/06 12:47:23 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

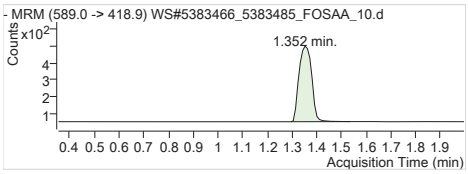
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1894 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1604 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 25890 | 0.96 | 1 µg/L | | |

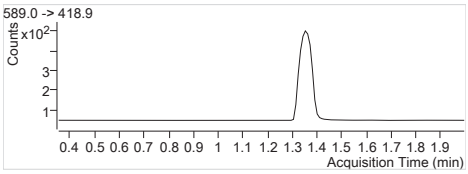
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 559 | 1.33 | 0.83 | 0.84 µg/L | 101.80 |
| EtFOSAA 1 | 528 | 1.35 | 0.83 | 0.93 µg/L | 112.21 |
| D3-MeFOSAA | 1894 | 1.33 | 100.00 | 111.37 µg/L | 111.37 |
| D5-EtFOSAA | 1604 | 1.35 | 100.00 | 109.47 µg/L | 109.47 |
| 13C9-PFDA | 25738 | 0.96 | 100.00 | 91.30 µg/L | 91.30 |



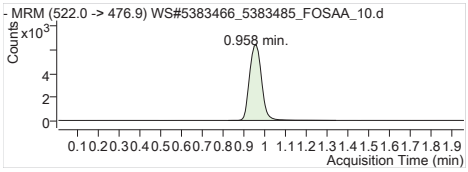



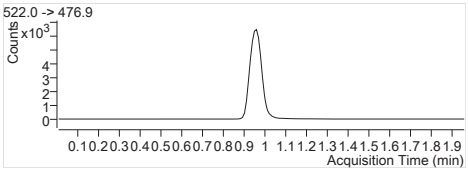

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: CC



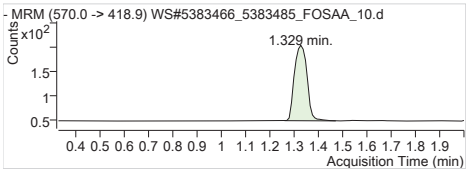



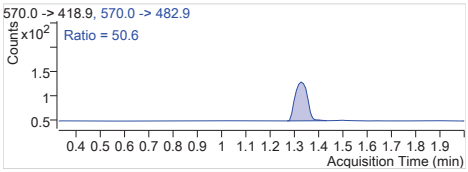

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: CC



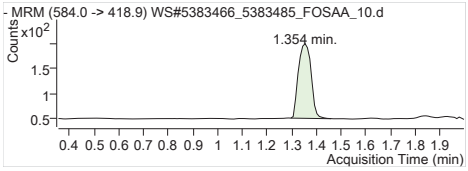



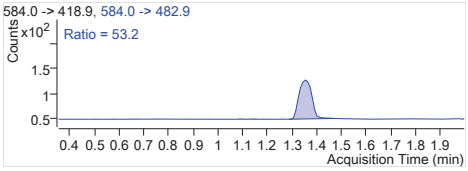

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.958 (0.958)
Concentration: 1 µg/L
Sample type: CC



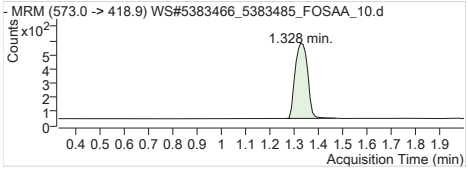



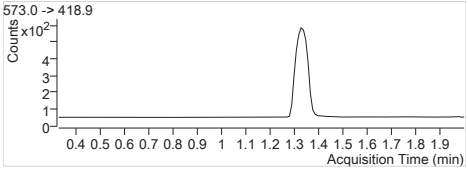

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 0.84 µg/L
Area ratio: 0.29514
Sample type: CC



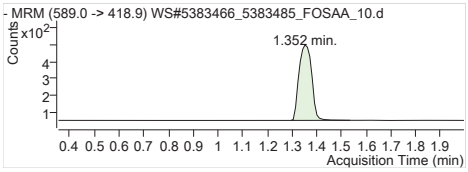



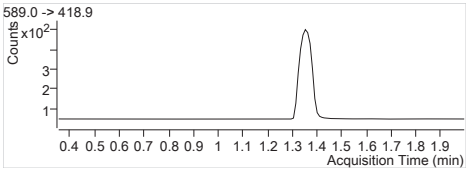

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 0.93 µg/L
Area ratio: 0.32918
Sample type: CC



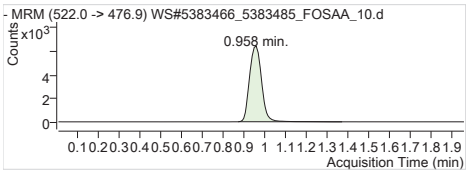



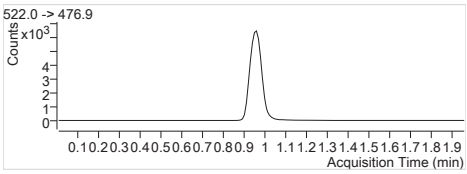

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 111.37 µg/L
Area ratio: 0.07316
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 109.47 µg/L |
| Area ratio: | 0.06195 |
| Sample type: | CC |



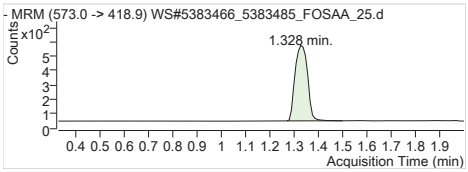

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.958 (0.958) |
| Calc. conc. | 91.30 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

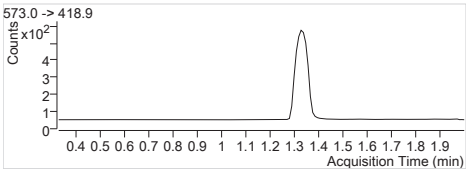
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_25.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/06 1:23:33 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

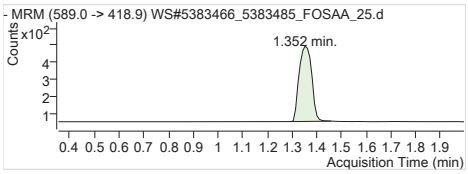
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1876 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1574 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 28320 | 0.95 | 1 µg/L | | |

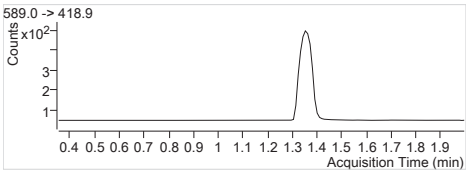
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 7752 | 1.33 | 12.50 | 11.44 µg/L | 91.49 |
| EtFOSAA 1 | 7641 | 1.35 | 12.50 | 11.53 µg/L | 92.25 |
| D3-MeFOSAA | 1876 | 1.33 | 100.00 | 100.84 µg/L | 100.84 |
| D5-EtFOSAA | 1574 | 1.35 | 100.00 | 98.20 µg/L | 98.20 |
| 13C9-PFDA | 28134 | 0.95 | 100.00 | 99.80 µg/L | 99.80 |



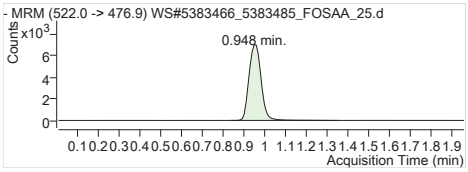



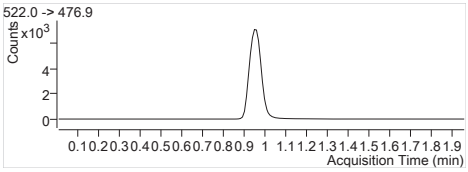

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: CC



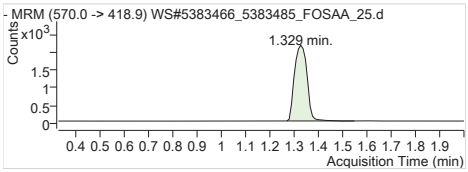



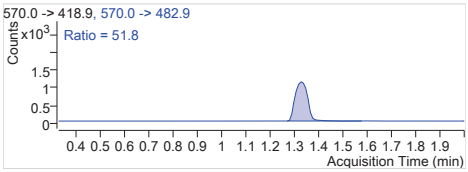

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: CC



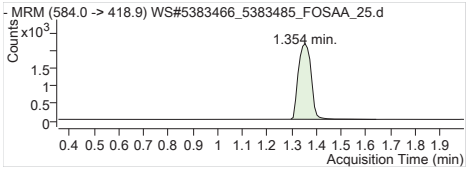



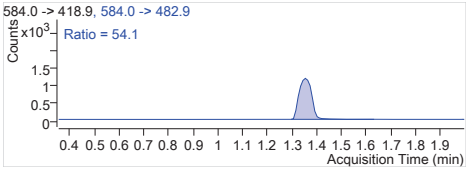

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.948 (0.958)
Concentration: 1 µg/L
Sample type: CC



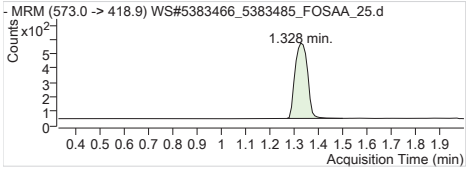



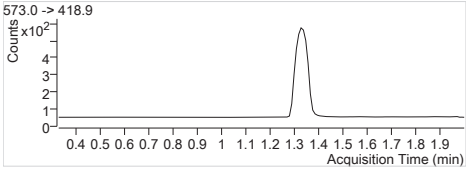

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 11.44 µg/L
Area ratio: 4.13220
Sample type: CC



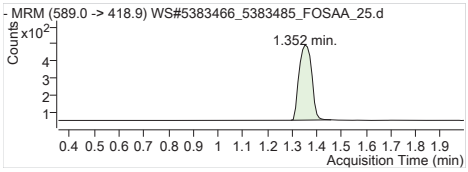



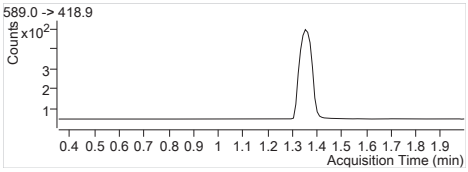

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 11.53 µg/L
Area ratio: 4.85451
Sample type: CC



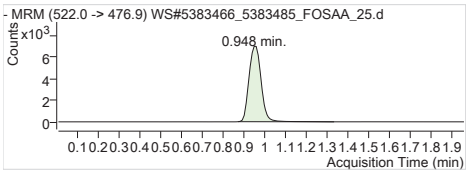



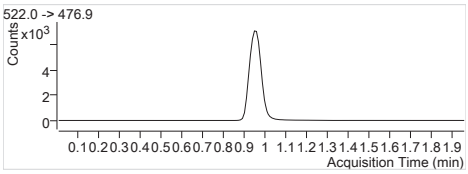

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 100.84 µg/L
Area ratio: 0.06624
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 98.20 µg/L |
| Area ratio: | 0.05558 |
| Sample type: | CC |



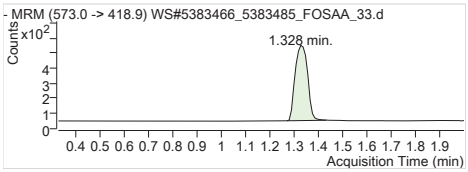

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.948 (0.958) |
| Calc. conc. | 99.80 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

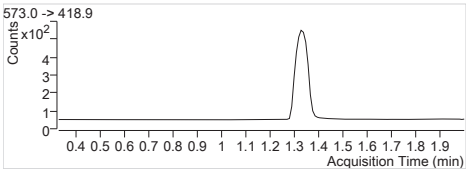
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_33.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/06 1:42:50 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

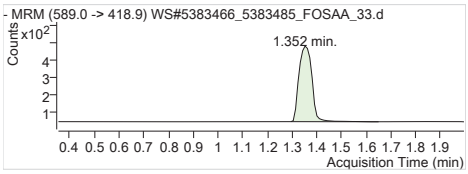
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1776 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1575 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 28229 | 0.96 | 1 µg/L | | |

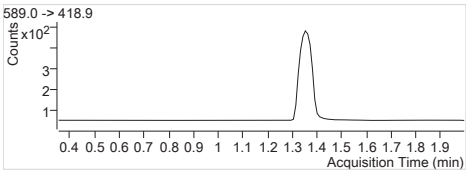
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 7618 | 1.33 | 12.50 | 11.87 µg/L | 94.96 |
| EtFOSAA 1 | 7636 | 1.35 | 12.50 | 11.52 µg/L | 92.13 |
| D3-MeFOSAA | 1776 | 1.33 | 100.00 | 95.77 µg/L | 95.77 |
| D5-EtFOSAA | 1575 | 1.35 | 100.00 | 98.58 µg/L | 98.58 |
| 13C9-PFDA | 28351 | 0.96 | 100.00 | 100.57 µg/L | 100.57 |



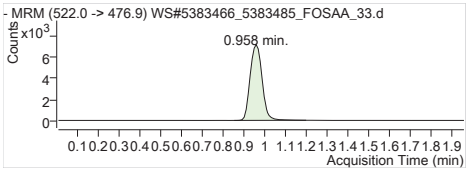



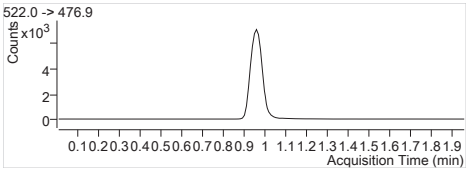

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: CC



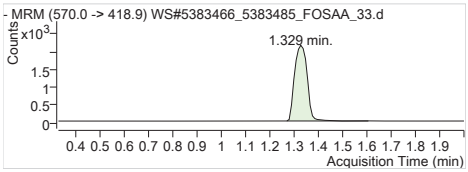



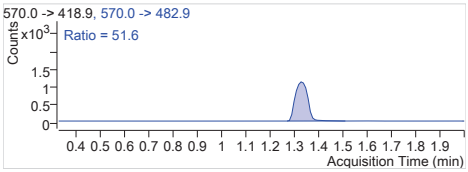

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: CC



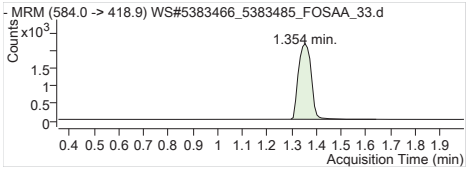



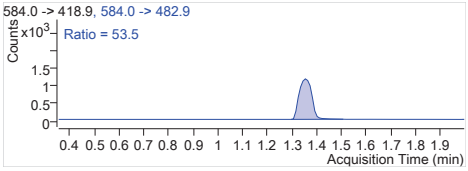

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.958 (0.958)
Concentration: 1 µg/L
Sample type: CC



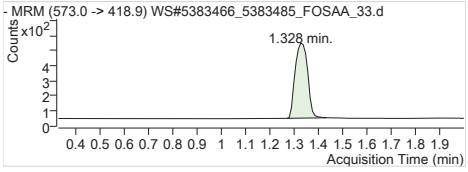



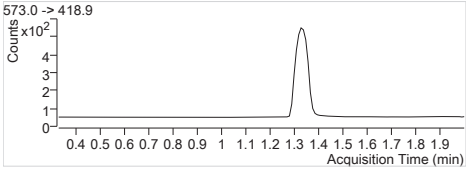

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 11.87 µg/L
Area ratio: 4.28941
Sample type: CC



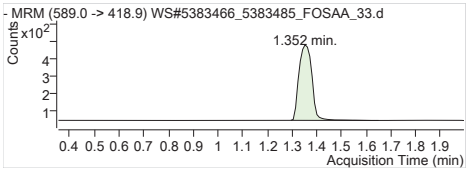



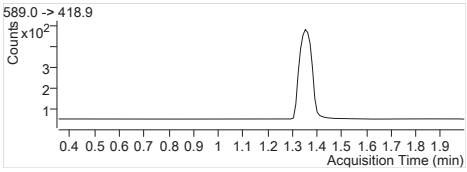

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 11.52 µg/L
Area ratio: 4.84825
Sample type: CC



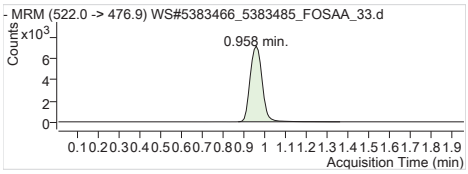



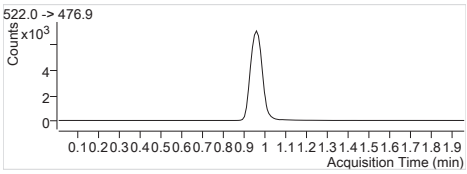

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 95.77 µg/L
Area ratio: 0.06291
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 98.58 µg/L |
| Area ratio: | 0.05579 |
| Sample type: | CC |



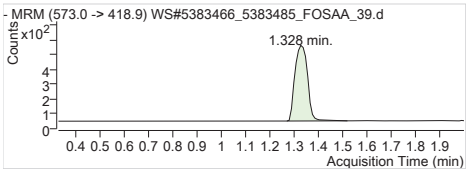

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.958 (0.958) |
| Calc. conc. | 100.57 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

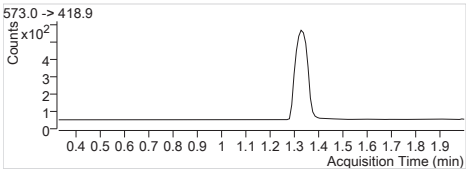
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_39.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/06 2:52:44 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

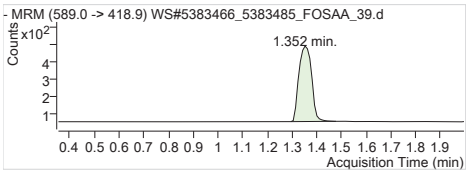
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1857 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1565 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 28622 | 0.95 | 1 µg/L | | |

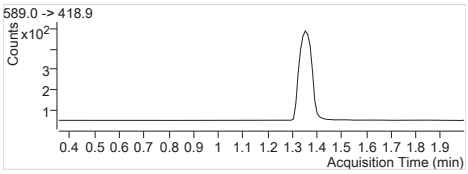
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 7748 | 1.33 | 12.50 | 11.55 µg/L | 92.38 |
| EtFOSAA 1 | 7645 | 1.35 | 12.50 | 11.60 µg/L | 92.82 |
| D3-MeFOSAA | 1857 | 1.33 | 100.00 | 98.77 µg/L | 98.77 |
| D5-EtFOSAA | 1565 | 1.35 | 100.00 | 96.61 µg/L | 96.61 |
| 13C9-PFDA | 28872 | 0.95 | 100.00 | 102.42 µg/L | 102.42 |



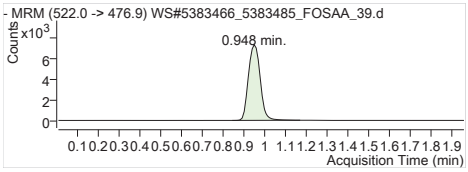



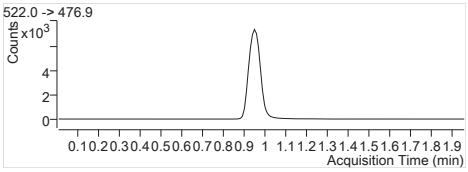

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: CC



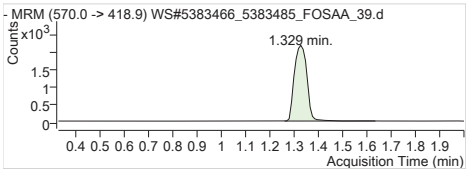



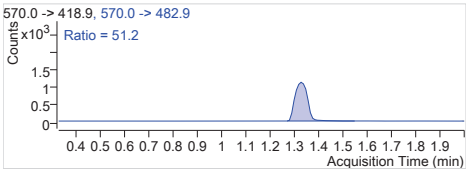

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: CC



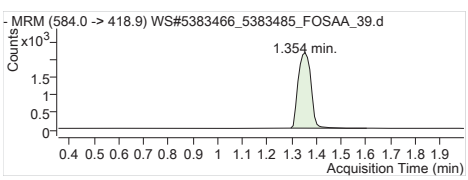



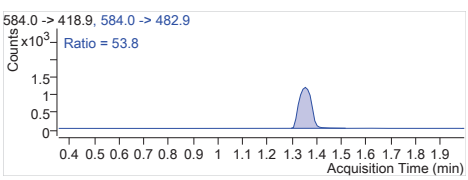

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.948 (0.958)
Concentration: 1 µg/L
Sample type: CC



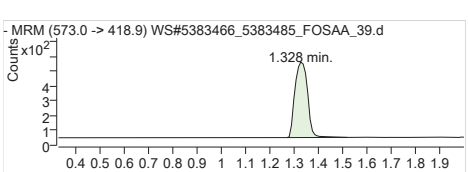



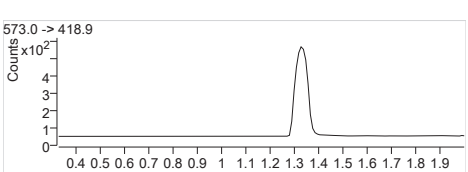

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 11.55 µg/L
Area ratio: 4.17232
Sample type: CC



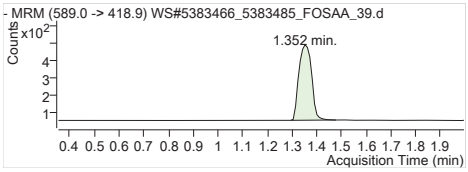



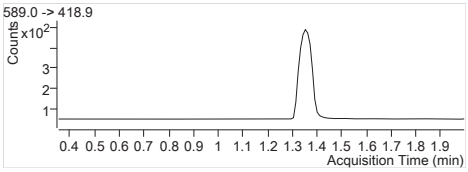

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 11.60 µg/L
Area ratio: 4.88498
Sample type: CC



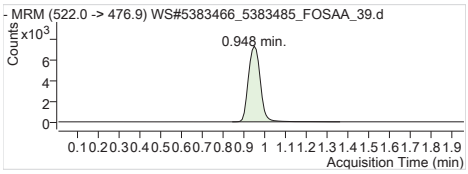



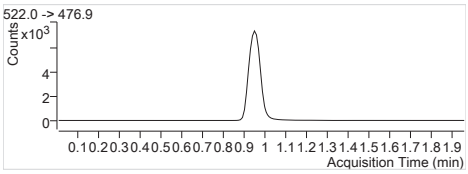

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 98.77 µg/L
Area ratio: 0.06488
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 96.61 µg/L |
| Area ratio: | 0.05468 |
| Sample type: | CC |



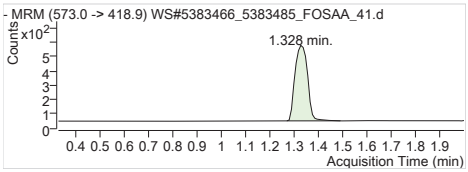

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.948 (0.958) |
| Calc. conc. | 102.42 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

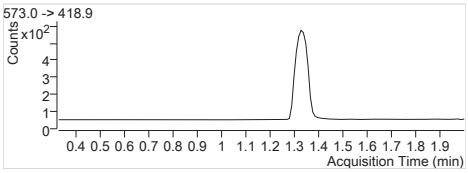
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_41.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/06 2:57:34 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

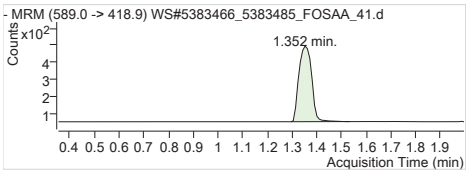
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1885 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1595 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 29001 | 0.95 | 1 µg/L | | |

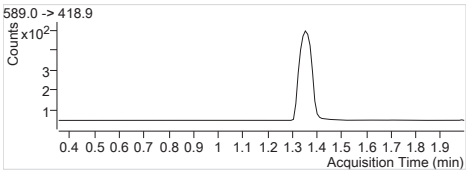
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 7711 | 1.33 | 12.50 | 11.32 µg/L | 90.58 |
| EtFOSAA 1 | 7693 | 1.35 | 12.50 | 11.46 µg/L | 91.66 |
| D3-MeFOSAA | 1885 | 1.33 | 100.00 | 98.95 µg/L | 98.95 |
| D5-EtFOSAA | 1595 | 1.35 | 100.00 | 97.18 µg/L | 97.18 |
| 13C9-PFDA | 29023 | 0.95 | 100.00 | 102.95 µg/L | 102.95 |



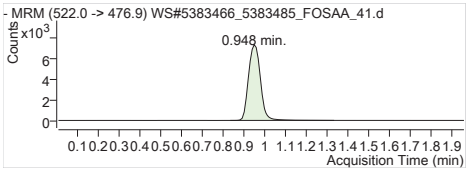



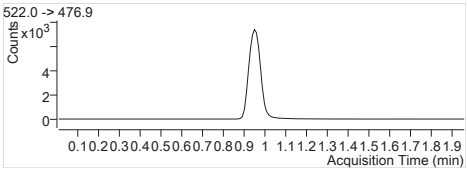

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: CC



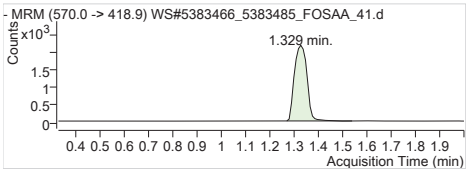



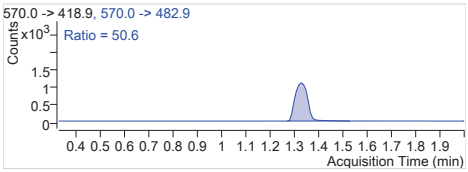

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: CC



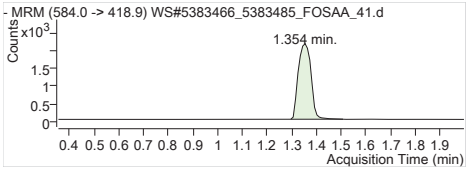



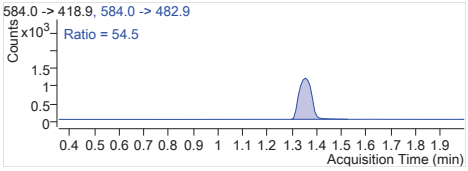

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.948 (0.958)
Concentration: 1 µg/L
Sample type: CC



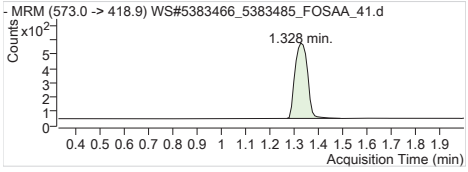



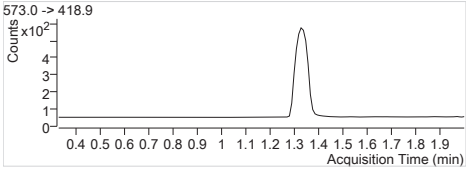

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 11.32 µg/L
Area ratio: 4.09072
Sample type: CC



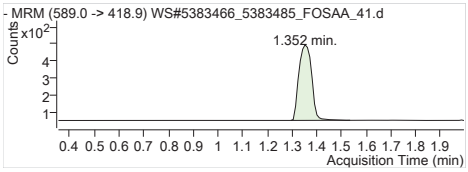



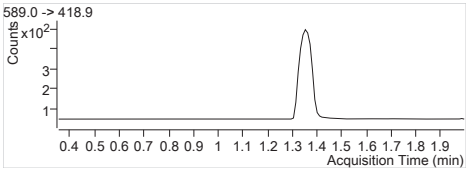

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 11.46 µg/L
Area ratio: 4.82320
Sample type: CC



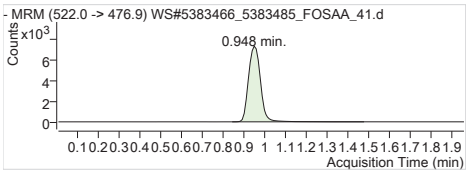



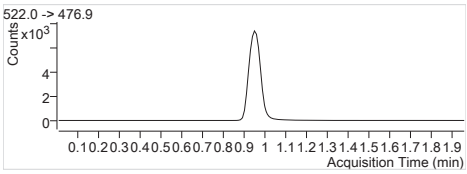

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 98.95 µg/L
Area ratio: 0.06500
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 97.18 µg/L |
| Area ratio: | 0.05500 |
| Sample type: | CC |



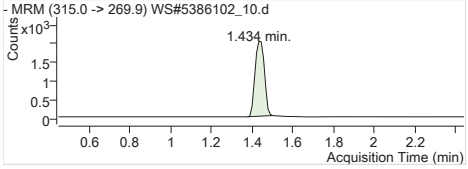

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.948 (0.958) |
| Calc. conc. | 102.95 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

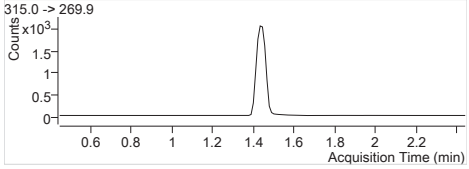
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-C8 |
| **Acq. Date** | 2018/02/08 3:51:17 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

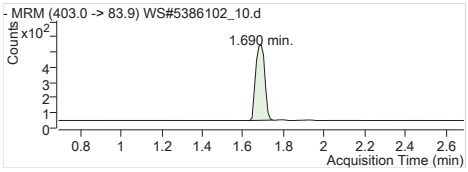
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6401 | 1.43 | 1 µg/L | | |
| MPFHxS | 1558 | 1.69 | 1 µg/L | | |
| MPFHpA | 7910 | 1.70 | 1 µg/L | | |
| MPFOA | 8320 | 1.88 | 1 µg/L | | |
| MPFOS | 1920 | 1.98 | 1 µg/L | | |
| MPFNA | 8655 | 2.02 | 1 µg/L | | |
| MPFDA | 7196 | 2.14 | 1 µg/L | | |
| MPFUnA | 8481 | 2.23 | 1 µg/L | | |
| MPFDoA | 11855 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12712 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 32150 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 41525 | 2.13 | 1 µg/L | | |

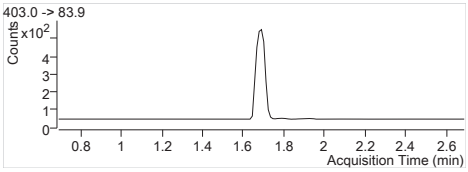
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 513 | 1.09 | 0.83 | 0.84 µg/L | 100.66 |
| PFHxA 1 | 1900 | 1.43 | 0.83 | 0.82 µg/L | 98.85 |
| PFHxS 1 | 472 | 1.69 | 0.83 | 0.68 µg/L | 82.01 |
| PFHpA 1 | 2414 | 1.70 | 0.83 | 0.84 µg/L | 100.86 |
| PFOA 1 | 2863 | 1.88 | 0.83 | 0.94 µg/L | 113.70 |
| PFOS 1 | 593 | 1.98 | 0.83 | 0.94 µg/L | 113.82 |
| PFNA 1 | 2412 | 2.03 | 0.83 | 0.81 µg/L | 97.61 |
| PFDA 1 | 2787 | 2.14 | 0.83 | 0.79 µg/L | 95.10 |
| PFUnA 1 | 2888 | 2.23 | 0.83 | 0.84 µg/L | 100.98 |
| PFDoA 1 | 3466 | 2.32 | 0.83 | 0.78 µg/L | 93.61 |
| PFTrDA 1 | 4415 | 2.40 | 0.83 | 0.93 µg/L | 112.20 |
| PFTeDA 1 | 3792 | 2.47 | 0.83 | 0.90 µg/L | 108.78 |
| 13C2-PFHxA | 6401 | 1.43 | 100.00 | 102.45 µg/L | 102.45 |
| 18O2-PFHxS | 1558 | 1.69 | 100.00 | 97.47 µg/L | 97.47 |
| 13C4-PFHpA | 7910 | 1.70 | 100.00 | 96.68 µg/L | 96.68 |
| 13C4-PFOA | 8320 | 1.88 | 100.00 | 96.39 µg/L | 96.39 |
| 13C4-PFOS | 1920 | 1.98 | 100.00 | 98.63 µg/L | 98.63 |
| 13C5-PFNA | 8656 | 2.02 | 100.00 | 100.48 µg/L | 100.48 |
| 13C2-PFDA | 6981 | 2.14 | 100.00 | 98.77 µg/L | 98.77 |
| 13C2-PFUnA | 8481 | 2.23 | 100.00 | 101.19 µg/L | 101.19 |
| 13C2-PFDoA | 11855 | 2.32 | 100.00 | 101.88 µg/L | 101.88 |
| 13C2-PFTeDA | 13021 | 2.47 | 100.00 | 98.10 µg/L | 98.10 |
| 13C6-PFHxA | 32150 | 1.43 | 100.00 | 101.35 µg/L | 101.35 |
| 13C9-PFDA | 41525 | 2.13 | 100.00 | 102.39 µg/L | 102.39 |



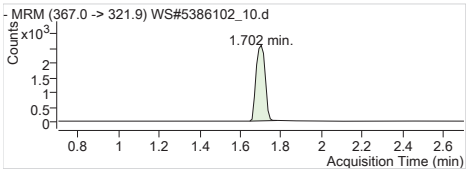



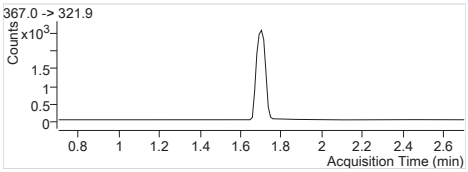

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.445)
Concentration: 1 µg/L
Sample type: CC



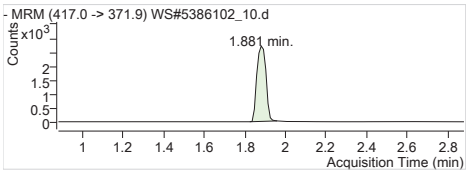



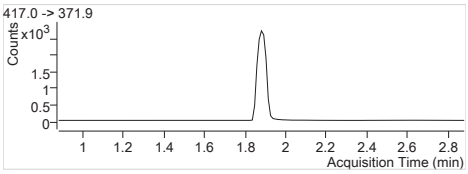

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: CC



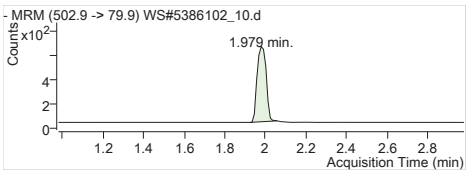



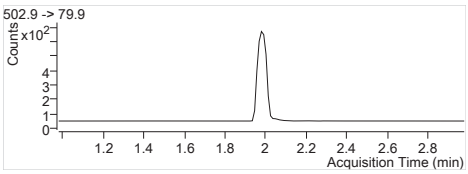

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: CC



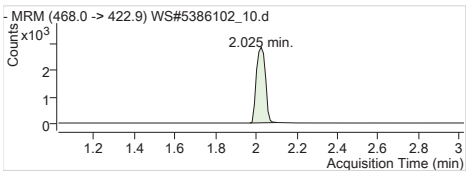



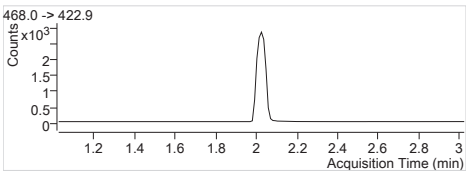

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



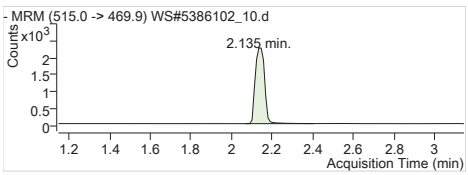



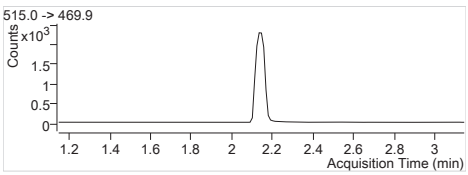

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



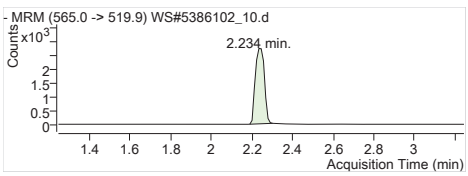



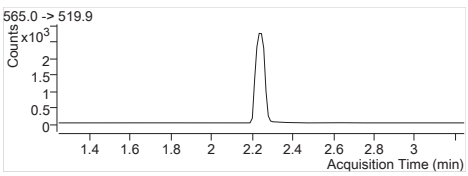

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: CC



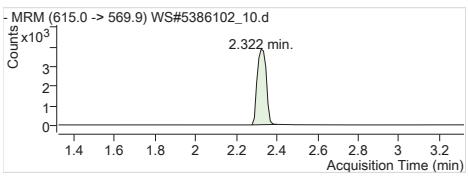



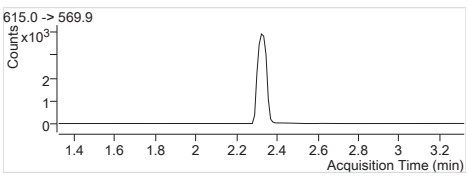

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: CC



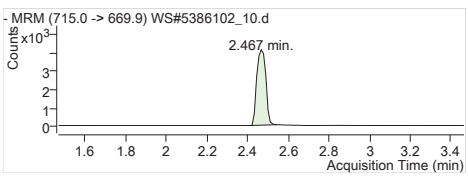



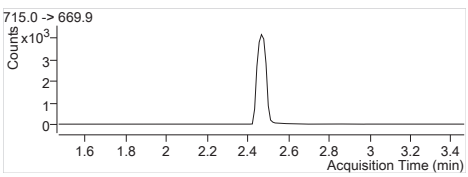

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.245)
Concentration: 1 µg/L
Sample type: CC



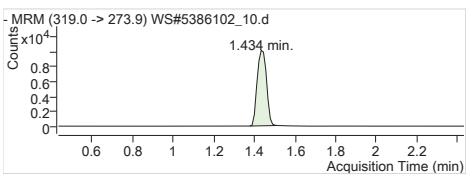



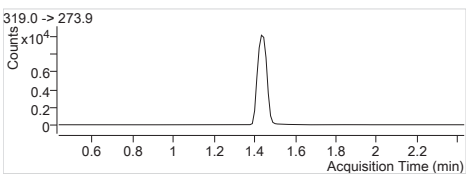

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



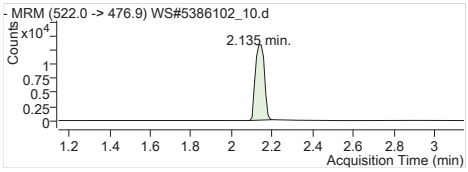



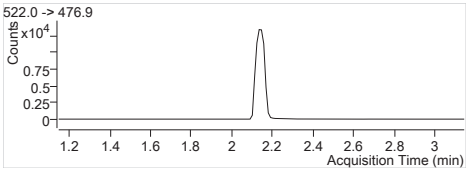

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



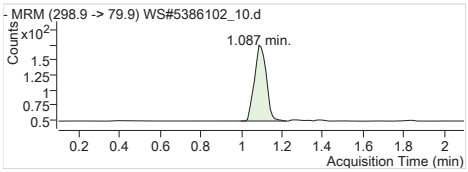



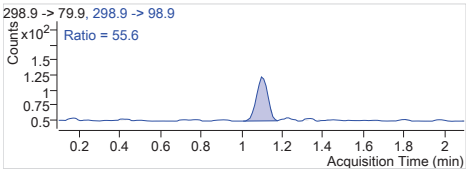

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



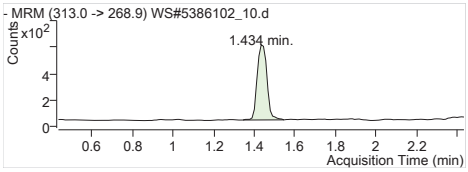



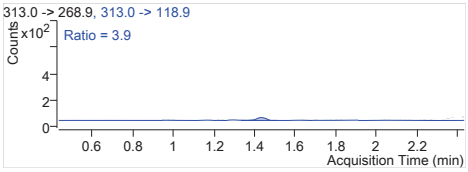

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: CC



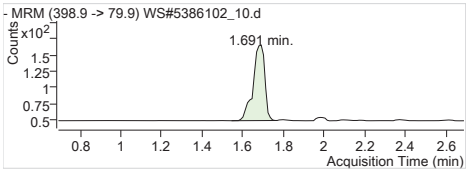



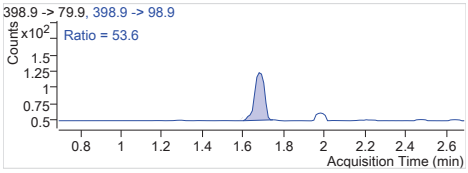

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.098)
Calc. conc. 0.84 µg/L
Area ratio: 0.32927
Sample type: CC



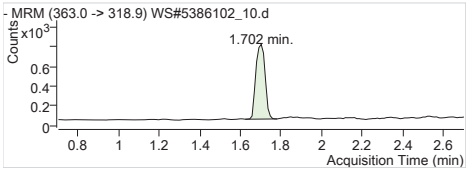



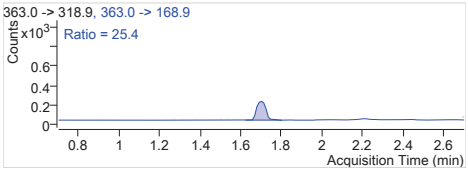

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 0.82 µg/L
Area ratio: 0.29683
Sample type: CC



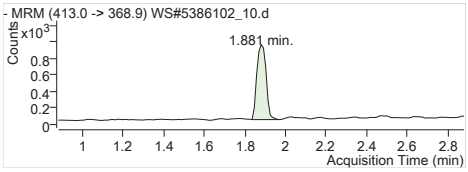



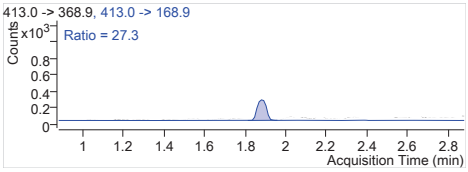

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.68 µg/L
Area ratio: 0.30295
Sample type: CC



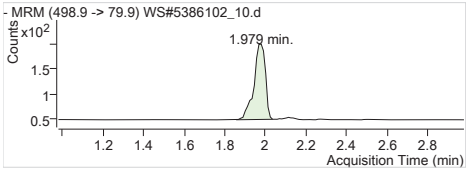



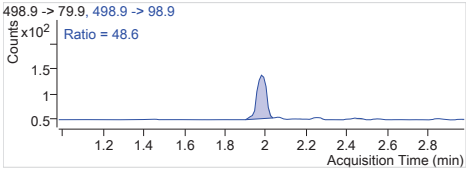

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 0.84 µg/L
Area ratio: 0.30518
Sample type: CC



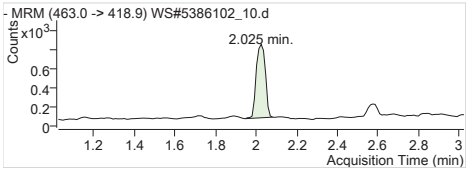



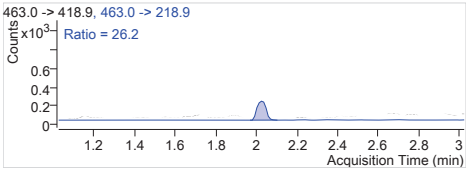

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 0.94 µg/L
Area ratio: 0.34411
Sample type: CC



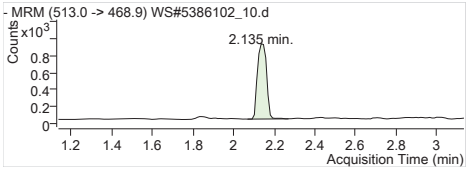



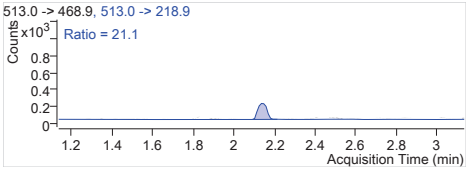

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 0.94 µg/L
Area ratio: 0.30885
Sample type: CC



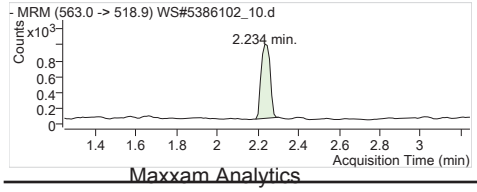



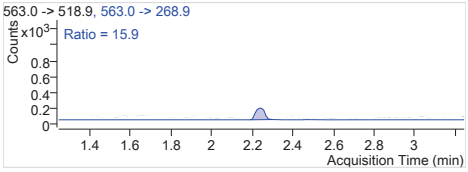

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 0.81 µg/L
Area ratio: 0.27868
Sample type: CC



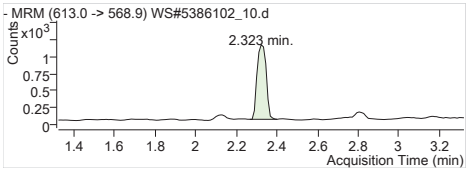



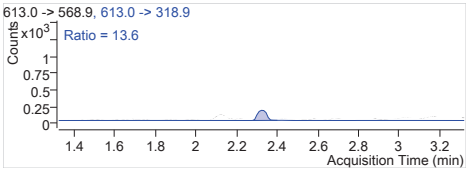

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 0.79 µg/L
Area ratio: 0.38730
Sample type: CC



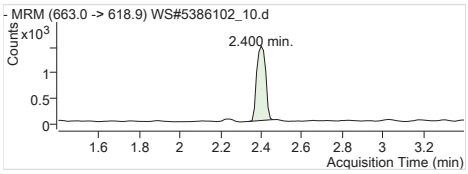



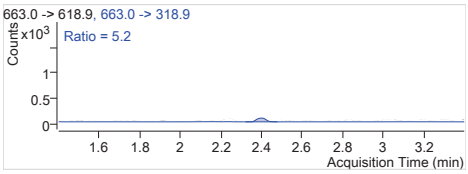

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.246)
Calc. conc. 0.84 µg/L
Area ratio: 0.34053
Sample type: CC



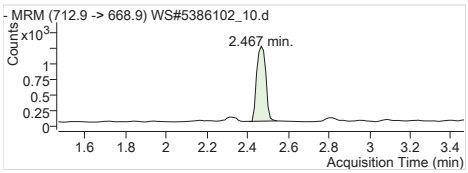



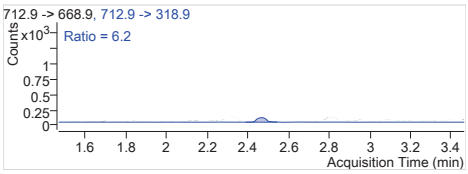

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.78 µg/L
Area ratio: 0.29237
Sample type: CC



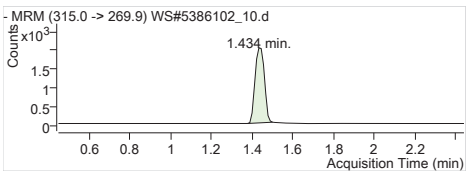



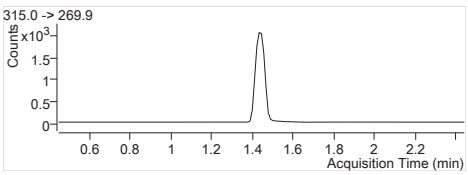

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.93 µg/L
Area ratio: 0.34731
Sample type: CC



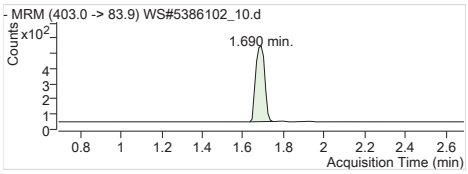



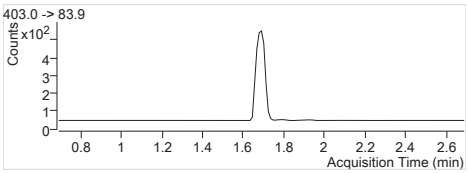

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 0.90 µg/L
Area ratio: 0.29830
Sample type: CC



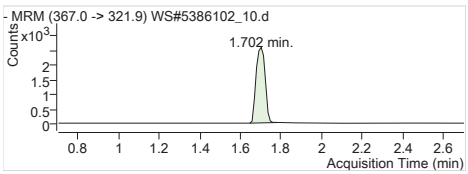



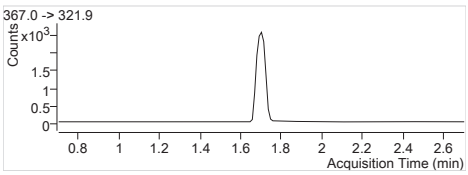

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 102.45 µg/L
Area ratio: 0.19910
Sample type: CC



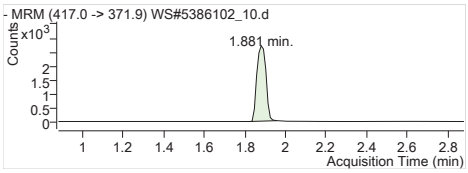



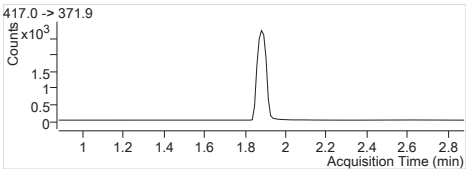

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 97.47 µg/L
Area ratio: 0.04846
Sample type: CC



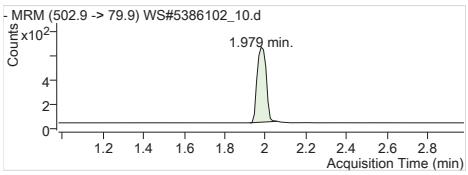



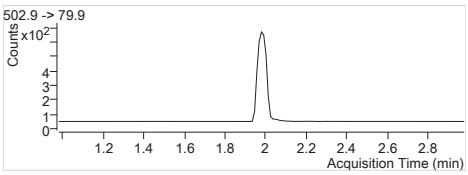

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 96.68 µg/L
Area ratio: 0.24603
Sample type: CC



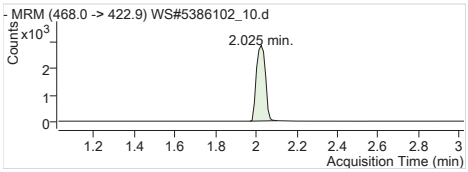



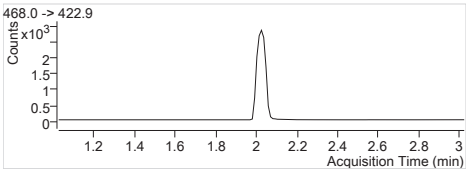

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 96.39 µg/L
Area ratio: 0.25879
Sample type: CC



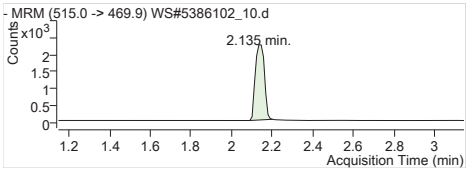



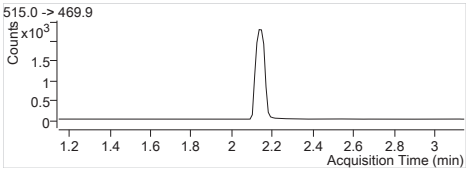

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 98.63 µg/L
Area ratio: 0.05972
Sample type: CC



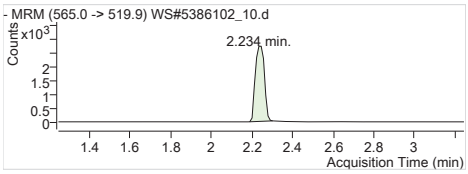



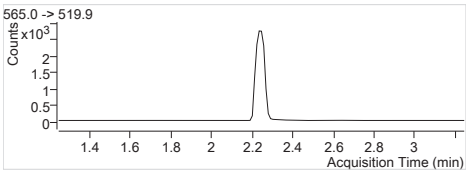

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 100.48 µg/L
Area ratio: 0.26924
Sample type: CC



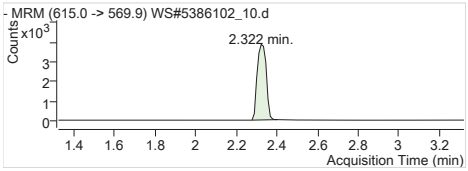



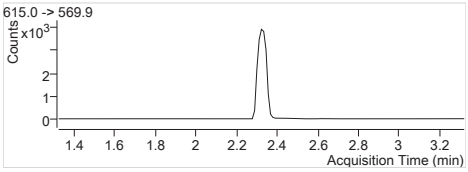

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 98.77 µg/L
Area ratio: 0.16812
Sample type: CC



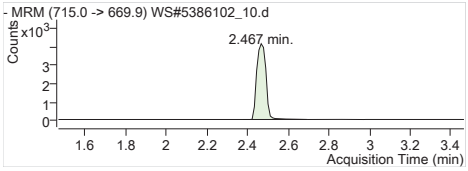



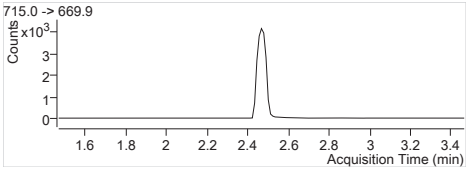

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.245)
Calc. conc. 101.19 µg/L
Area ratio: 0.20424
Sample type: CC



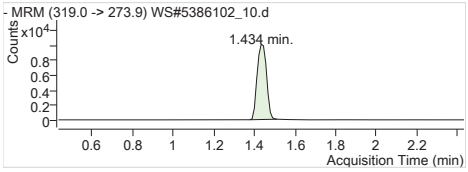



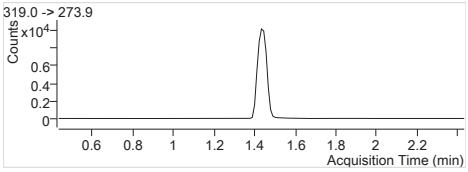

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 101.88 µg/L
Area ratio: 0.28549
Sample type: CC



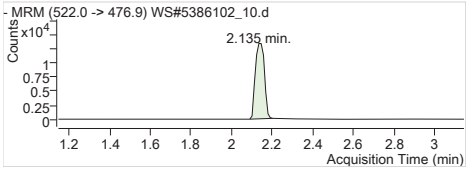



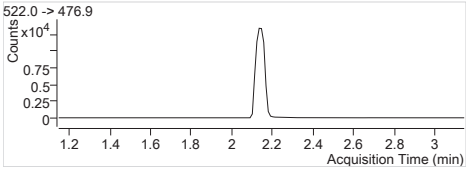

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 98.10 µg/L
Area ratio: 0.31357
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 101.35 µg/L
Area ratio: 0
Sample type: CC



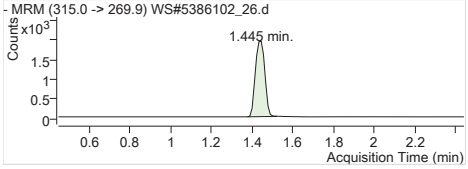

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 102.39 µg/L
Area ratio: 0
Sample type: CC

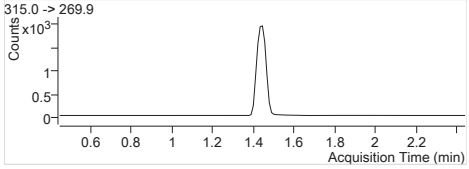
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_26.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D2 |
| **Acq. Date** | 2018/02/08 5:10:13 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

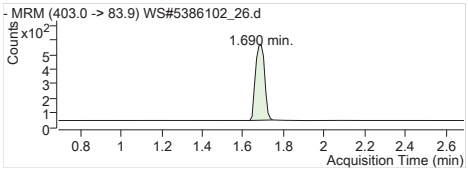
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6212 | 1.44 | 1 µg/L | | |
| MPFHxS | 1630 | 1.69 | 1 µg/L | | |
| MPFHpA | 8094 | 1.70 | 1 µg/L | | |
| MPFOA | 8918 | 1.88 | 1 µg/L | | |
| MPFOS | 1863 | 1.98 | 1 µg/L | | |
| MPFNA | 8635 | 2.02 | 1 µg/L | | |
| MPFDA | 7264 | 2.15 | 1 µg/L | | |
| MPFUnA | 8228 | 2.25 | 1 µg/L | | |
| MPFDoA | 10776 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12927 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 33413 | 1.44 | 1 µg/L | | |
| 13C9-PFDA IS | 42329 | 2.15 | 1 µg/L | | |

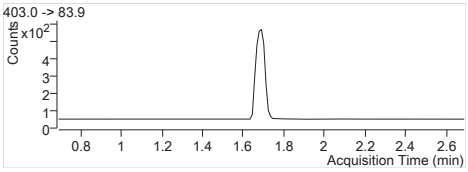
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 8588 | 1.10 | 12.50 | 12.45 µg/L | 99.58 |
| PFHxA 1 | 30130 | 1.45 | 12.50 | 11.99 µg/L | 95.94 |
| PFHxS 1 | 8023 | 1.68 | 12.50 | 11.86 µg/L | 94.85 |
| PFHpA 1 | 38378 | 1.70 | 12.50 | 12.00 µg/L | 95.97 |
| PFOA 1 | 42614 | 1.88 | 12.50 | 11.51 µg/L | 92.10 |
| PFOS 1 | 8167 | 1.98 | 12.50 | 11.97 µg/L | 95.77 |
| PFNA 1 | 37896 | 2.03 | 12.50 | 12.04 µg/L | 96.31 |
| PFDA 1 | 40871 | 2.15 | 12.50 | 11.62 µg/L | 92.98 |
| PFUnA 1 | 44297 | 2.25 | 12.50 | 11.54 µg/L | 92.33 |
| PFDoA 1 | 57343 | 2.32 | 12.50 | 12.82 µg/L | 102.57 |
| PFTrDA 1 | 63954 | 2.40 | 12.50 | 12.02 µg/L | 96.14 |
| PFTeDA 1 | 55279 | 2.47 | 12.50 | 12.28 µg/L | 98.23 |
| 13C2-PFHxA | 6212 | 1.44 | 100.00 | 95.67 µg/L | 95.67 |
| 18O2-PFHxS | 1630 | 1.69 | 100.00 | 98.12 µg/L | 98.12 |
| 13C4-PFHpA | 8094 | 1.70 | 100.00 | 95.19 µg/L | 95.19 |
| 13C4-PFOA | 8918 | 1.88 | 100.00 | 99.42 µg/L | 99.42 |
| 13C4-PFOS | 1863 | 1.98 | 100.00 | 92.09 µg/L | 92.09 |
| 13C5-PFNA | 8635 | 2.02 | 100.00 | 96.45 µg/L | 96.45 |
| 13C2-PFDA | 7108 | 2.15 | 100.00 | 98.66 µg/L | 98.66 |
| 13C2-PFUnA | 8228 | 2.25 | 100.00 | 96.30 µg/L | 96.30 |
| 13C2-PFDoA | 10776 | 2.32 | 100.00 | 90.85 µg/L | 90.85 |
| 13C2-PFTeDA | 13120 | 2.47 | 100.00 | 96.97 µg/L | 96.97 |
| 13C6-PFHxA | 33413 | 1.44 | 100.00 | 105.33 µg/L | 105.33 |
| 13C9-PFDA | 42329 | 2.15 | 100.00 | 104.37 µg/L | 104.37 |



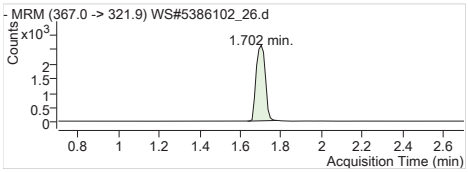



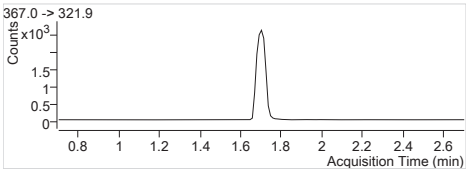

**MPFHxA** Internal Standard
RT (Exp. RT): 1.445 (1.445)
Concentration: 1 µg/L
Sample type: CC



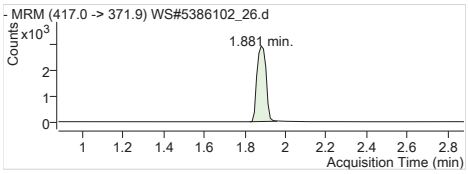



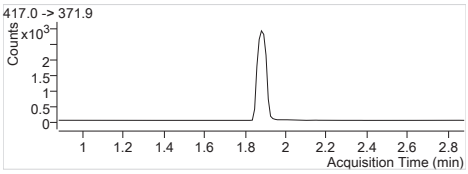

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: CC



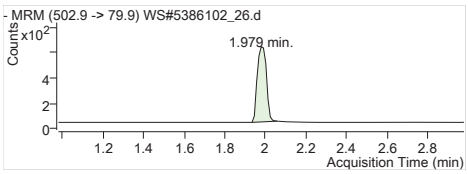



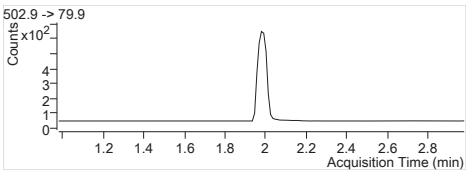

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: CC



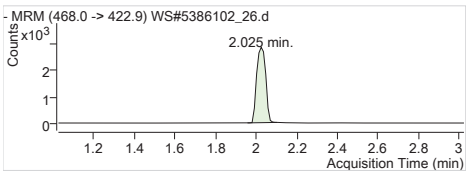



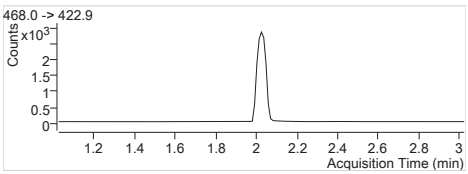

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



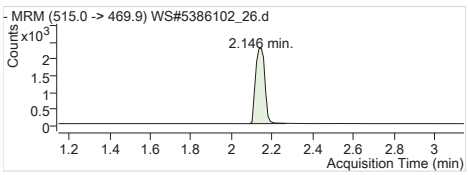



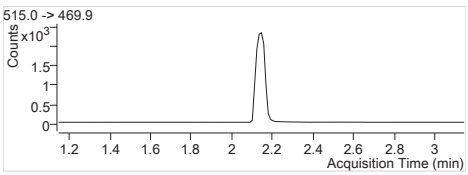

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



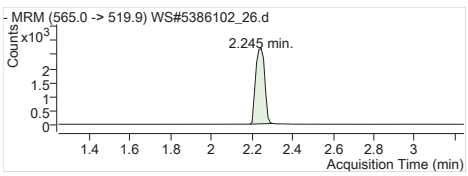



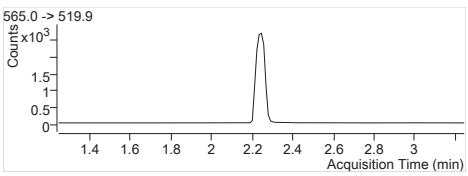

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: CC



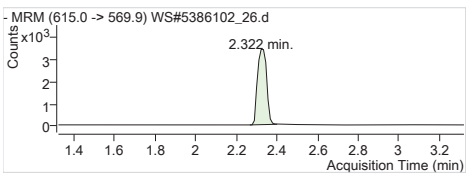



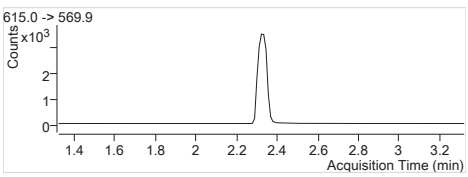

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



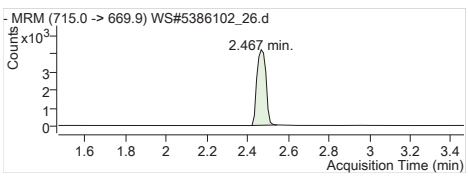



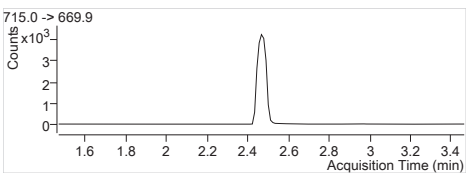

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: CC



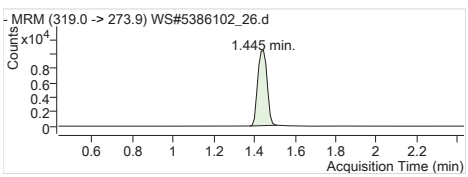



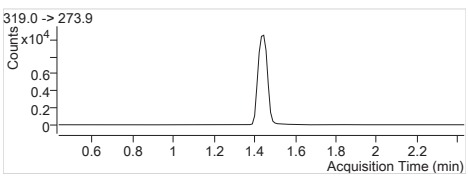

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



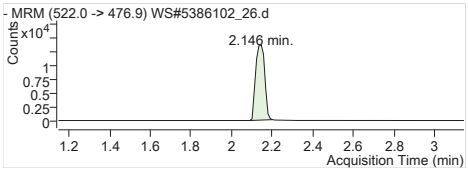



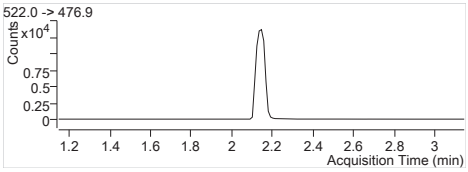

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



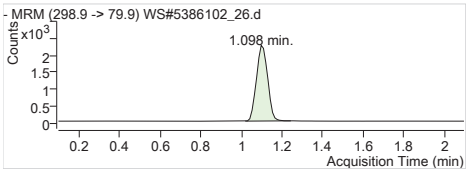



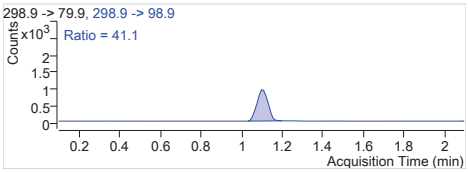

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.445 (1.434)
Concentration: 1 µg/L
Sample type: CC



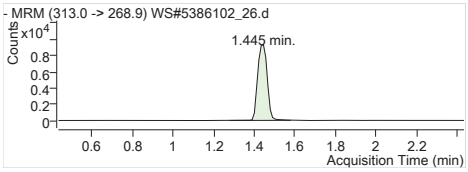



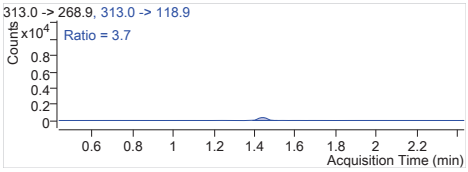

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



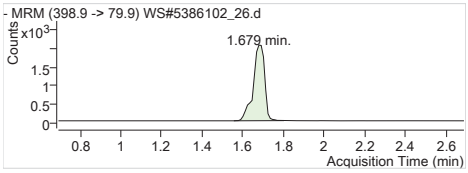



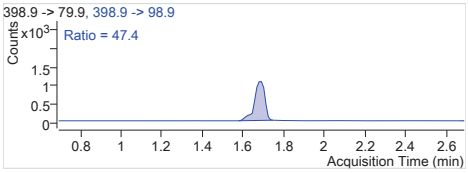

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.098 (1.098)
Calc. conc. 12.45 µg/L
Area ratio: 5.26871
Sample type: CC



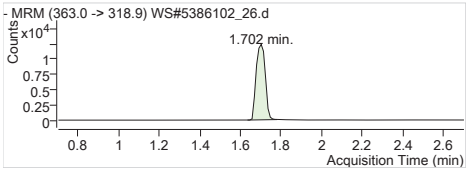



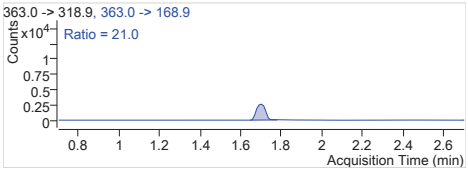

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.445 (1.434)
Calc. conc. 11.99 µg/L
Area ratio: 4.85029
Sample type: CC



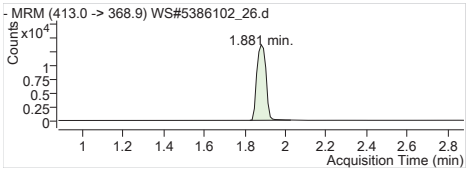



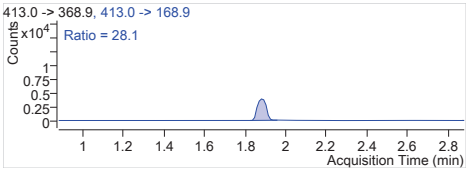

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.691)
Calc. conc. 11.86 µg/L
Area ratio: 4.92209
Sample type: CC



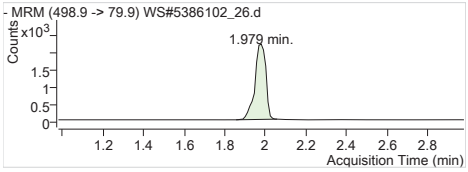



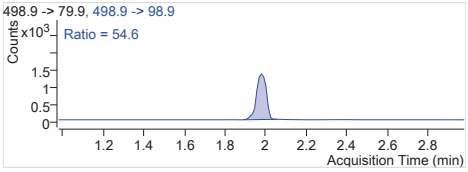

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 12.00 µg/L
Area ratio: 4.74154
Sample type: CC



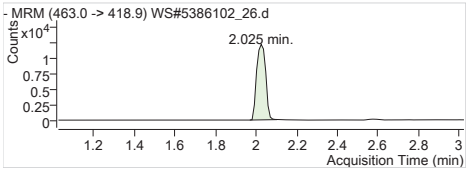



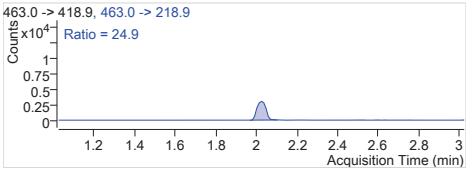

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 11.51 µg/L
Area ratio: 4.77843
Sample type: CC



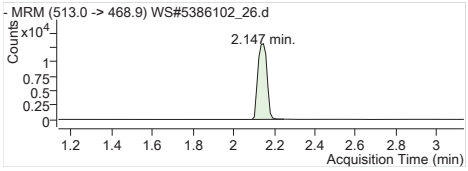



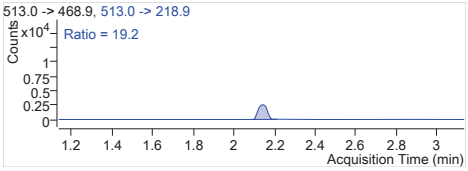

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 11.97 µg/L
Area ratio: 4.38379
Sample type: CC



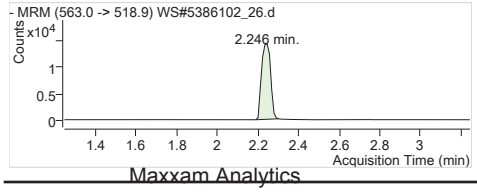



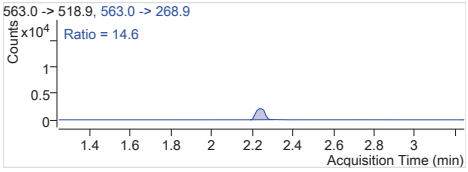

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 12.04 µg/L
Area ratio: 4.38865
Sample type: CC



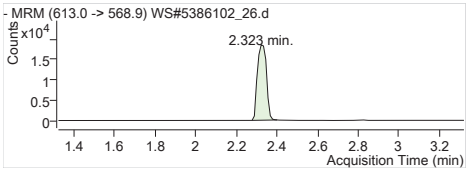



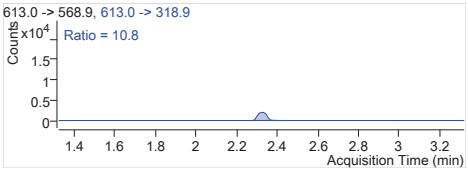

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.135)
Calc. conc. 11.62 µg/L
Area ratio: 5.62651
Sample type: CC



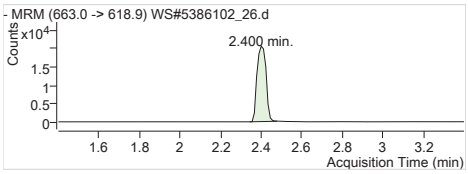



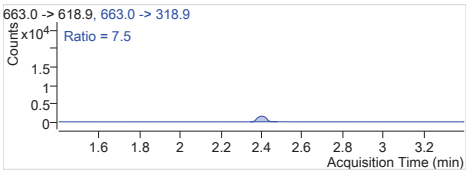

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 11.54 µg/L
Area ratio: 5.38369
Sample type: CC



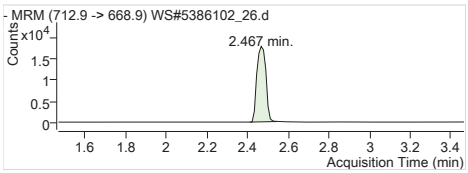



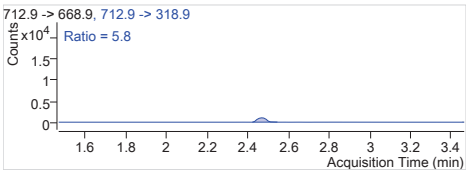

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 12.82 µg/L
Area ratio: 5.32136
Sample type: CC



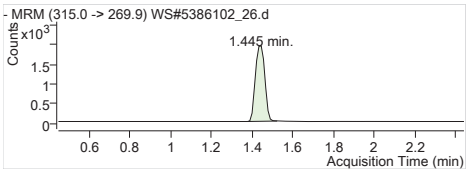



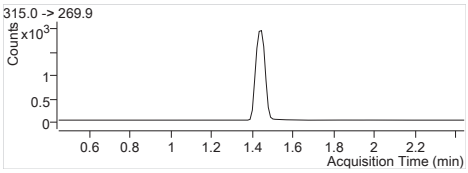

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 12.02 µg/L
Area ratio: 4.94732
Sample type: CC



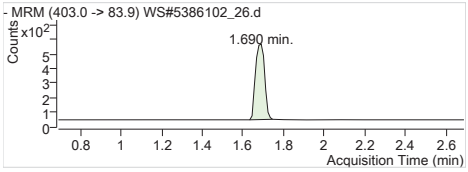



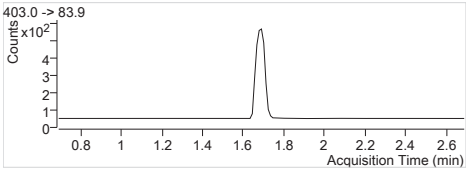

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 12.28 µg/L
Area ratio: 4.27624
Sample type: CC



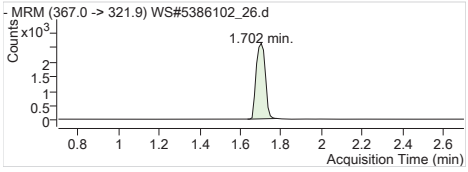



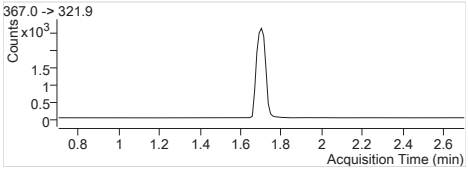

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.445 (1.445)
Calc. conc. 95.67 µg/L
Area ratio: 0.18592
Sample type: CC



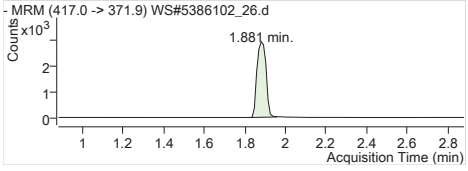



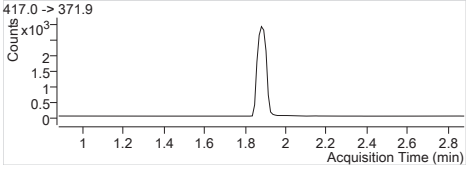

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 98.12 µg/L
Area ratio: 0.04878
Sample type: CC



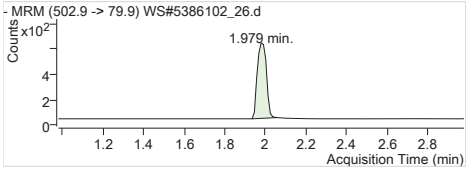



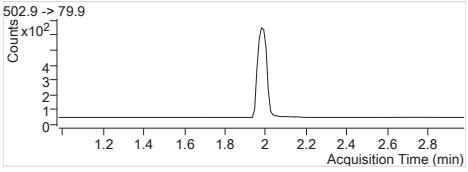

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 95.19 µg/L
Area ratio: 0.24224
Sample type: CC



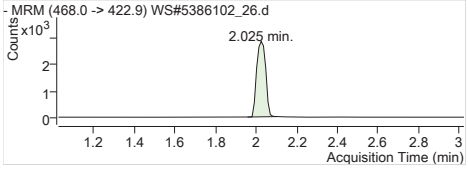



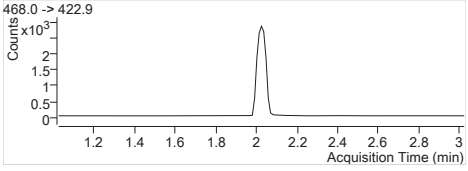

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 99.42 µg/L
Area ratio: 0.26690
Sample type: CC



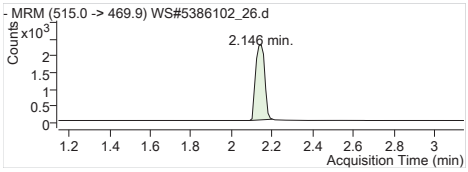



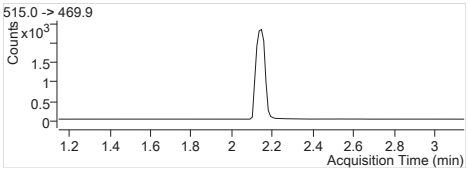

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 92.09 µg/L
Area ratio: 0.05576
Sample type: CC



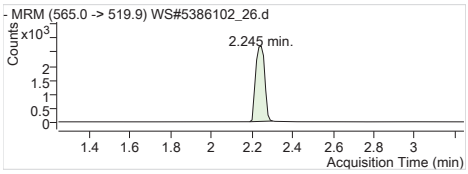



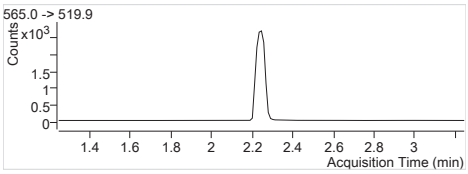

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 96.45 µg/L
Area ratio: 0.25843
Sample type: CC



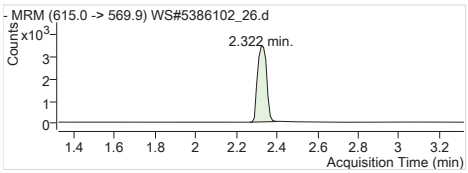



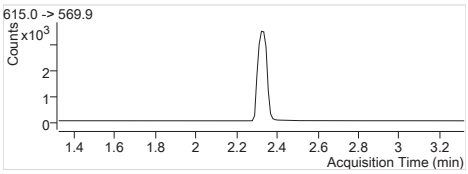

| | |
|---|---|
| **13C2-PFDA** | 515.0 -> 469.9 |
| RT (Exp. RT): | 2.146 (2.146) |
| Calc. conc. | 98.66 µg/L |
| Area ratio: | 0.16792 |
| Sample type: | CC |



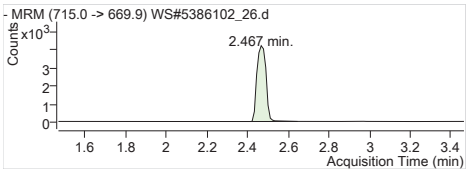



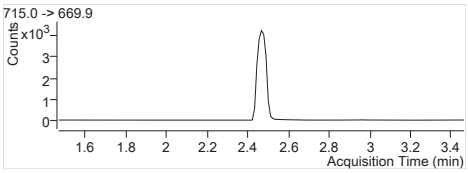

| | |
|---|---|
| **13C2-PFUnA** | 565.0 -> 519.9 |
| RT (Exp. RT): | 2.245 (2.245) |
| Calc. conc. | 96.30 µg/L |
| Area ratio: | 0.19438 |
| Sample type: | CC |



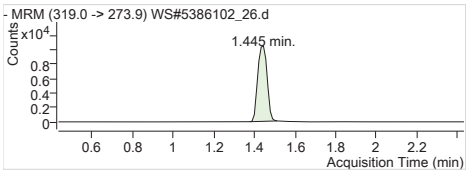



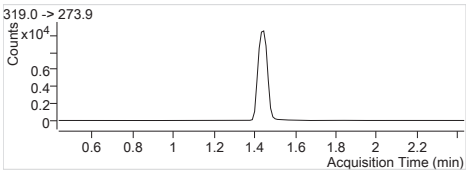

| | |
|---|---|
| **13C2-PFDoA** | 615.0 -> 569.9 |
| RT (Exp. RT): | 2.322 (2.322) |
| Calc. conc. | 90.85 µg/L |
| Area ratio: | 0.25458 |
| Sample type: | CC |



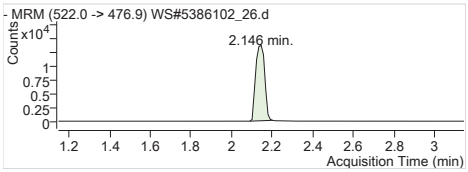



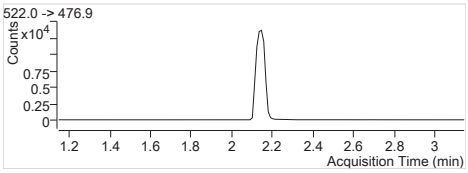

| | |
|---|---|
| **13C2-PFTeDA** | 715.0 -> 669.9 |
| RT (Exp. RT): | 2.467 (2.467) |
| Calc. conc. | 96.97 µg/L |
| Area ratio: | 0.30995 |
| Sample type: | CC |




| | |
|---|---|
| **13C6-PFHxA** | 319.0 -> 273.9 |
| RT (Exp. RT): | 1.445 (1.434) |
| Calc. conc. | 105.33 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |



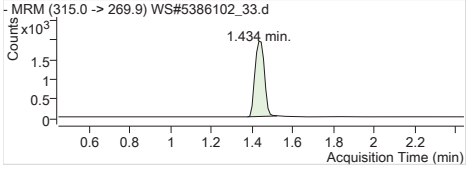

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 2.146 (2.146) |
| Calc. conc. | 104.37 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

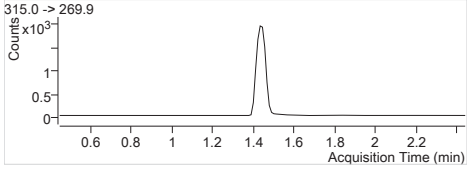
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_33.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D2 |
| **Acq. Date** | 2018/02/08 5:44:45 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

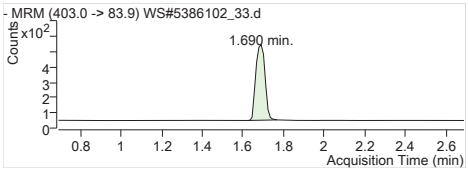
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6168 | 1.43 | 1 µg/L | | |
| MPFHxS | 1571 | 1.69 | 1 µg/L | | |
| MPFHpA | 8387 | 1.70 | 1 µg/L | | |
| MPFOA | 8961 | 1.88 | 1 µg/L | | |
| MPFOS | 1864 | 1.98 | 1 µg/L | | |
| MPFNA | 8761 | 2.02 | 1 µg/L | | |
| MPFDA | 6818 | 2.15 | 1 µg/L | | |
| MPFUnA | 8456 | 2.23 | 1 µg/L | | |
| MPFDoA | 11590 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12009 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 32937 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 44706 | 2.15 | 1 µg/L | | |

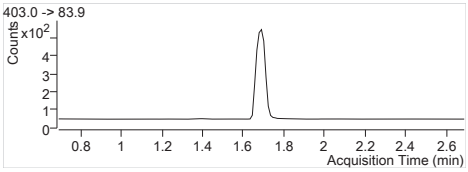
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 7701 | 1.10 | 12.50 | 11.58 µg/L | 92.68 |
| PFHxA 1 | 30556 | 1.43 | 12.50 | 12.25 µg/L | 97.97 |
| PFHxS 1 | 7973 | 1.68 | 12.50 | 12.23 µg/L | 97.81 |
| PFHpA 1 | 37171 | 1.70 | 12.50 | 11.22 µg/L | 89.74 |
| PFOA 1 | 41537 | 1.88 | 12.50 | 11.17 µg/L | 89.37 |
| PFOS 1 | 7884 | 1.98 | 12.50 | 11.55 µg/L | 92.43 |
| PFNA 1 | 38655 | 2.03 | 12.50 | 12.10 µg/L | 96.83 |
| PFDA 1 | 41735 | 2.14 | 12.50 | 12.65 µg/L | 101.17 |
| PFUnA 1 | 44591 | 2.23 | 12.50 | 11.31 µg/L | 90.45 |
| PFDoA 1 | 56589 | 2.32 | 12.50 | 11.77 µg/L | 94.16 |
| PFTrDA 1 | 60995 | 2.40 | 12.50 | 12.33 µg/L | 98.68 |
| PFTeDA 1 | 54366 | 2.47 | 12.50 | 13.00 µg/L | 103.97 |
| 13C2-PFHxA | 6168 | 1.43 | 100.00 | 96.37 µg/L | 96.37 |
| 18O2-PFHxS | 1571 | 1.69 | 100.00 | 95.93 µg/L | 95.93 |
| 13C4-PFHpA | 8387 | 1.70 | 100.00 | 100.06 µg/L | 100.06 |
| 13C4-PFOA | 8961 | 1.88 | 100.00 | 101.34 µg/L | 101.34 |
| 13C4-PFOS | 1864 | 1.98 | 100.00 | 93.47 µg/L | 93.47 |
| 13C5-PFNA | 8760 | 2.02 | 100.00 | 99.26 µg/L | 99.26 |
| 13C2-PFDA | 6675 | 2.15 | 100.00 | 87.72 µg/L | 87.72 |
| 13C2-PFUnA | 8456 | 2.23 | 100.00 | 93.71 µg/L | 93.71 |
| 13C2-PFDoA | 11590 | 2.32 | 100.00 | 92.52 µg/L | 92.52 |
| 13C2-PFTeDA | 12184 | 2.47 | 100.00 | 85.26 µg/L | 85.26 |
| 13C6-PFHxA | 32937 | 1.43 | 100.00 | 103.83 µg/L | 103.83 |
| 13C9-PFDA | 44706 | 2.15 | 100.00 | 110.24 µg/L | 110.24 |



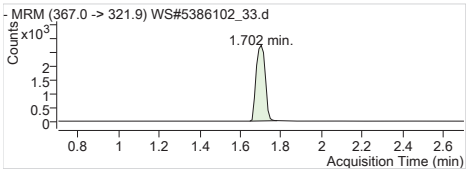



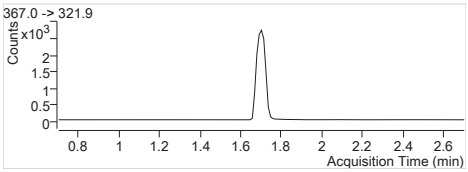

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.445)
Concentration: 1 µg/L
Sample type: CC



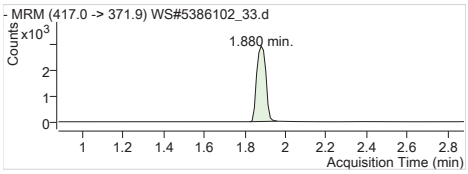



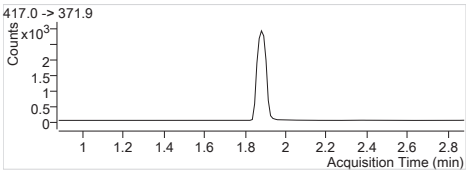

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: CC



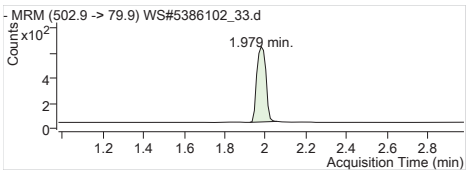



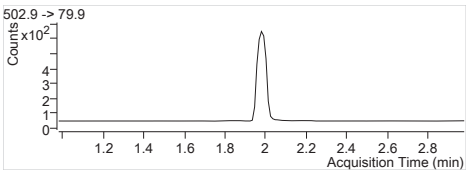

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: CC



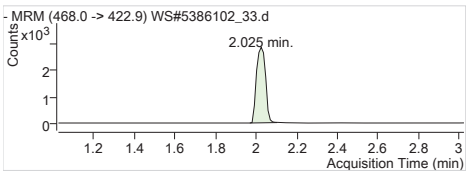



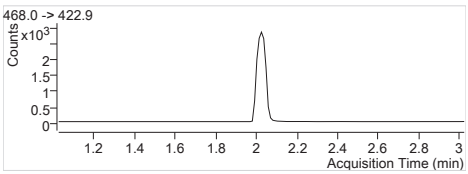

**MPFOA** Internal Standard
RT (Exp. RT): 1.880 (1.881)
Concentration: 1 µg/L
Sample type: CC



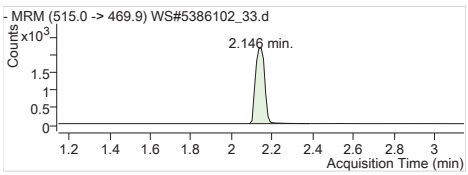



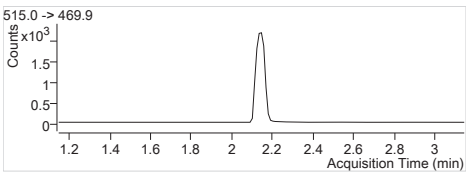

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



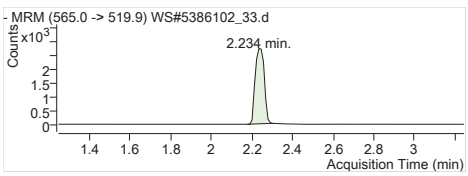



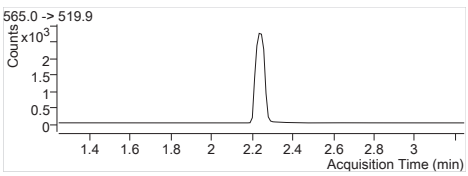

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: CC



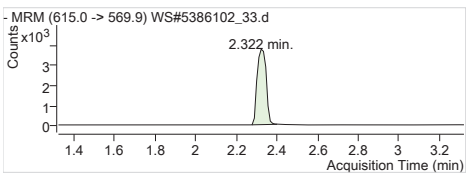



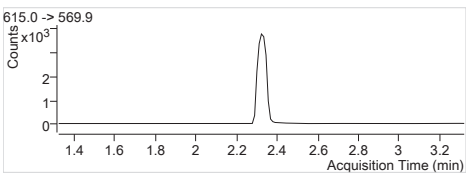

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



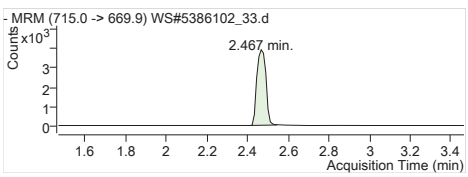



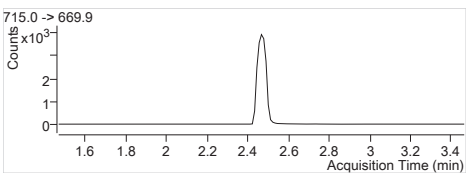

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.245)
Concentration: 1 µg/L
Sample type: CC



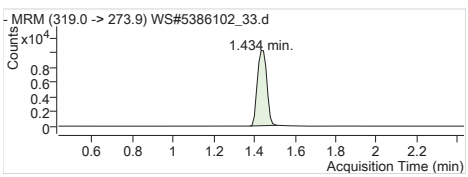



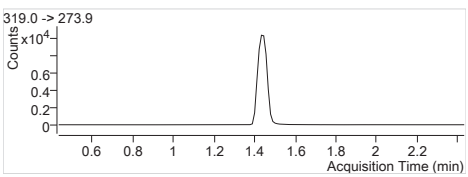

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



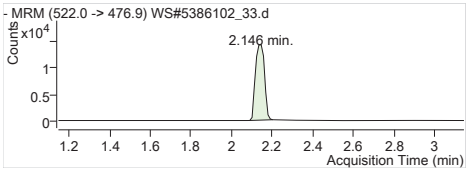



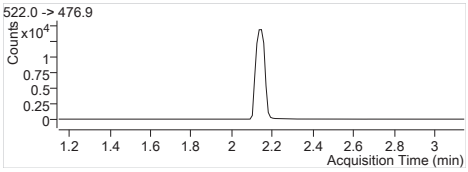

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



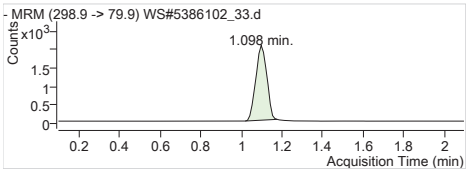



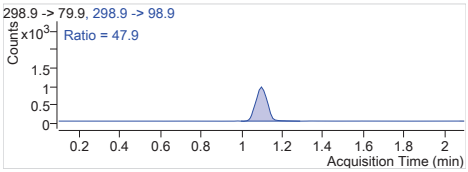

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



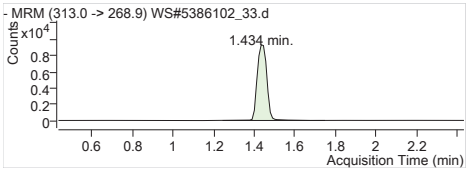



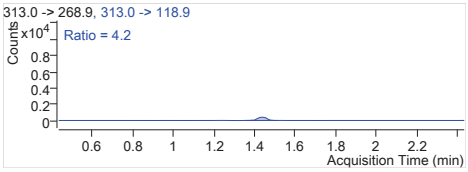

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



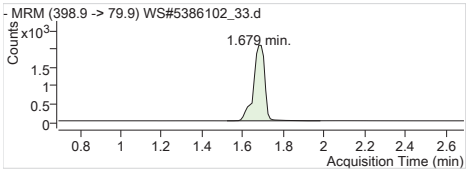



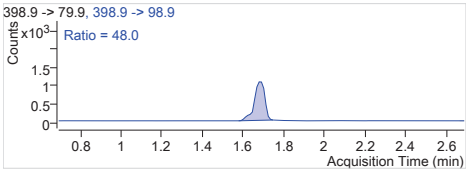

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.098 (1.098)
Calc. conc. 11.58 µg/L
Area ratio: 4.90197
Sample type: CC



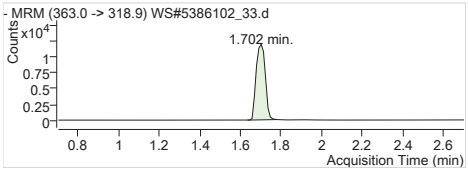



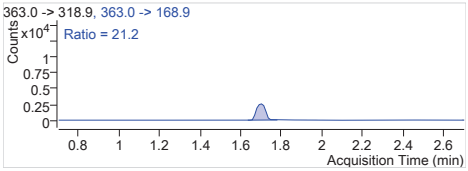

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 12.25 µg/L
Area ratio: 4.95396
Sample type: CC



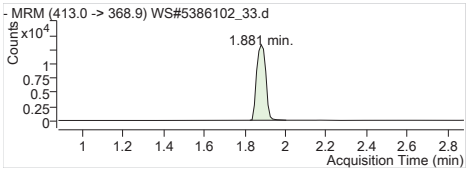



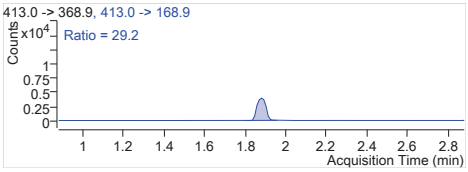

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.691)
Calc. conc. 12.23 µg/L
Area ratio: 5.07511
Sample type: CC



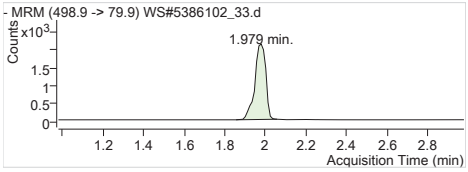



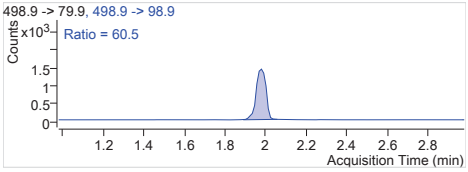

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 11.22 µg/L
Area ratio: 4.43198
Sample type: CC



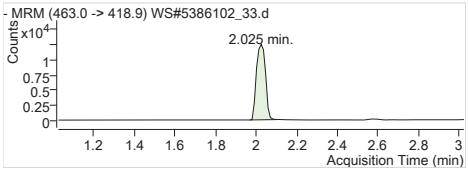



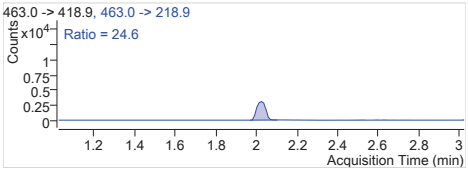

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 11.17 µg/L
Area ratio: 4.63531
Sample type: CC



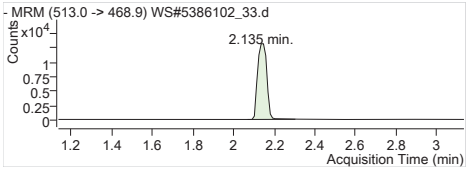



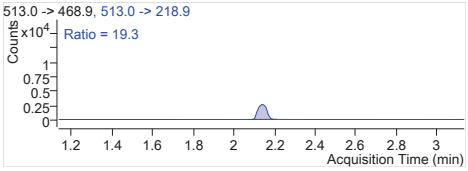

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 11.55 µg/L
Area ratio: 4.22961
Sample type: CC



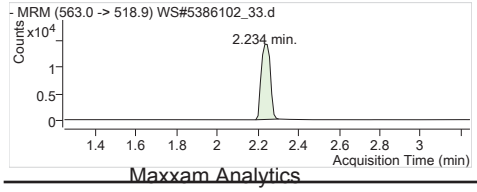



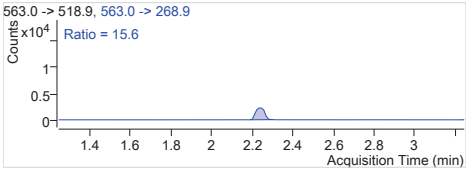

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 12.10 µg/L
Area ratio: 4.41217
Sample type: CC



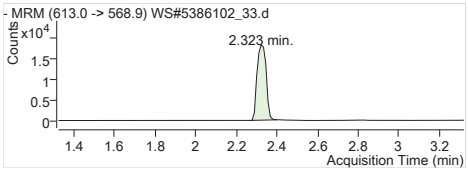



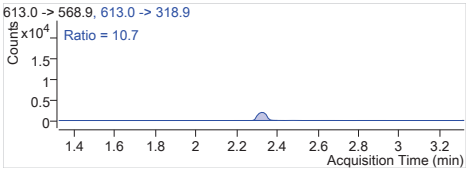

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 12.65 µg/L
Area ratio: 6.12130
Sample type: CC



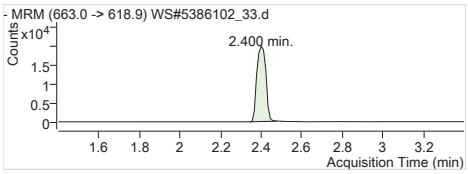



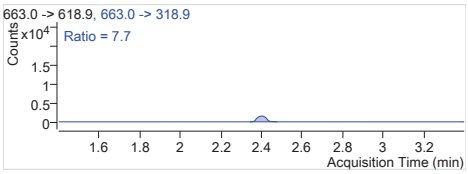

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.246)
Calc. conc. 11.31 µg/L
Area ratio: 5.27330
Sample type: CC



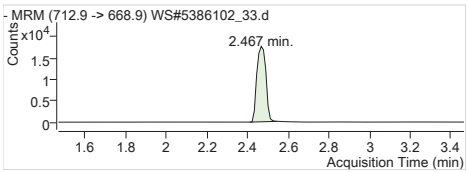



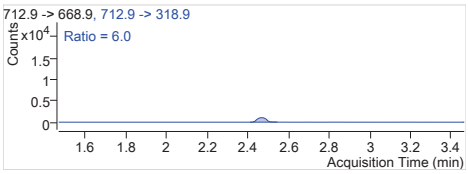

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 11.77 µg/L
Area ratio: 4.88257
Sample type: CC



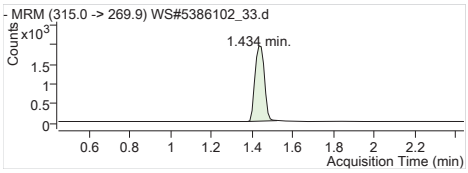



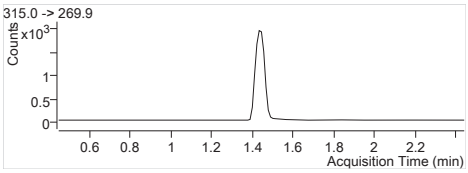

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 12.33 µg/L
Area ratio: 5.07911
Sample type: CC



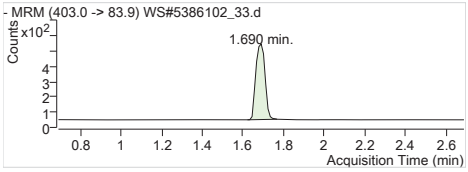



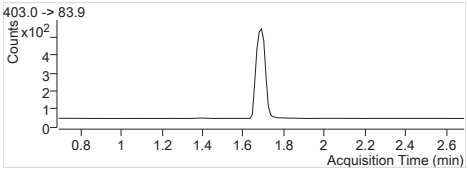

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 13.00 µg/L
Area ratio: 4.52710
Sample type: CC



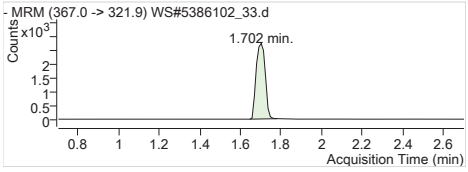



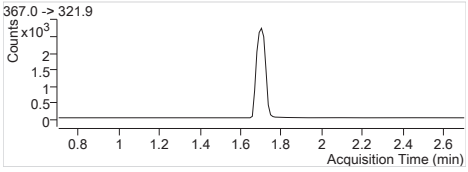

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 96.37 µg/L
Area ratio: 0.18727
Sample type: CC



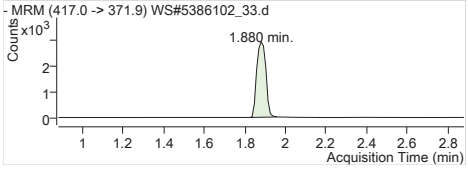



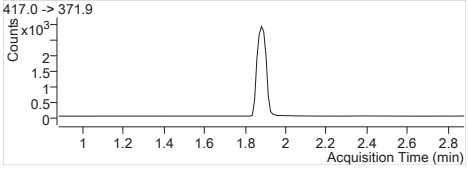

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 95.93 µg/L
Area ratio: 0.04770
Sample type: CC



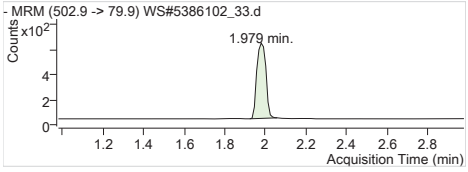



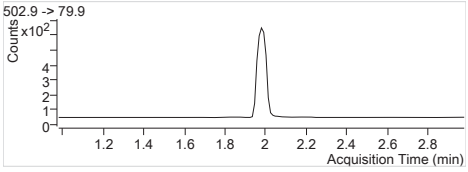

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 100.06 µg/L
Area ratio: 0.25464
Sample type: CC



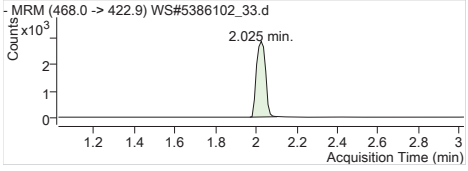



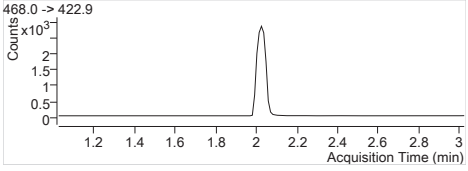

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.880 (1.881)
Calc. conc. 101.34 µg/L
Area ratio: 0.27206
Sample type: CC



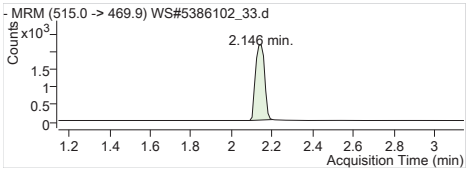



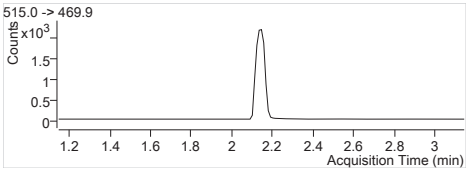

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 93.47 µg/L
Area ratio: 0.05659
Sample type: CC



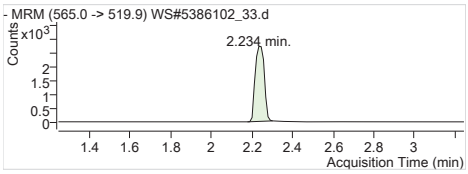



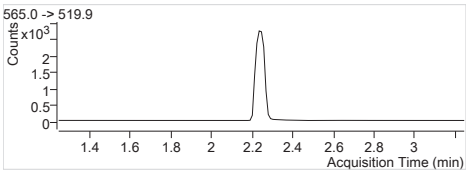

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 99.26 µg/L
Area ratio: 0.26596
Sample type: CC



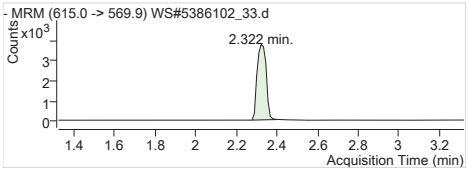



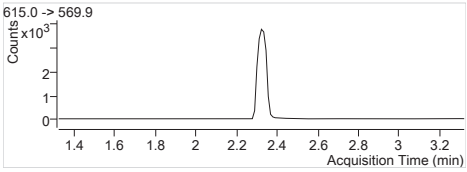

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 87.72 µg/L
Area ratio: 0.14931
Sample type: CC



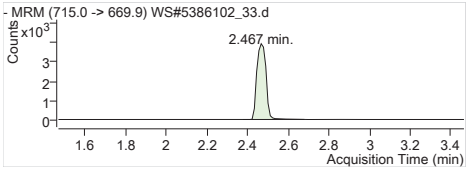



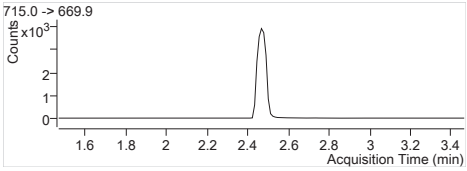

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.245)
Calc. conc. 93.71 µg/L
Area ratio: 0.18915
Sample type: CC



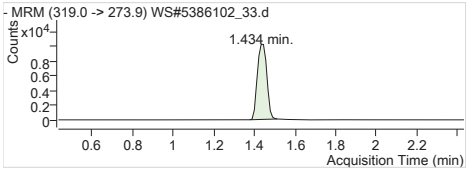



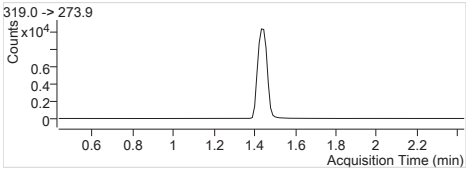

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 92.52 µg/L
Area ratio: 0.25925
Sample type: CC



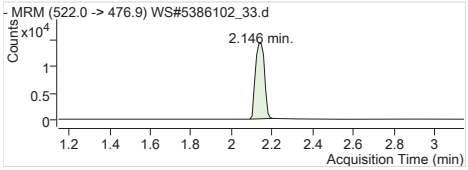



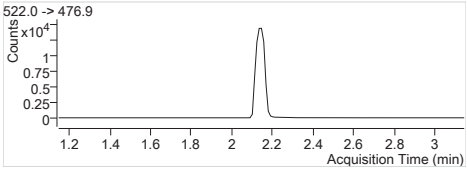

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 85.26 µg/L
Area ratio: 0.27254
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 103.83 µg/L
Area ratio: 0
Sample type: CC



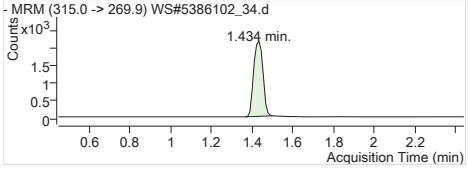

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 110.24 µg/L
Area ratio: 0
Sample type: CC

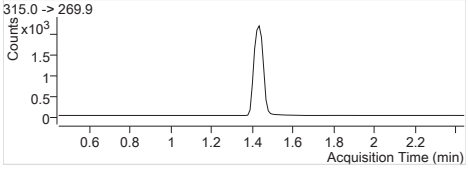
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_34.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-C8 |
| **Acq. Date** | 2018/02/08 3:47:11 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

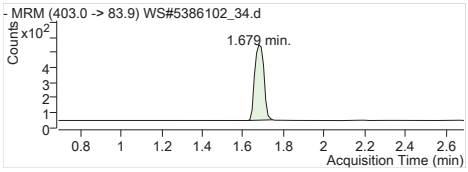
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6824 | 1.43 | 1 µg/L | | |
| MPFHxS | 1577 | 1.68 | 1 µg/L | | |
| MPFHpA | 8844 | 1.69 | 1 µg/L | | |
| MPFOA | 8986 | 1.88 | 1 µg/L | | |
| MPFOS | 2166 | 1.98 | 1 µg/L | | |
| MPFNA | 10142 | 2.02 | 1 µg/L | | |
| MPFDA | 7734 | 2.14 | 1 µg/L | | |
| MPFUnA | 8702 | 2.23 | 1 µg/L | | |
| MPFDoA | 11944 | 2.32 | 1 µg/L | | |
| MPFTeDA | 14298 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 34491 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 43455 | 2.13 | 1 µg/L | | |

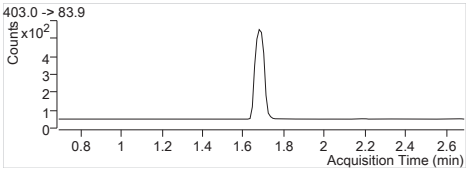
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 642 | 1.09 | 0.83 | 1.02 µg/L | 122.71 |
| PFHxA 1 | 1851 | 1.43 | 0.83 | 0.76 µg/L | 91.29 |
| PFHxS 1 | 534 | 1.68 | 0.83 | 0.77 µg/L | 92.41 |
| PFHpA 1 | 2888 | 1.69 | 0.83 | 0.89 µg/L | 107.34 |
| PFOA 1 | 3343 | 1.88 | 0.83 | 1.01 µg/L | 121.71 |
| PFOS 1 | 579 | 1.97 | 0.83 | 0.83 µg/L | 100.28 |
| PFNA 1 | 2723 | 2.01 | 0.83 | 0.78 µg/L | 94.26 |
| PFDA 1 | 2908 | 2.14 | 0.83 | 0.77 µg/L | 92.29 |
| PFUnA 1 | 2999 | 2.23 | 0.83 | 0.85 µg/L | 102.03 |
| PFDoA 1 | 4144 | 2.32 | 0.83 | 0.91 µg/L | 109.36 |
| PFTrDA 1 | 4355 | 2.40 | 0.83 | 0.83 µg/L | 99.79 |
| PFTeDA 1 | 3818 | 2.47 | 0.83 | 0.81 µg/L | 98.01 |
| 13C2-PFHxA | 6824 | 1.43 | 100.00 | 101.81 µg/L | 101.81 |
| 18O2-PFHxS | 1577 | 1.68 | 100.00 | 91.96 µg/L | 91.96 |
| 13C4-PFHpA | 8844 | 1.69 | 100.00 | 100.76 µg/L | 100.76 |
| 13C4-PFOA | 8986 | 1.88 | 100.00 | 97.04 µg/L | 97.04 |
| 13C4-PFOS | 2166 | 1.98 | 100.00 | 103.72 µg/L | 103.72 |
| 13C5-PFNA | 10047 | 2.02 | 100.00 | 108.71 µg/L | 108.71 |
| 13C2-PFDA | 7567 | 2.14 | 100.00 | 102.31 µg/L | 102.31 |
| 13C2-PFUnA | 8702 | 2.23 | 100.00 | 99.21 µg/L | 99.21 |
| 13C2-PFDoA | 11944 | 2.32 | 100.00 | 98.09 µg/L | 98.09 |
| 13C2-PFTeDA | 14299 | 2.47 | 100.00 | 102.94 µg/L | 102.94 |
| 13C6-PFHxA | 34491 | 1.43 | 100.00 | 108.73 µg/L | 108.73 |
| 13C9-PFDA | 43455 | 2.13 | 100.00 | 107.15 µg/L | 107.15 |



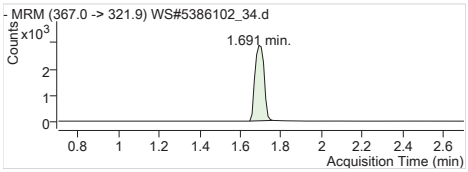



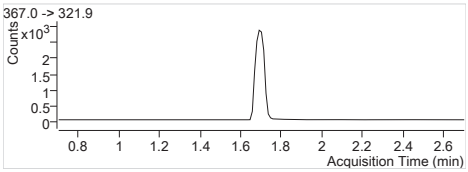

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.445) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



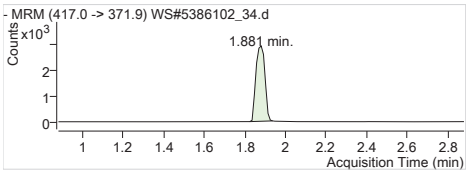



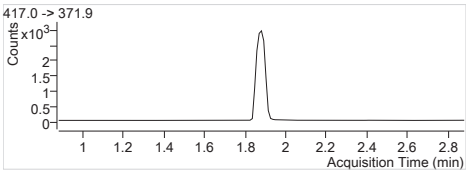

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.690)
Concentration: 1 µg/L
Sample type: CC



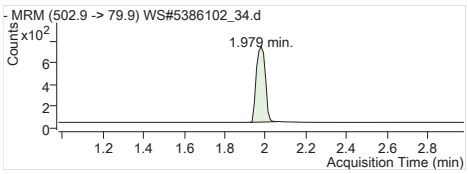



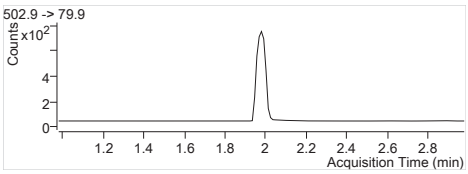

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.702)
Concentration: 1 µg/L
Sample type: CC



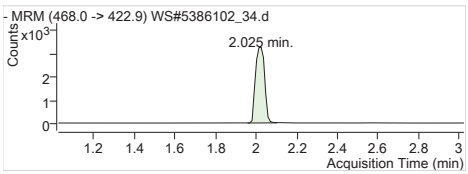



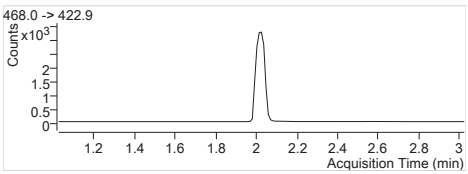

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



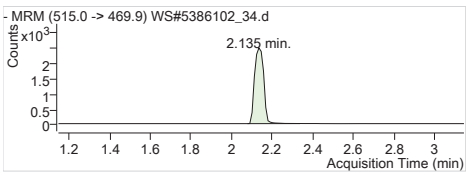



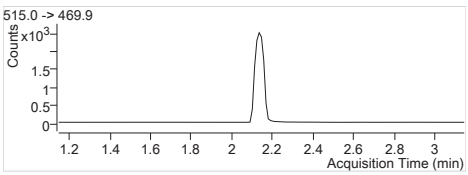

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



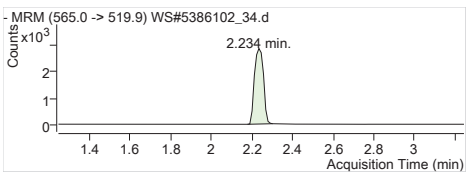



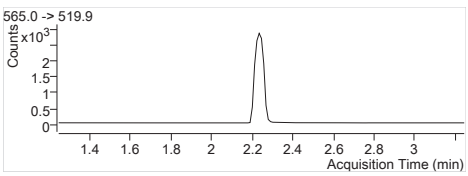

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: CC



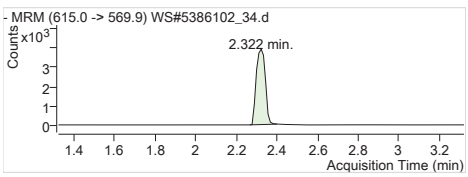



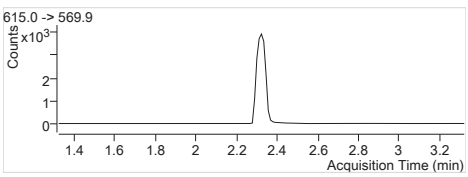

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: CC



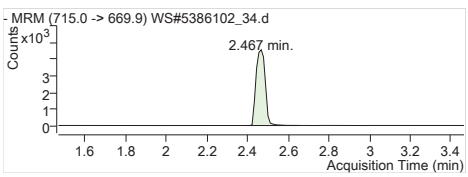



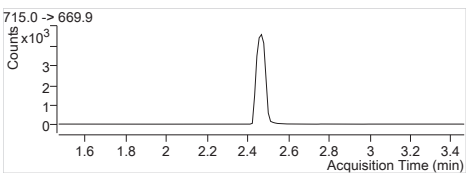

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.245)
Concentration: 1 µg/L
Sample type: CC



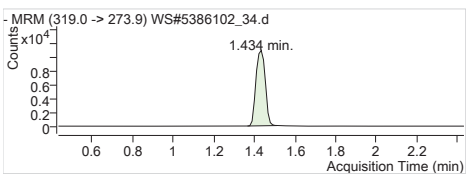



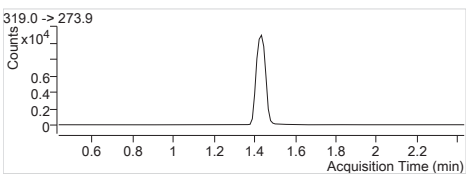

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



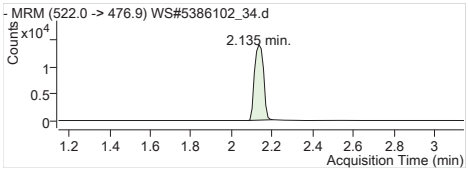



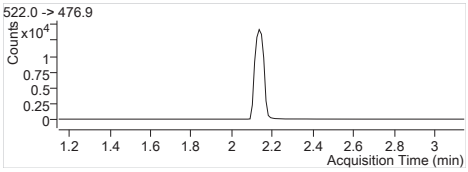

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



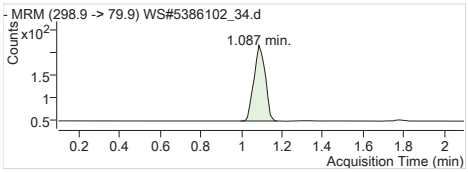



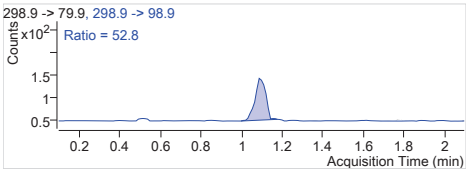

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



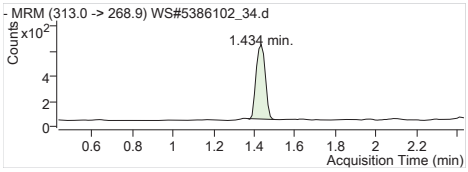



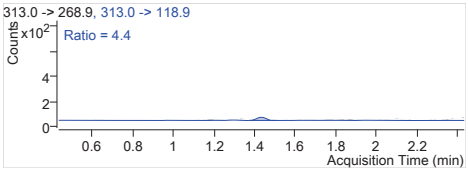

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: CC



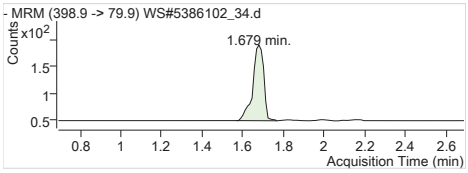



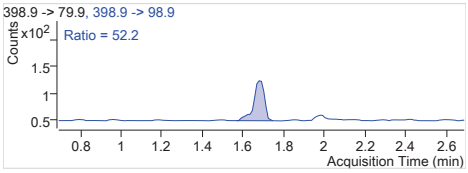

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.098)
Calc. conc. 1.02 µg/L
Area ratio: 0.40710
Sample type: CC



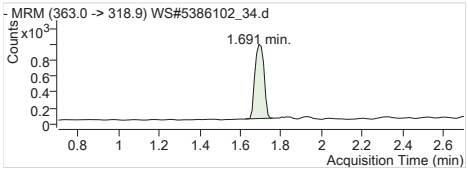



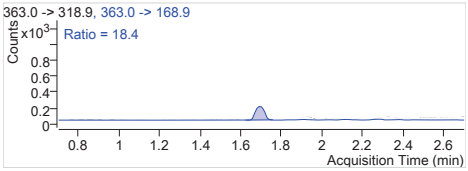

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 0.76 µg/L
Area ratio: 0.27125
Sample type: CC



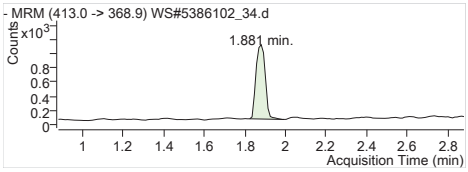



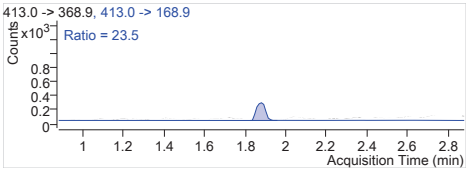

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.691)
Calc. conc. 0.77 µg/L
Area ratio: 0.33862
Sample type: CC



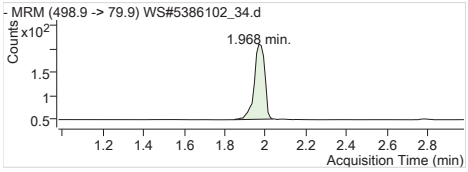



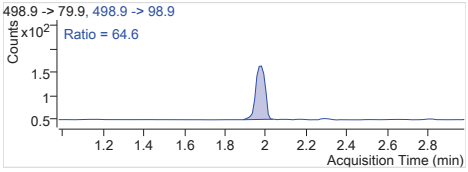

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.702)
Calc. conc. 0.89 µg/L
Area ratio: 0.32655
Sample type: CC



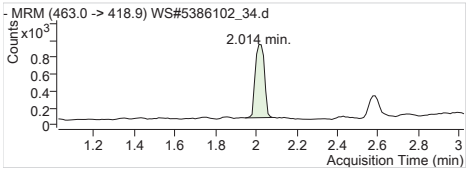



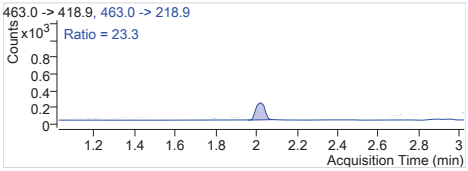

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 1.01 µg/L
Area ratio: 0.37202
Sample type: CC



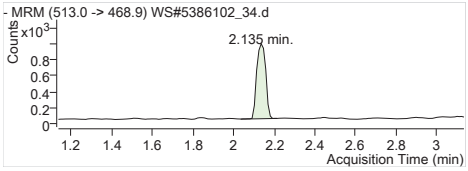



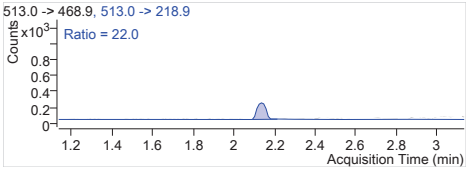

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.979)
Calc. conc. 0.83 µg/L
Area ratio: 0.26731
Sample type: CC



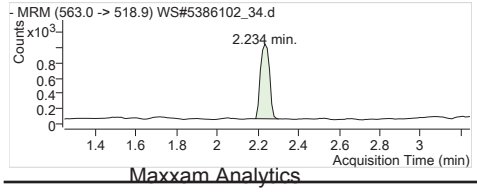



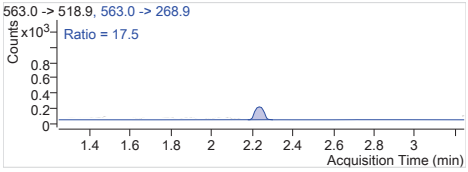

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.025)
Calc. conc. 0.78 µg/L
Area ratio: 0.26849
Sample type: CC



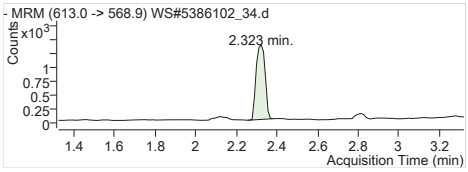



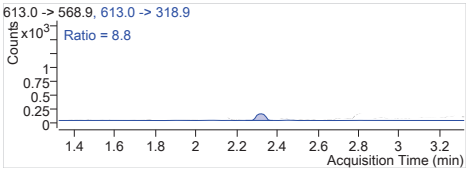

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 0.77 µg/L
Area ratio: 0.37600
Sample type: CC



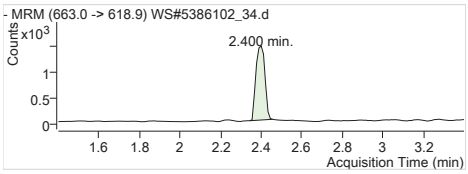



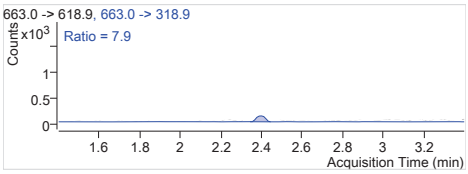

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.246)
Calc. conc. 0.85 µg/L
Area ratio: 0.34463
Sample type: CC



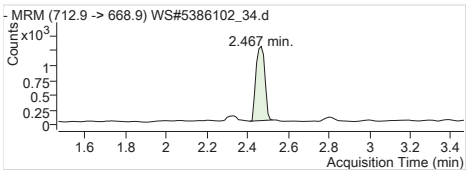



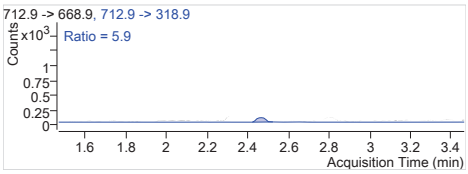

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.91 µg/L
Area ratio: 0.34695
Sample type: CC



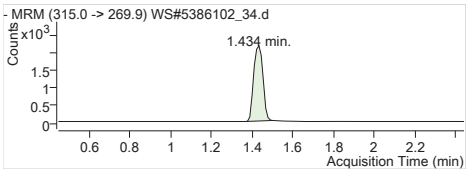



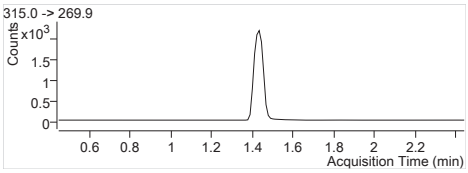

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.83 µg/L
Area ratio: 0.30459
Sample type: CC



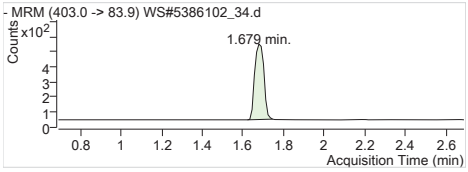



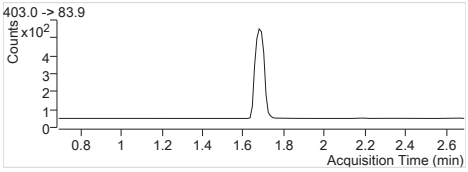

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 0.81 µg/L
Area ratio: 0.26703
Sample type: CC



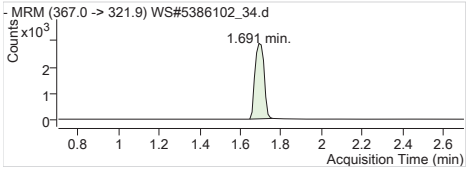



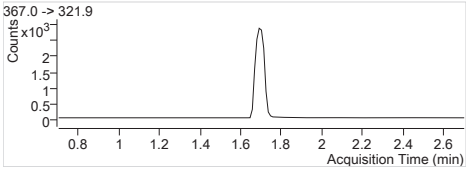

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 101.81 µg/L
Area ratio: 0.19785
Sample type: CC



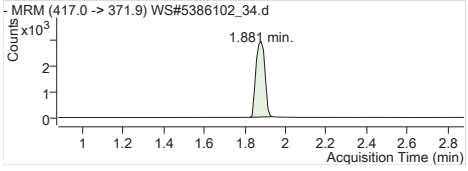



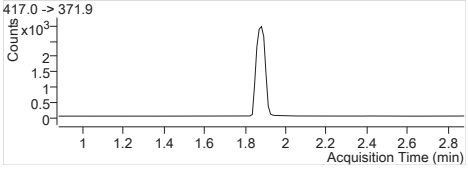

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.690)
Calc. conc. 91.96 µg/L
Area ratio: 0.04572
Sample type: CC



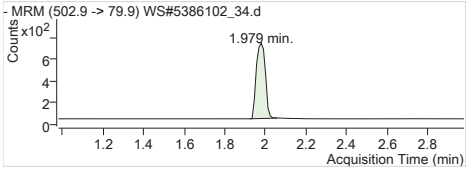



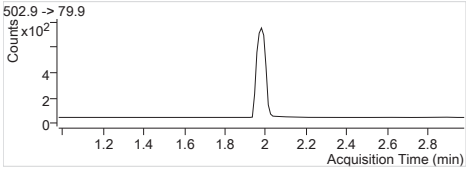

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.702)
Calc. conc. 100.76 µg/L
Area ratio: 0.25641
Sample type: CC



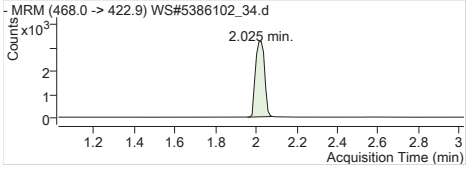



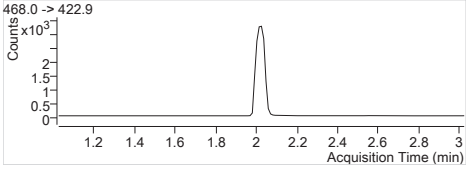

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 97.04 µg/L
Area ratio: 0.26053
Sample type: CC



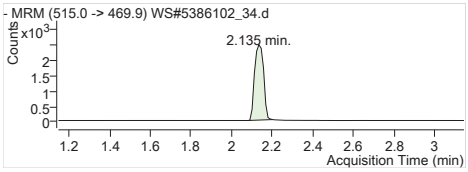



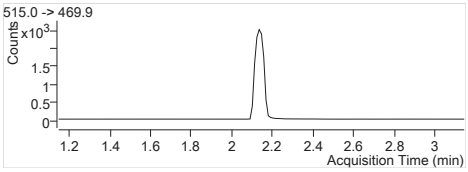

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 103.72 µg/L
Area ratio: 0.06280
Sample type: CC



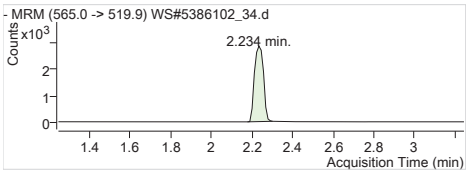



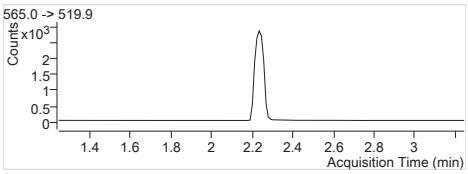

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 108.71 µg/L
Area ratio: 0.29129
Sample type: CC



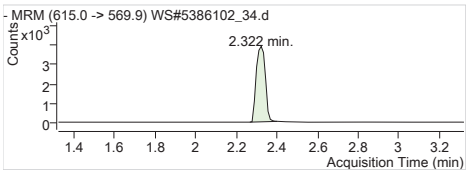



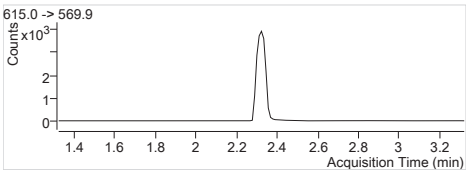

| | |
|---|---|
| **13C2-PFDA** | 515.0 -> 469.9 |
| RT (Exp. RT): | 2.135 (2.146) |
| Calc. conc. | 102.31 µg/L |
| Area ratio: | 0.17413 |
| Sample type: | CC |



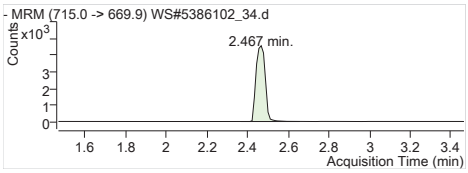



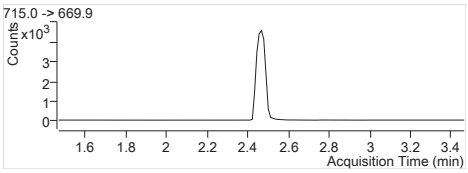

| | |
|---|---|
| **13C2-PFUnA** | 565.0 -> 519.9 |
| RT (Exp. RT): | 2.234 (2.245) |
| Calc. conc. | 99.21 µg/L |
| Area ratio: | 0.20025 |
| Sample type: | CC |



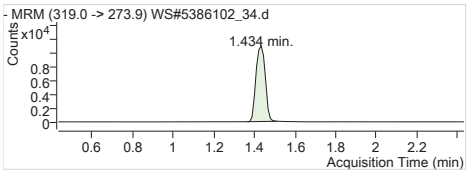



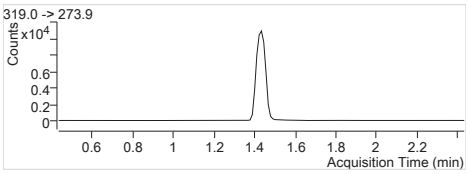

| | |
|---|---|
| **13C2-PFDoA** | 615.0 -> 569.9 |
| RT (Exp. RT): | 2.322 (2.322) |
| Calc. conc. | 98.09 µg/L |
| Area ratio: | 0.27486 |
| Sample type: | CC |



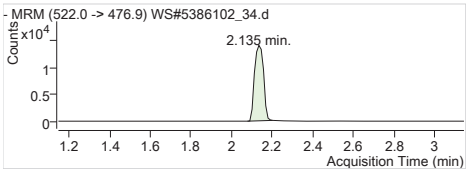



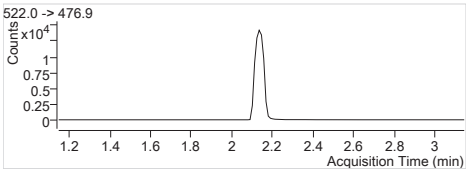

| | |
|---|---|
| **13C2-PFTeDA** | 715.0 -> 669.9 |
| RT (Exp. RT): | 2.467 (2.467) |
| Calc. conc. | 102.94 µg/L |
| Area ratio: | 0.32905 |
| Sample type: | CC |




| | |
|---|---|
| **13C6-PFHxA** | 319.0 -> 273.9 |
| RT (Exp. RT): | 1.434 (1.434) |
| Calc. conc. | 108.73 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |



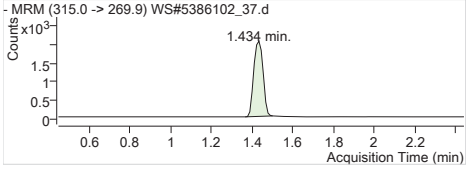

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 2.135 (2.146) |
| Calc. conc. | 107.15 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

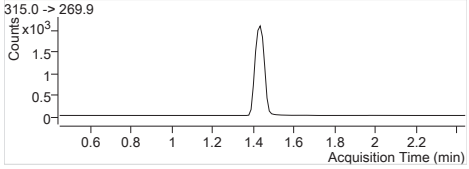
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_37.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D2 |
| **Acq. Date** | 2018/02/08 4:01:57 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

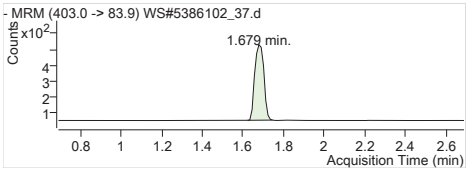
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6476 | 1.43 | 1 µg/L | | |
| MPFHxS | 1498 | 1.68 | 1 µg/L | | |
| MPFHpA | 8243 | 1.69 | 1 µg/L | | |
| MPFOA | 9595 | 1.88 | 1 µg/L | | |
| MPFOS | 1878 | 1.98 | 1 µg/L | | |
| MPFNA | 8637 | 2.02 | 1 µg/L | | |
| MPFDA | 6880 | 2.14 | 1 µg/L | | |
| MPFUnA | 8813 | 2.23 | 1 µg/L | | |
| MPFDoA | 11599 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13627 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 35453 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 44102 | 2.13 | 1 µg/L | | |

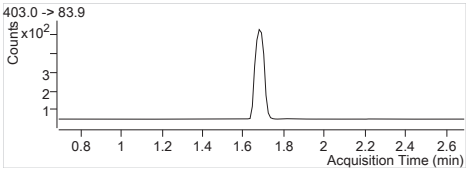
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 8462 | 1.09 | 12.50 | 13.34 µg/L | 106.73 |
| PFHxA 1 | 30830 | 1.43 | 12.50 | 11.77 µg/L | 94.18 |
| PFHxS 1 | 8007 | 1.68 | 12.50 | 12.88 µg/L | 103.04 |
| PFHpA 1 | 41975 | 1.69 | 12.50 | 12.88 µg/L | 103.03 |
| PFOA 1 | 45630 | 1.88 | 12.50 | 11.46 µg/L | 91.66 |
| PFOS 1 | 8451 | 1.97 | 12.50 | 12.29 µg/L | 98.29 |
| PFNA 1 | 38345 | 2.03 | 12.50 | 12.18 µg/L | 97.43 |
| PFDA 1 | 42970 | 2.14 | 12.50 | 12.90 µg/L | 103.23 |
| PFUnA 1 | 46137 | 2.23 | 12.50 | 11.23 µg/L | 89.80 |
| PFDoA 1 | 58450 | 2.32 | 12.50 | 12.15 µg/L | 97.17 |
| PFTrDA 1 | 69208 | 2.40 | 12.50 | 12.33 µg/L | 98.67 |
| PFTeDA 1 | 55720 | 2.47 | 12.50 | 11.74 µg/L | 93.95 |
| 13C2-PFHxA | 6476 | 1.43 | 100.00 | 94.00 µg/L | 94.00 |
| 18O2-PFHxS | 1498 | 1.68 | 100.00 | 84.98 µg/L | 84.98 |
| 13C4-PFHpA | 8243 | 1.69 | 100.00 | 91.37 µg/L | 91.37 |
| 13C4-PFOA | 9595 | 1.88 | 100.00 | 100.81 µg/L | 100.81 |
| 13C4-PFOS | 1878 | 1.98 | 100.00 | 87.49 µg/L | 87.49 |
| 13C5-PFNA | 8581 | 2.02 | 100.00 | 90.33 µg/L | 90.33 |
| 13C2-PFDA | 6799 | 2.14 | 100.00 | 90.57 µg/L | 90.57 |
| 13C2-PFUnA | 8813 | 2.23 | 100.00 | 99.00 µg/L | 99.00 |
| 13C2-PFDoA | 11599 | 2.32 | 100.00 | 93.86 µg/L | 93.86 |
| 13C2-PFTeDA | 13838 | 2.47 | 100.00 | 98.16 µg/L | 98.16 |
| 13C6-PFHxA | 35453 | 1.43 | 100.00 | 111.76 µg/L | 111.76 |
| 13C9-PFDA | 44102 | 2.13 | 100.00 | 108.75 µg/L | 108.75 |



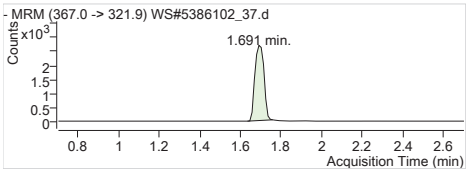



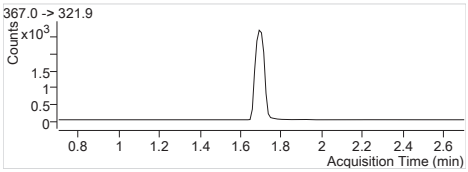

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.445) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



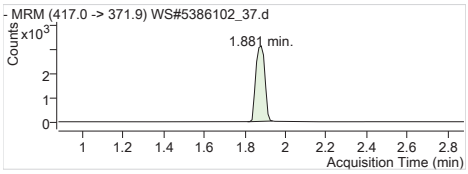



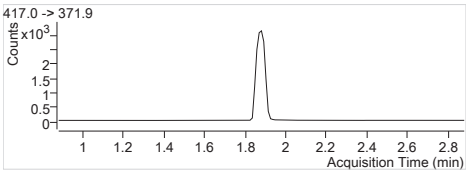

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.690)
Concentration: 1 µg/L
Sample type: CC



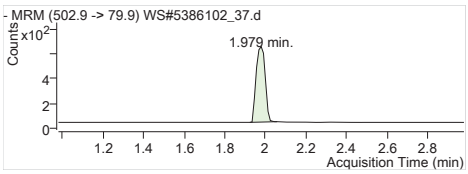



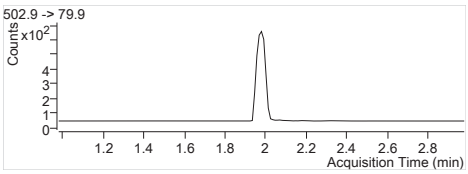

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.702)
Concentration: 1 µg/L
Sample type: CC



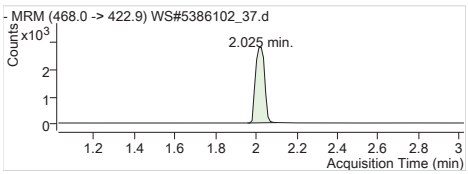



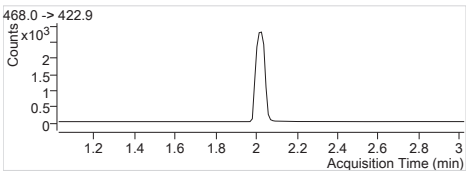

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



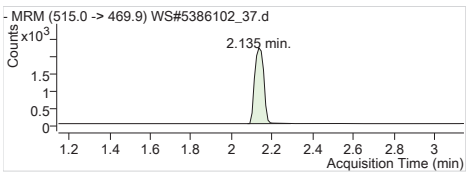



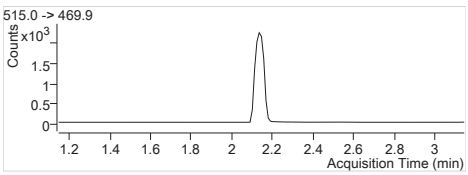

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



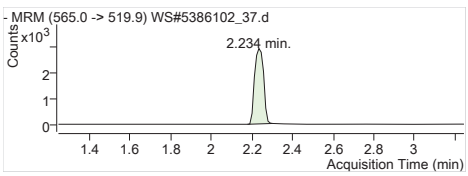



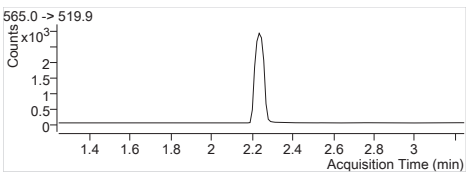

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: CC



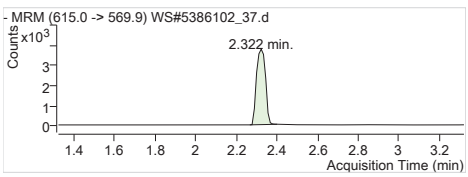



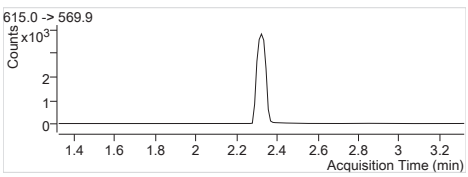

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: CC



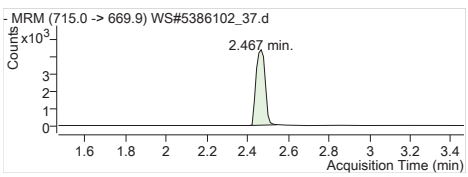



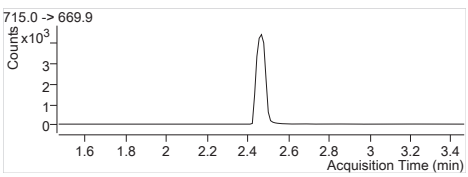

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.245)
Concentration: 1 µg/L
Sample type: CC



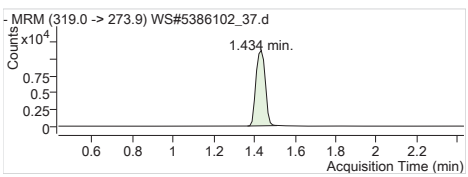



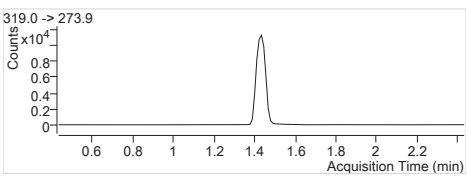

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



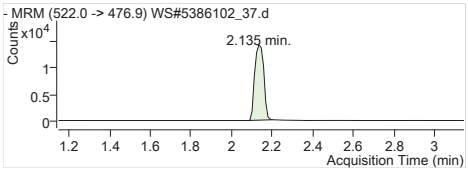



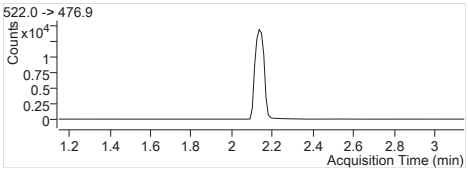

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



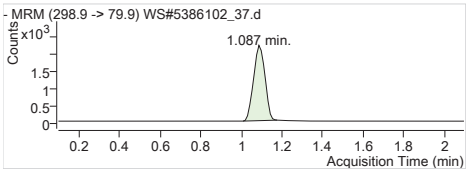



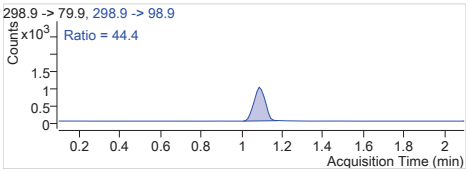

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



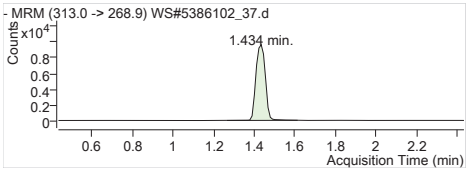



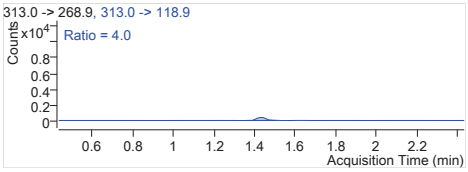

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: CC



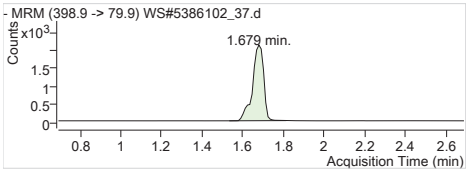



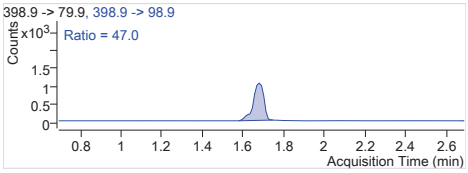

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.098)
Calc. conc. 13.34 µg/L
Area ratio: 5.64887
Sample type: CC



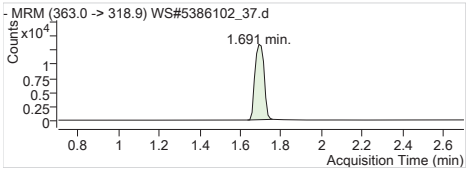



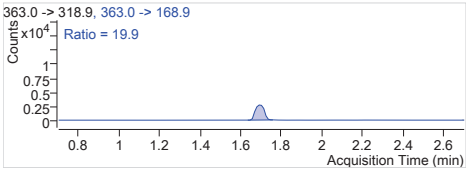

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 11.77 µg/L
Area ratio: 4.76065
Sample type: CC



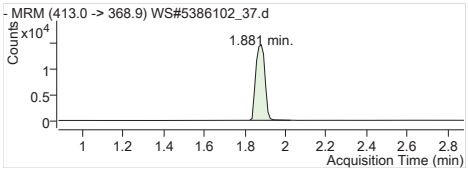



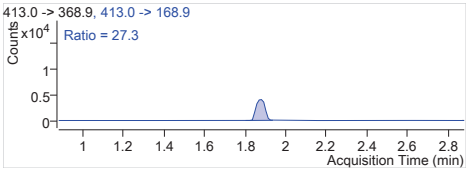

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.691)
Calc. conc. 12.88 µg/L
Area ratio: 5.34513
Sample type: CC



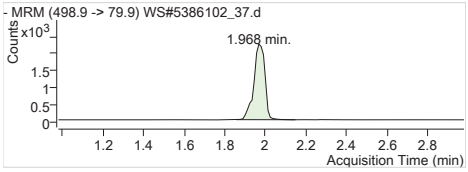



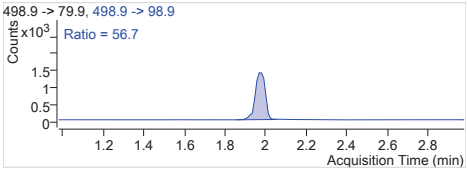

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.702)
Calc. conc. 12.88 µg/L
Area ratio: 5.09220
Sample type: CC



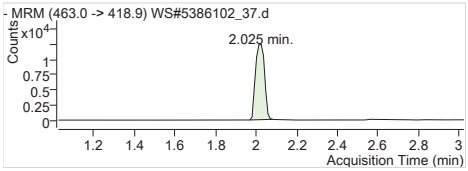



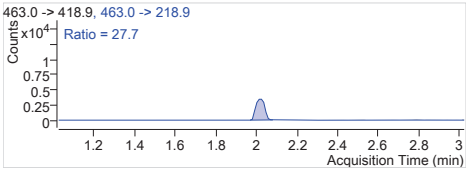

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 11.46 µg/L
Area ratio: 4.75560
Sample type: CC



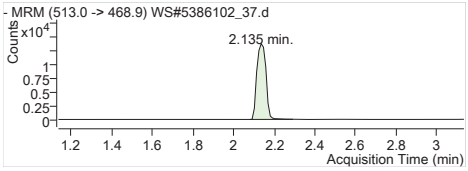



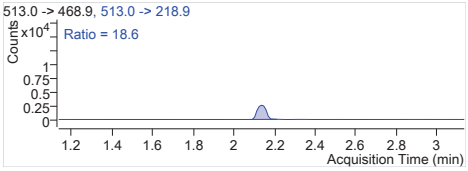

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.979)
Calc. conc. 12.29 µg/L
Area ratio: 4.50000
Sample type: CC



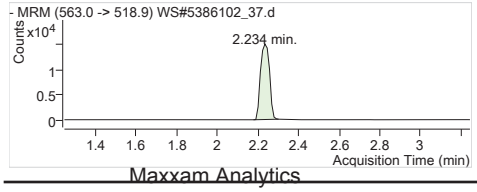



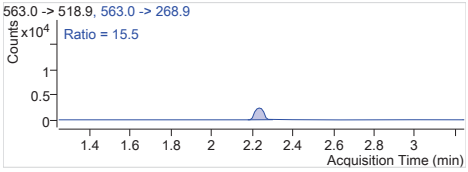

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 12.18 µg/L
Area ratio: 4.43962
Sample type: CC



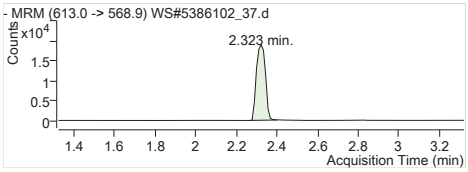



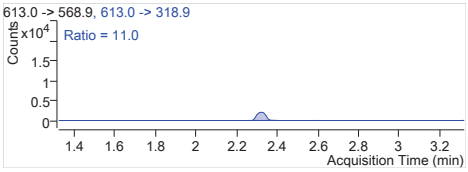

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 12.90 µg/L
Area ratio: 6.24564
Sample type: CC



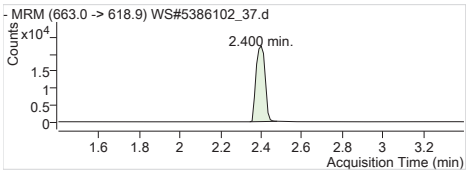



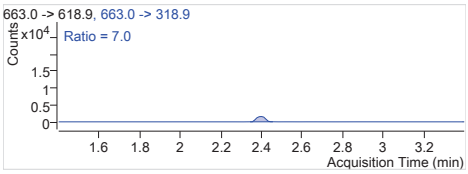

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.246)
Calc. conc. 11.23 µg/L
Area ratio: 5.23511
Sample type: CC



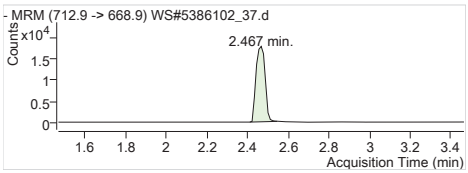



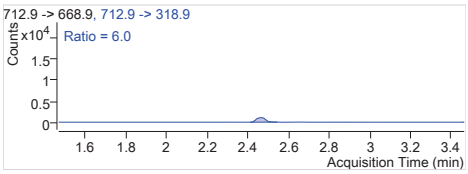

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 12.15 µg/L
Area ratio: 5.03923
Sample type: CC



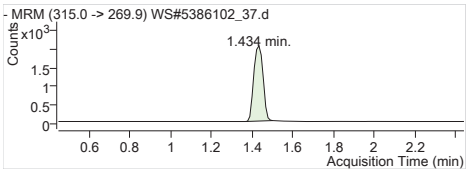



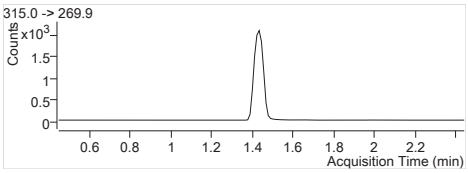

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 12.33 µg/L
Area ratio: 5.07874
Sample type: CC



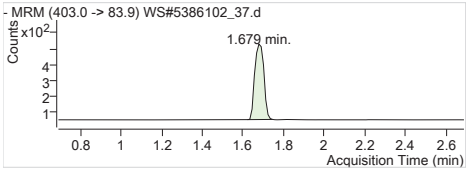



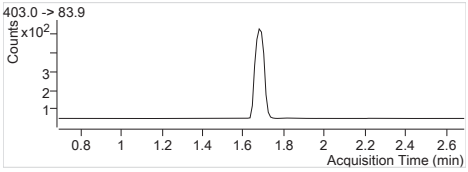

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 11.74 µg/L
Area ratio: 4.08894
Sample type: CC



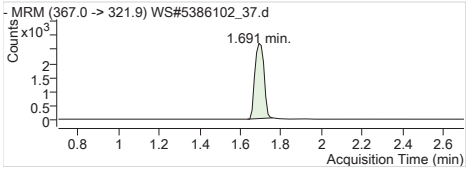



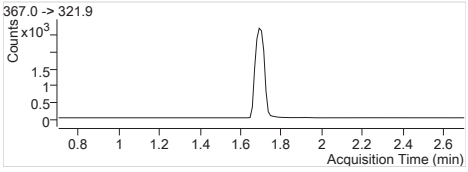

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 94.00 µg/L
Area ratio: 0.18266
Sample type: CC



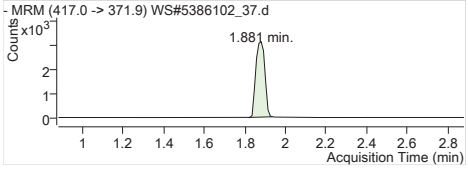



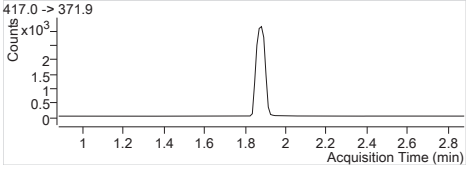

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.690)
Calc. conc. 84.98 µg/L
Area ratio: 0.04225
Sample type: CC



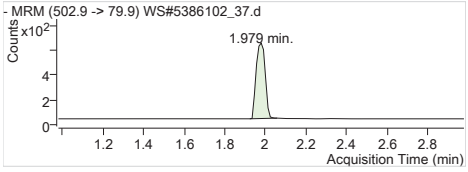



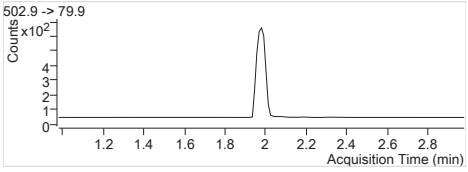

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.702)
Calc. conc. 91.37 µg/L
Area ratio: 0.23251
Sample type: CC



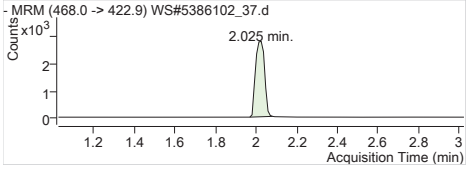



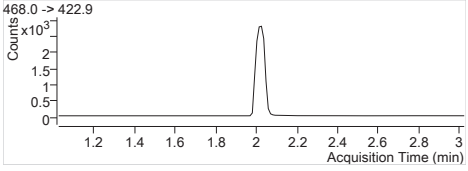

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 100.81 µg/L
Area ratio: 0.27064
Sample type: CC



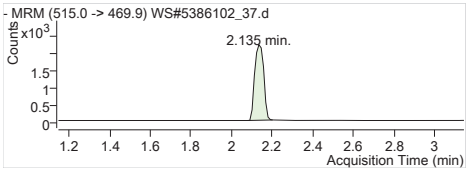



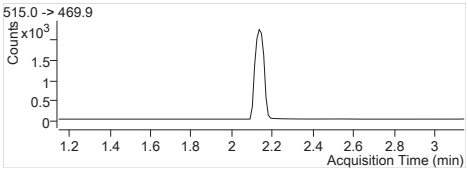

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 87.49 µg/L
Area ratio: 0.05297
Sample type: CC



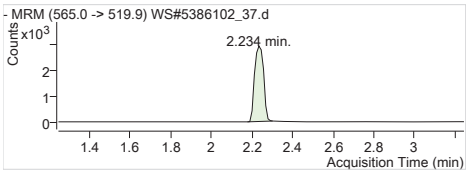



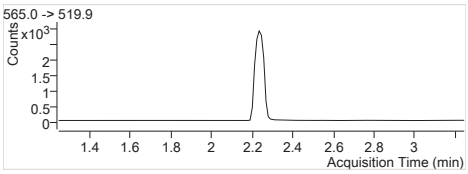

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 90.33 µg/L
Area ratio: 0.24204
Sample type: CC



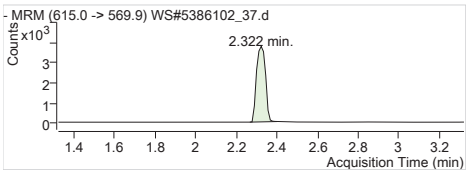



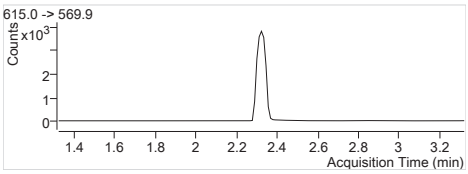

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 90.57 µg/L
Area ratio: 0.15417
Sample type: CC



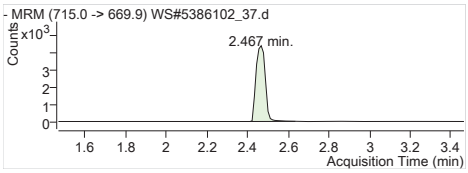



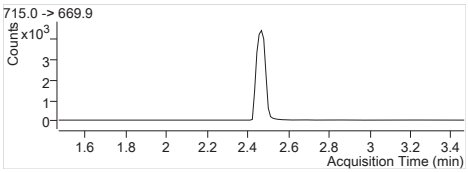

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.245)
Calc. conc. 99.00 µg/L
Area ratio: 0.19983
Sample type: CC



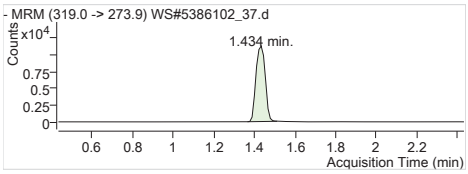



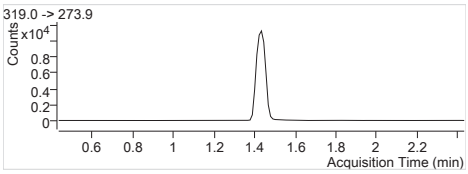

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 93.86 µg/L
Area ratio: 0.26300
Sample type: CC



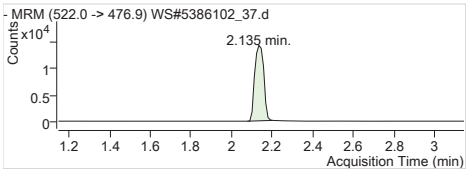



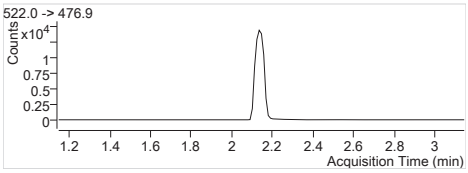

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 98.16 µg/L
Area ratio: 0.31377
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 111.76 µg/L
Area ratio: 0
Sample type: CC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 108.75 µg/L
Area ratio: 0
Sample type: CC

# Quantitation Results

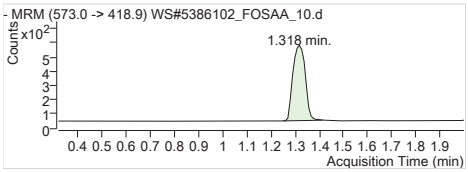
Agilent Technologies

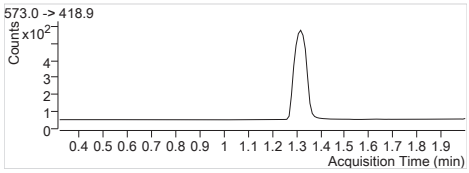
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-C8 |
| **Acq. Date** | 2018/02/08 9:55:40 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

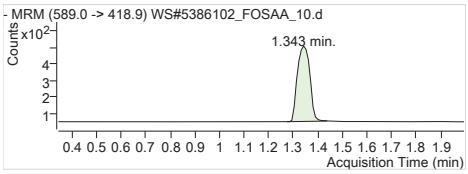
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1882 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1622 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 35225 | 0.92 | 1 µg/L | | |

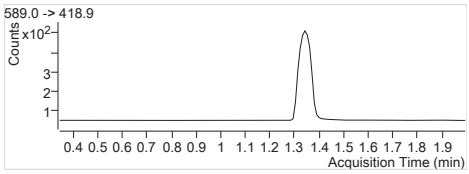
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 545 | 1.31 | 0.83 | 0.82 µg/L | 98.35 |
| EtFOSAA 1 | 551 | 1.34 | 0.83 | 0.87 µg/L | 104.50 |
| D3-MeFOSAA | 1904 | 1.32 | 100.00 | 101.58 µg/L | 101.58 |
| D5-EtFOSAA | 1633 | 1.34 | 100.00 | 100.41 µg/L | 100.41 |
| 13C9-PFDA | 34350 | 0.92 | 100.00 | 102.82 µg/L | 102.82 |



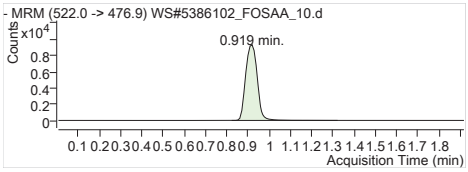



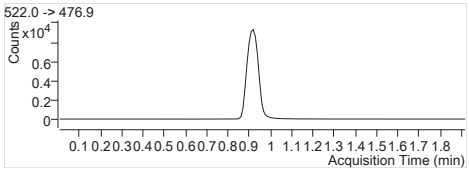

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: CC



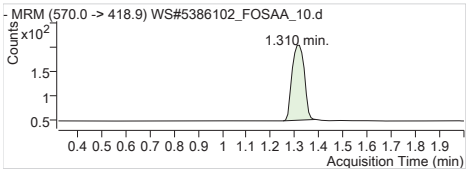



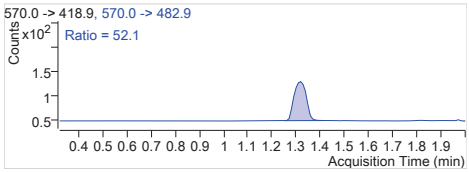

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: CC



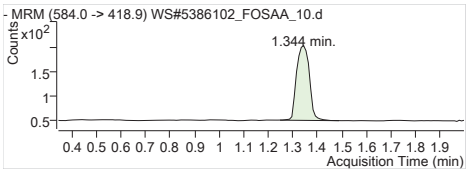



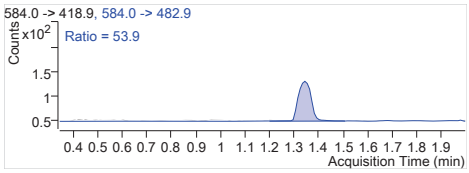

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.919 (0.919)
Concentration: 1 µg/L
Sample type: CC



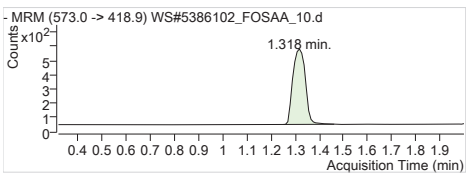



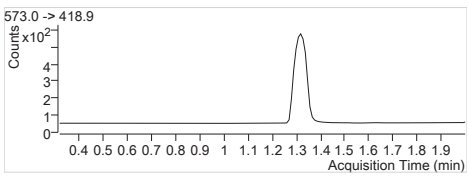

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.319)
Calc. conc. 0.82 µg/L
Area ratio: 0.28959
Sample type: CC



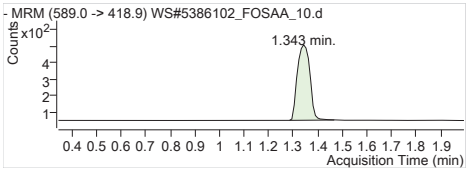



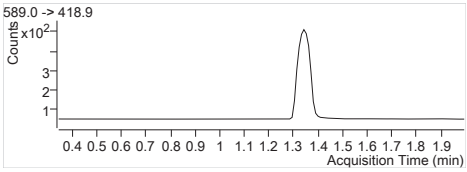

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 0.87 µg/L
Area ratio: 0.33970
Sample type: CC



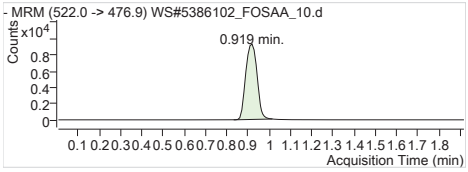



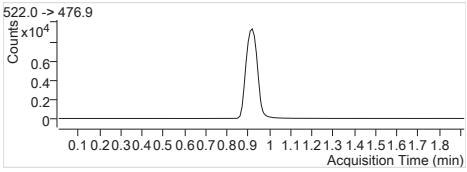

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 101.58 µg/L
Area ratio: 0.05405
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 100.41 µg/L |
| Area ratio: | 0.04636 |
| Sample type: | CC |



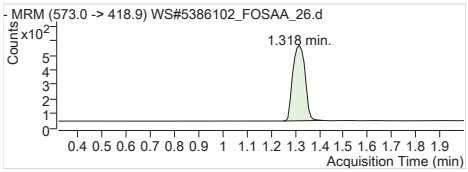

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.919 (0.919) |
| Calc. conc. | 102.82 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

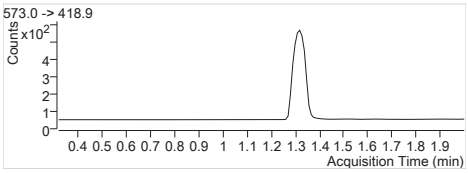
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_26.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-D2 |
| **Acq. Date** | 2018/02/08 10:34:12 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

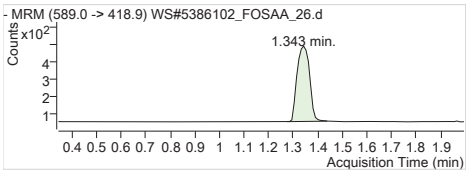
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1825 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1565 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 35972 | 0.92 | 1 µg/L | | |

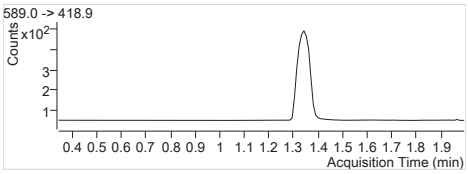
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 7785 | 1.32 | 12.50 | 12.02 µg/L | 96.18 |
| EtFOSAA 1 | 7832 | 1.34 | 12.50 | 11.90 µg/L | 95.17 |
| D3-MeFOSAA | 1835 | 1.32 | 100.00 | 95.87 µg/L | 95.87 |
| D5-EtFOSAA | 1576 | 1.34 | 100.00 | 94.89 µg/L | 94.89 |
| 13C9-PFDA | 35131 | 0.92 | 100.00 | 105.16 µg/L | 105.16 |



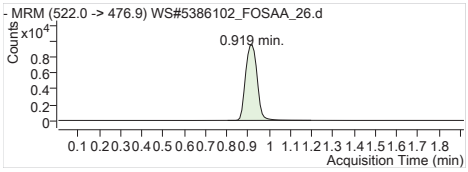



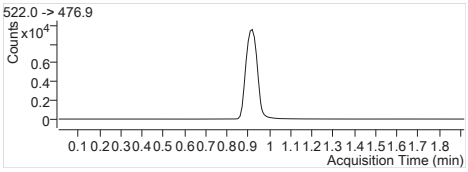

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: CC



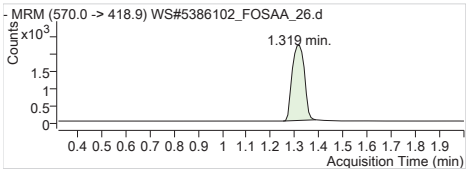



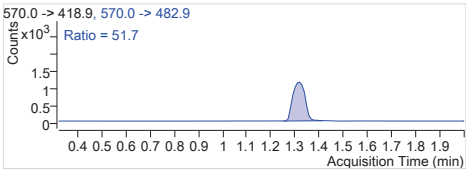

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: CC



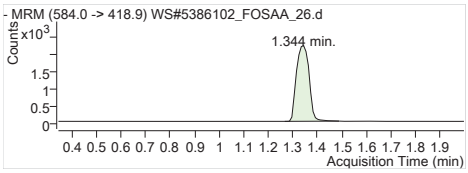



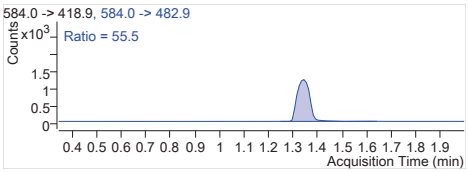

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.919 (0.919)
Concentration: 1 µg/L
Sample type: CC



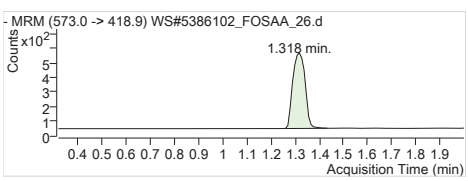



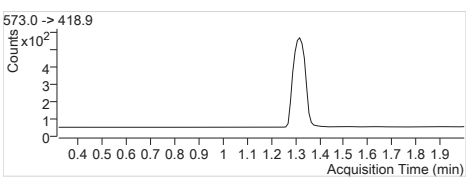

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.319 (1.319)
Calc. conc. 12.02 µg/L
Area ratio: 4.26575
Sample type: CC



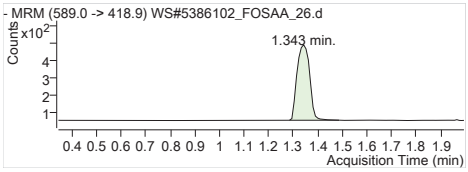



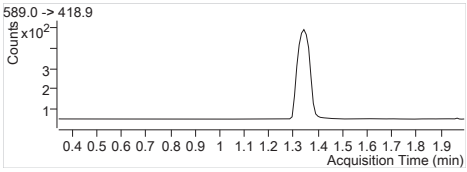

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 11.90 µg/L
Area ratio: 5.00447
Sample type: CC



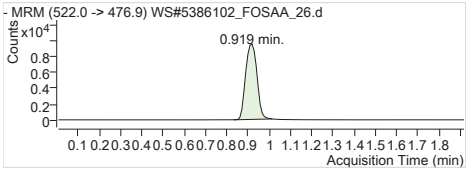



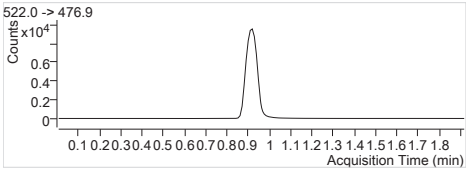

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 95.87 µg/L
Area ratio: 0.05101
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 94.89 µg/L |
| Area ratio: | 0.04381 |
| Sample type: | CC |



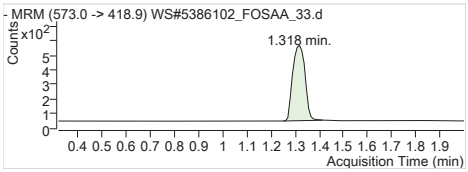

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.919 (0.919) |
| Calc. conc. | 105.16 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

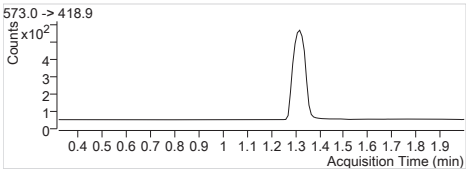
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_33.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-D2 |
| **Acq. Date** | 2018/02/08 10:51:05 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

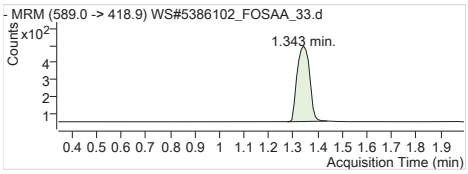
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1832 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1580 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 35917 | 0.92 | 1 µg/L | | |

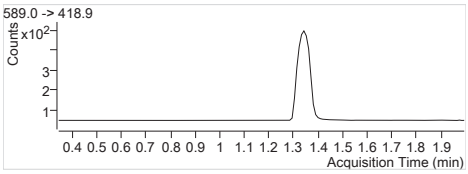
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 7693 | 1.32 | 12.50 | 11.84 µg/L | 94.69 |
| EtFOSAA 1 | 7730 | 1.34 | 12.50 | 11.63 µg/L | 93.05 |
| D3-MeFOSAA | 1846 | 1.32 | 100.00 | 96.59 µg/L | 96.59 |
| D5-EtFOSAA | 1585 | 1.34 | 100.00 | 95.58 µg/L | 95.58 |
| 13C9-PFDA | 35154 | 0.92 | 100.00 | 105.23 µg/L | 105.23 |



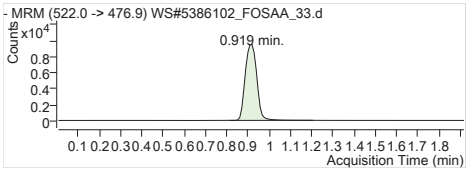



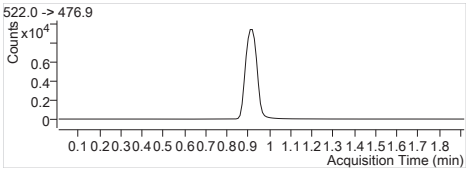

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: CC



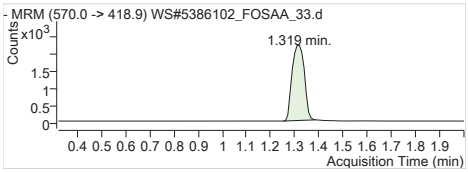



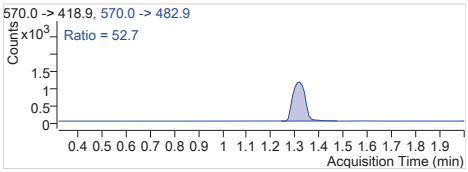

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: CC



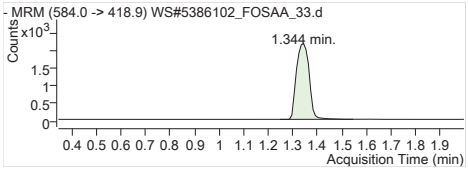



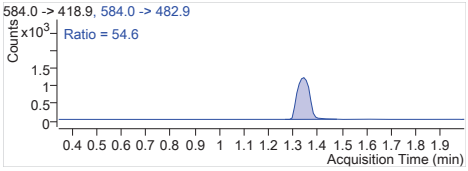

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.919 (0.919)
Concentration: 1 µg/L
Sample type: CC



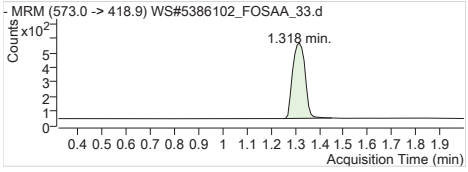



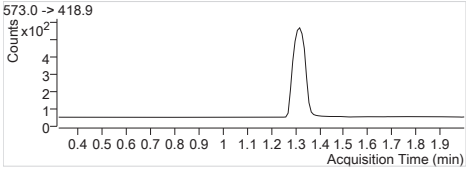

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.319 (1.319)
Calc. conc. 11.84 µg/L
Area ratio: 4.19924
Sample type: CC



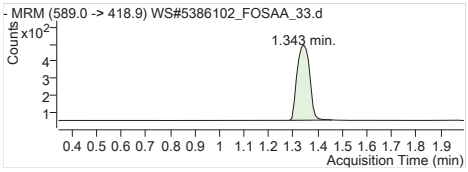



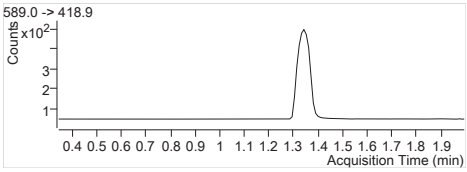

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 11.63 µg/L
Area ratio: 4.89241
Sample type: CC



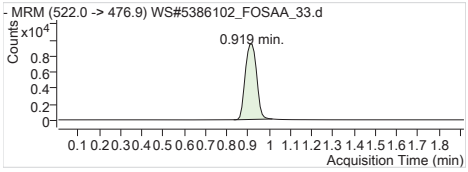



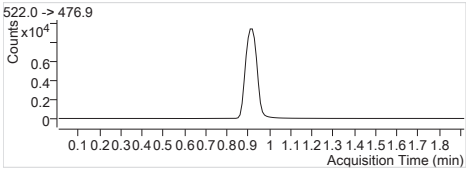

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 96.59 µg/L
Area ratio: 0.05140
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 95.58 µg/L |
| Area ratio: | 0.04413 |
| Sample type: | CC |



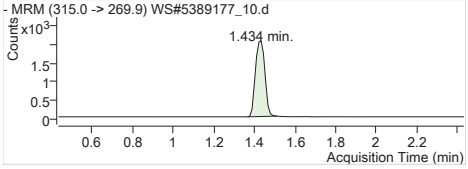

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.919 (0.919) |
| Calc. conc. | 105.23 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

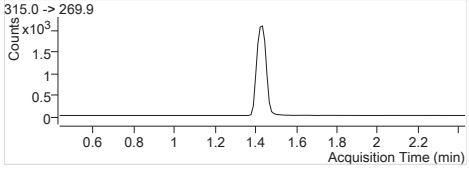
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A2 |
| **Acq. Date** | 2018/02/09 12:41:49 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

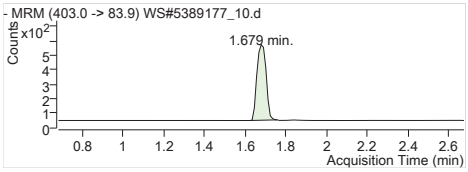
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6608 | 1.43 | 1 µg/L | | |
| MPFHxS | 1651 | 1.68 | 1 µg/L | | |
| MPFHpA | 8514 | 1.69 | 1 µg/L | | |
| MPFOA | 9098 | 1.88 | 1 µg/L | | |
| MPFOS | 1988 | 1.98 | 1 µg/L | | |
| MPFNA | 8860 | 2.01 | 1 µg/L | | |
| MPFDA | 7645 | 2.14 | 1 µg/L | | |
| MPFUnA | 9022 | 2.23 | 1 µg/L | | |
| MPFDoA | 12079 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13175 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 24034 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 32777 | 2.13 | 1 µg/L | | |

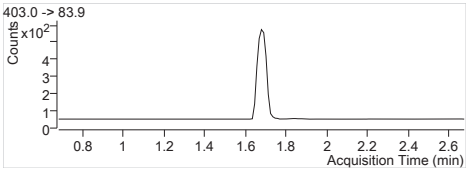
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 667 | 1.09 | 0.83 | 0.87 µg/L | 105.33 |
| PFHxA 1 | 2126 | 1.42 | 0.83 | 0.89 µg/L | 106.90 |
| PFHxS 1 | 697 | 1.68 | 0.83 | 1.06 µg/L | 128.12 |
| PFHpA 1 | 3018 | 1.69 | 0.83 | 0.95 µg/L | 114.29 |
| PFOA 1 | 3316 | 1.88 | 0.83 | 0.86 µg/L | 104.18 |
| PFOS 1 | 629 | 1.97 | 0.83 | 0.96 µg/L | 116.14 |
| PFNA 1 | 2806 | 2.01 | 0.83 | 0.90 µg/L | 109.02 |
| PFDA 1 | 3425 | 2.14 | 0.83 | 1.03 µg/L | 124.46 |
| PFUnA 1 | 3775 | 2.23 | 0.83 | 1.03 µg/L | 124.11 |
| PFDoA 1 | 4282 | 2.32 | 0.83 | 0.91 µg/L | 109.33 |
| PFTrDA 1 | 5201 | 2.40 | 0.83 | 0.95 µg/L | 113.87 |
| PFTeDA 1 | 4548 | 2.47 | 0.83 | 1.05 µg/L | 126.55 |
| 13C2-PFHxA | 6608 | 1.43 | 100.00 | 98.07 µg/L | 98.07 |
| 18O2-PFHxS | 1651 | 1.68 | 100.00 | 95.10 µg/L | 95.10 |
| 13C4-PFHpA | 8514 | 1.69 | 100.00 | 94.99 µg/L | 94.99 |
| 13C4-PFOA | 9098 | 1.88 | 100.00 | 94.87 µg/L | 94.87 |
| 13C4-PFOS | 1988 | 1.98 | 100.00 | 93.39 µg/L | 93.39 |
| 13C5-PFNA | 8861 | 2.01 | 100.00 | 91.66 µg/L | 91.66 |
| 13C2-PFDA | 7557 | 2.14 | 100.00 | 91.53 µg/L | 91.53 |
| 13C2-PFUnA | 9022 | 2.23 | 100.00 | 91.63 µg/L | 91.63 |
| 13C2-PFDoA | 12079 | 2.32 | 100.00 | 92.99 µg/L | 92.99 |
| 13C2-PFTeDA | 13518 | 2.47 | 100.00 | 86.95 µg/L | 86.95 |
| 13C6-PFHxA | 24034 | 1.43 | 100.00 | 112.26 µg/L | 112.26 |
| 13C9-PFDA | 32777 | 2.13 | 100.00 | 114.69 µg/L | 114.69 |



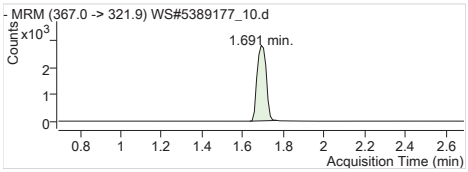



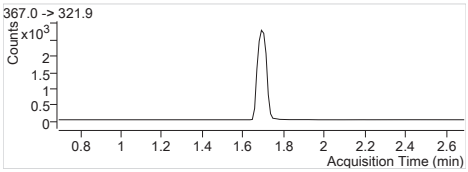

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



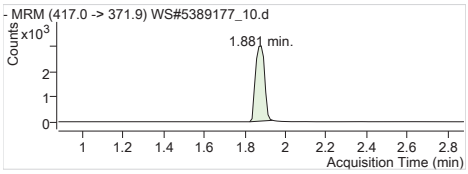



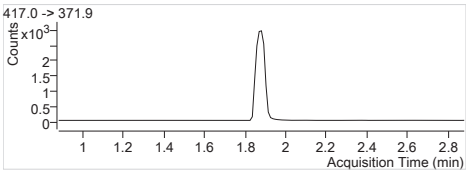

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: CC



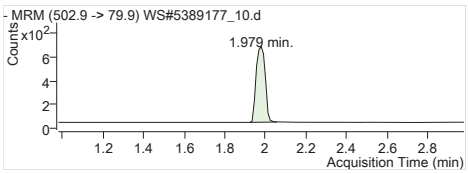



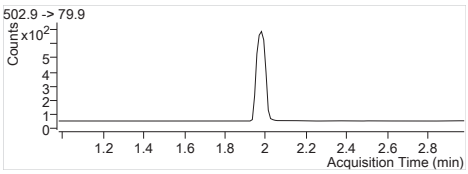

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: CC



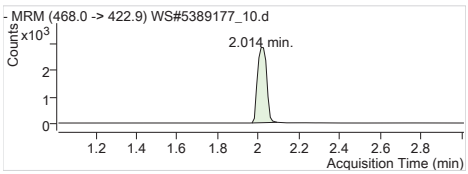



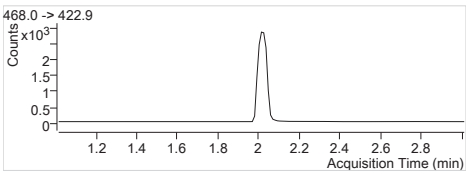

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



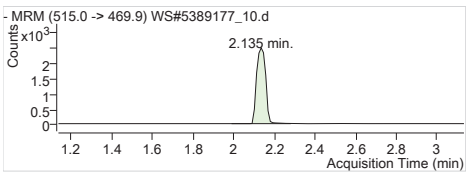



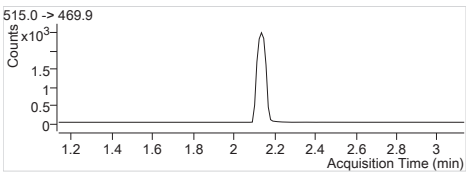

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



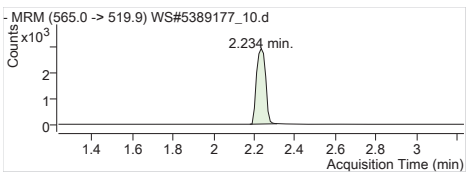



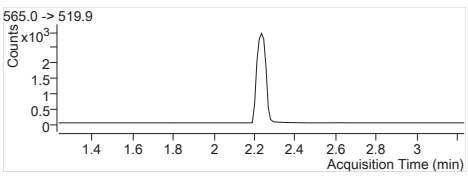

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: CC



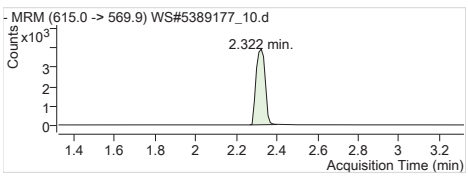



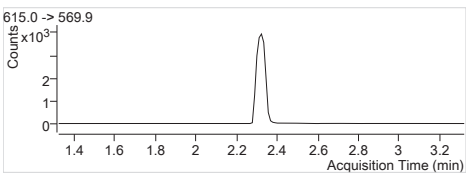

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



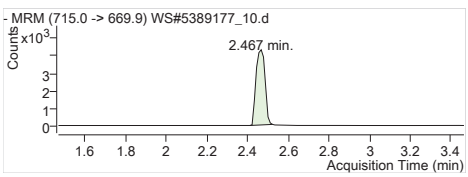



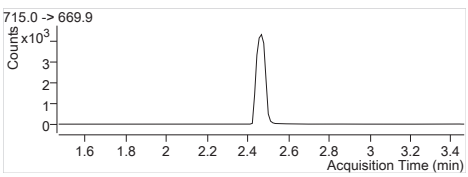

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: CC



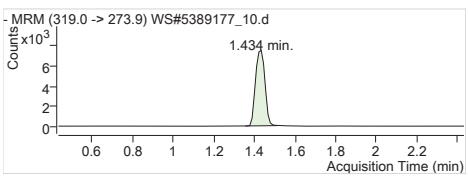



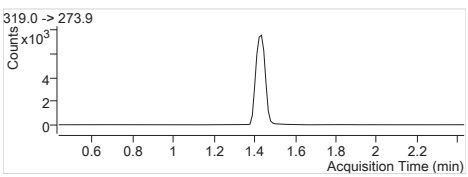

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



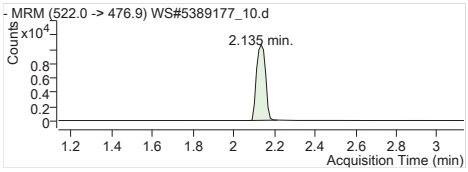



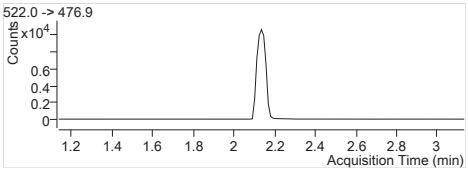

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



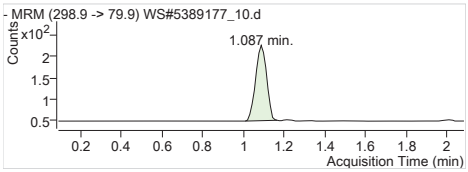



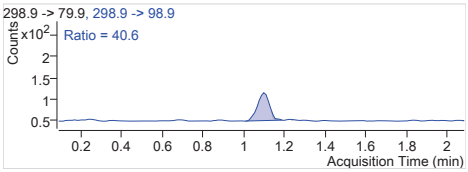

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



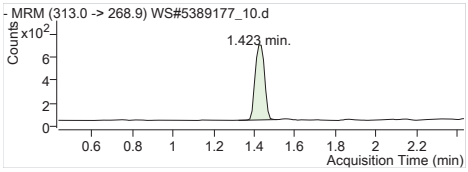



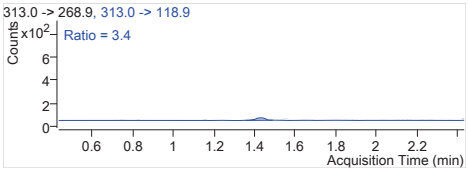

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



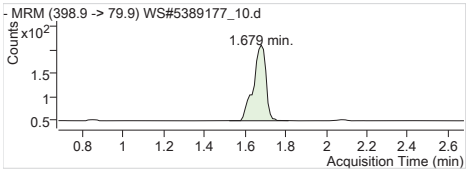



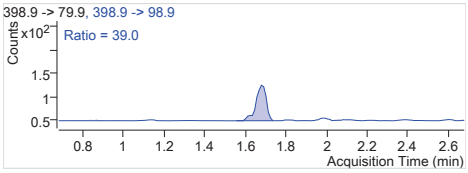

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 0.87 µg/L
Area ratio: 0.40400
Sample type: CC



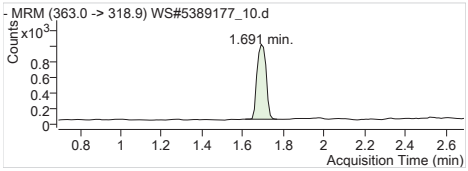



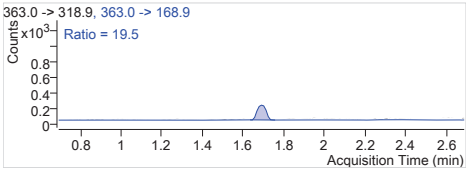

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.434)
Calc. conc. 0.89 µg/L
Area ratio: 0.32173
Sample type: CC



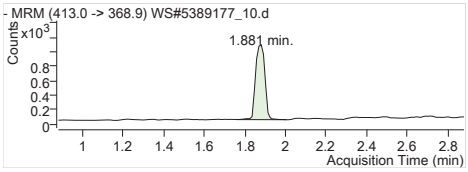



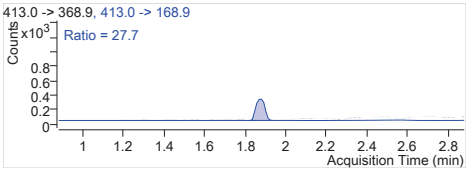

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 1.06 µg/L
Area ratio: 0.42217
Sample type: CC



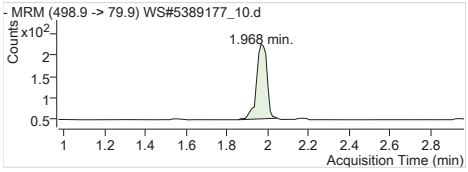



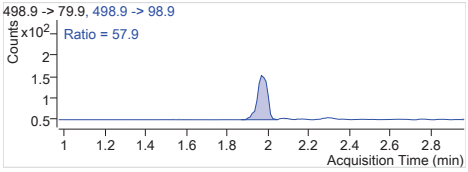

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.95 µg/L
Area ratio: 0.35447
Sample type: CC



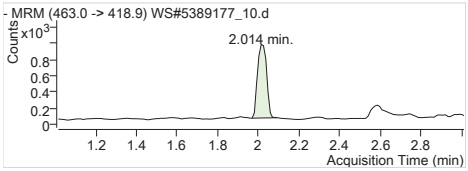



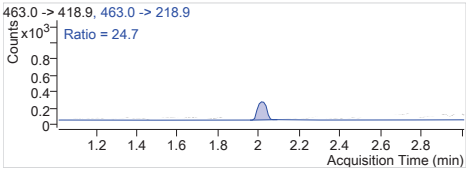

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 0.86 µg/L
Area ratio: 0.36448
Sample type: CC



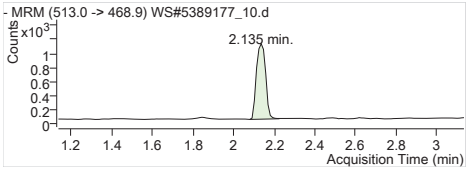



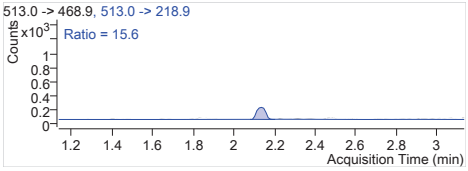

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 0.96 µg/L
Area ratio: 0.31640
Sample type: CC



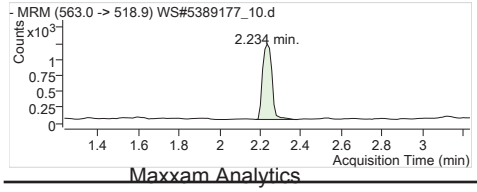



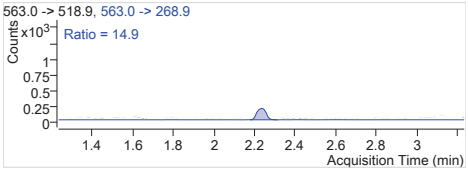

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 0.90 µg/L
Area ratio: 0.31670
Sample type: CC



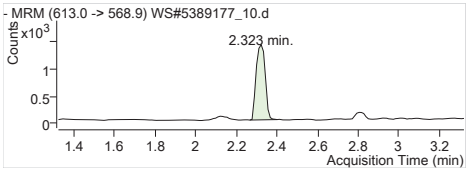



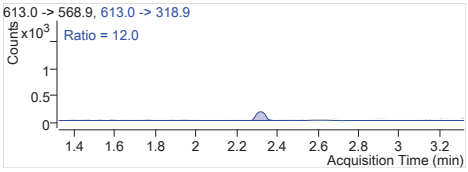

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 1.03 µg/L
Area ratio: 0.44801
Sample type: CC



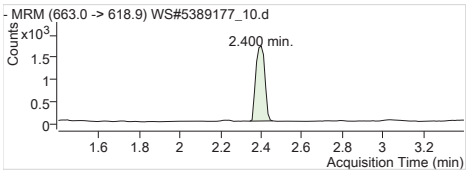



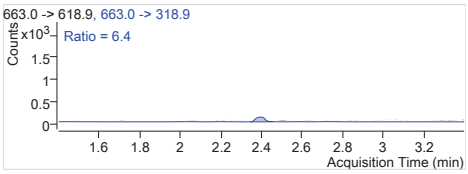

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 1.03 µg/L
Area ratio: 0.41842
Sample type: CC



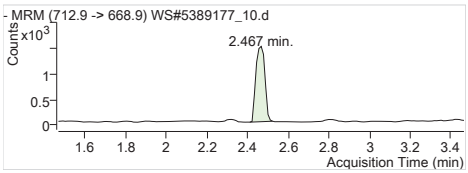



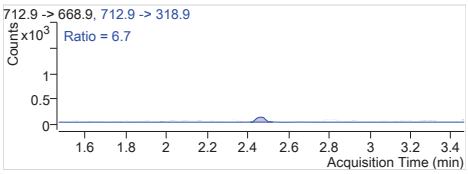

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.91 µg/L
Area ratio: 0.35450
Sample type: CC



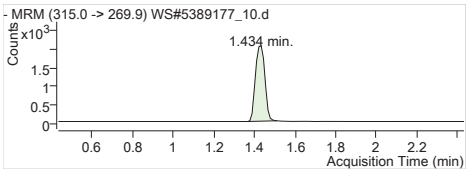



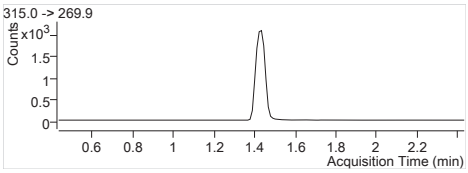

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.95 µg/L
Area ratio: 0.39476
Sample type: CC



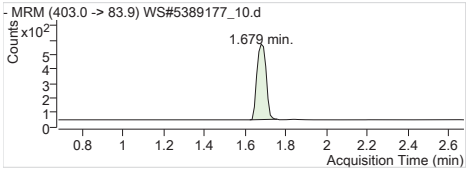



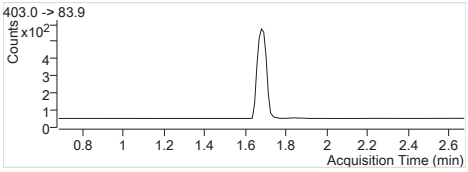

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 1.05 µg/L
Area ratio: 0.34520
Sample type: CC



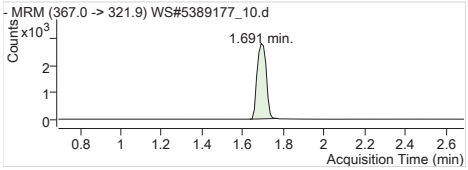



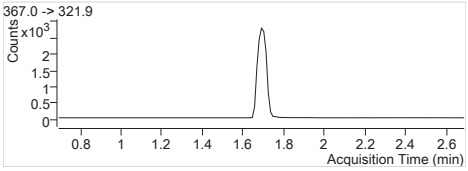

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 98.07 µg/L
Area ratio: 0.27494
Sample type: CC



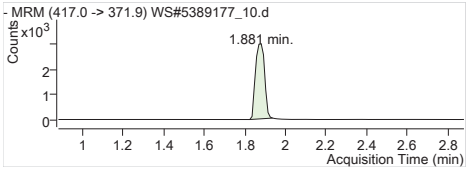



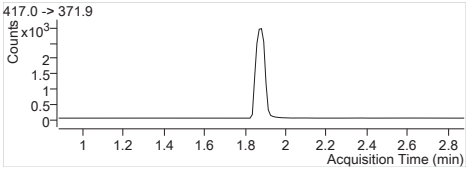

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 95.10 µg/L
Area ratio: 0.06869
Sample type: CC



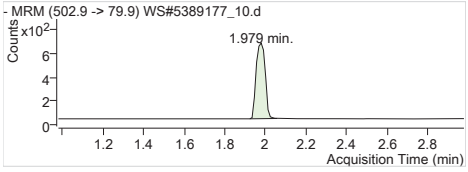



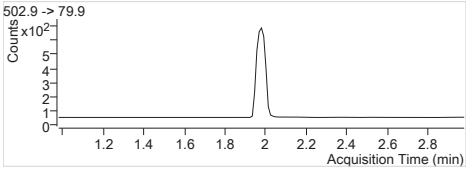

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 94.99 µg/L
Area ratio: 0.35425
Sample type: CC



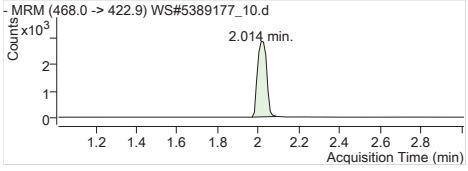



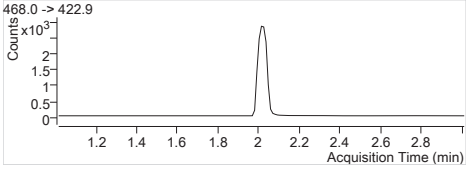

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 94.87 µg/L
Area ratio: 0.37855
Sample type: CC



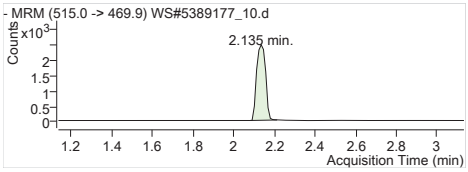



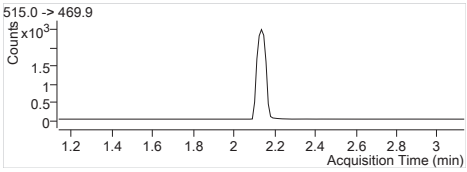

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 93.39 µg/L
Area ratio: 0.08272
Sample type: CC



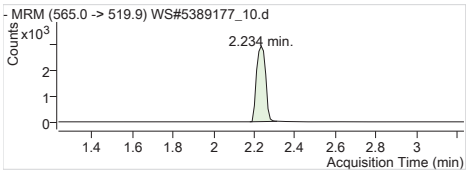



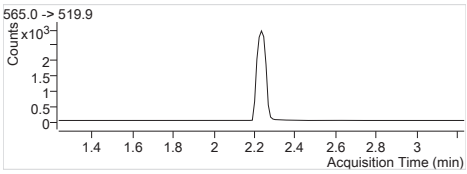

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 91.66 µg/L
Area ratio: 0.36869
Sample type: CC



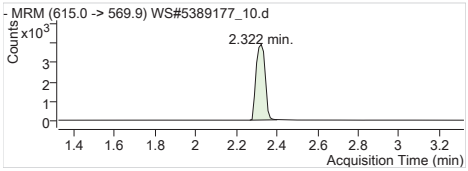



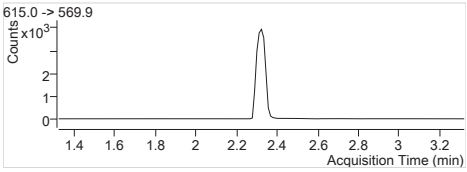

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 91.53 µg/L
Area ratio: 0.23056
Sample type: CC



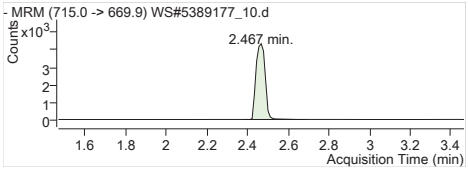



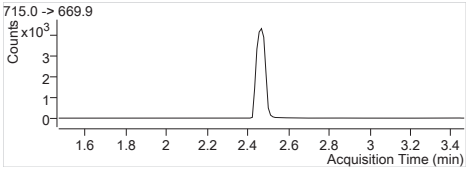

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 91.63 µg/L
Area ratio: 0.27525
Sample type: CC



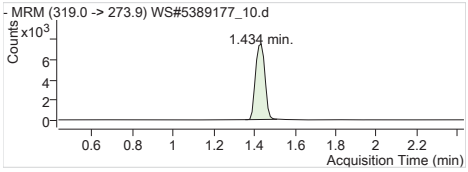



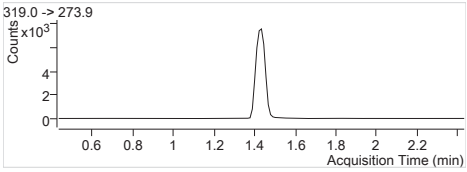

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 92.99 µg/L
Area ratio: 0.36852
Sample type: CC



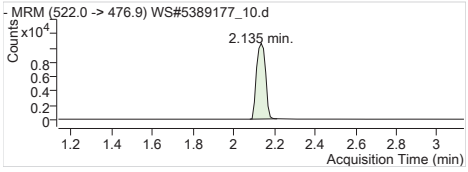



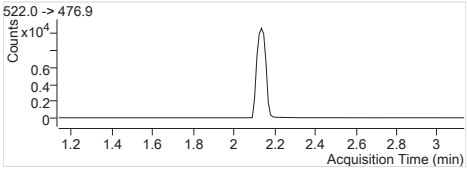

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 86.95 µg/L
Area ratio: 0.41242
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 112.26 µg/L
Area ratio: 0
Sample type: CC



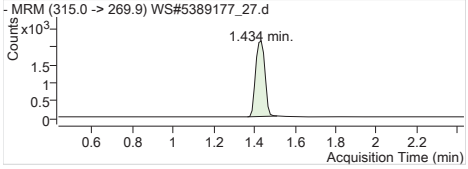

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 114.69 µg/L
Area ratio: 0
Sample type: CC

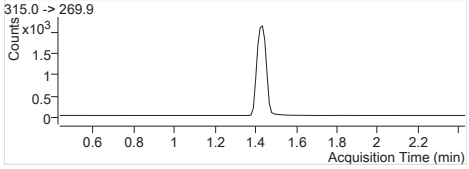
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_27.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A5 |
| **Acq. Date** | 2018/02/09 2:05:41 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

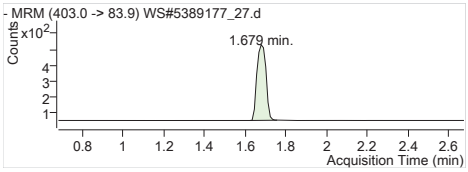
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6691 | 1.43 | 1 µg/L | | |
| MPFHxS | 1496 | 1.68 | 1 µg/L | | |
| MPFHpA | 8064 | 1.69 | 1 µg/L | | |
| MPFOA | 8652 | 1.88 | 1 µg/L | | |
| MPFOS | 1882 | 1.98 | 1 µg/L | | |
| MPFNA | 8928 | 2.01 | 1 µg/L | | |
| MPFDA | 7464 | 2.14 | 1 µg/L | | |
| MPFUnA | 8542 | 2.23 | 1 µg/L | | |
| MPFDoA | 11193 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12706 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 22921 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 30245 | 2.13 | 1 µg/L | | |

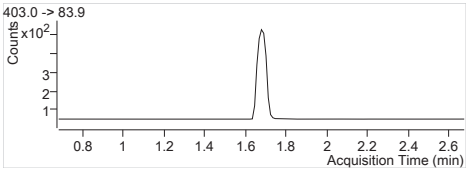
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 9306 | 1.09 | 12.50 | 13.51 µg/L | 108.10 |
| PFHxA 1 | 33244 | 1.43 | 12.50 | 12.03 µg/L | 96.21 |
| PFHxS 1 | 8576 | 1.68 | 12.50 | 12.82 µg/L | 102.59 |
| PFHpA 1 | 42668 | 1.69 | 12.50 | 12.83 µg/L | 102.67 |
| PFOA 1 | 46397 | 1.88 | 12.50 | 12.60 µg/L | 100.83 |
| PFOS 1 | 9274 | 1.97 | 12.50 | 13.04 µg/L | 104.29 |
| PFNA 1 | 41896 | 2.01 | 12.50 | 12.43 µg/L | 99.40 |
| PFDA 1 | 43455 | 2.14 | 12.50 | 12.14 µg/L | 97.11 |
| PFUnA 1 | 51071 | 2.23 | 12.50 | 13.52 µg/L | 108.15 |
| PFDoA 1 | 61193 | 2.32 | 12.50 | 12.55 µg/L | 100.43 |
| PFTrDA 1 | 70770 | 2.40 | 12.50 | 13.74 µg/L | 109.91 |
| PFTeDA 1 | 60793 | 2.47 | 12.50 | 13.55 µg/L | 108.42 |
| 13C2-PFHxA | 6691 | 1.43 | 100.00 | 104.12 µg/L | 104.12 |
| 18O2-PFHxS | 1496 | 1.68 | 100.00 | 90.36 µg/L | 90.36 |
| 13C4-PFHpA | 8064 | 1.69 | 100.00 | 94.34 µg/L | 94.34 |
| 13C4-PFOA | 8652 | 1.88 | 100.00 | 94.60 µg/L | 94.60 |
| 13C4-PFOS | 1882 | 1.98 | 100.00 | 92.70 µg/L | 92.70 |
| 13C5-PFNA | 8929 | 2.01 | 100.00 | 96.84 µg/L | 96.84 |
| 13C2-PFDA | 7396 | 2.14 | 100.00 | 97.08 µg/L | 97.08 |
| 13C2-PFUnA | 8542 | 2.23 | 100.00 | 94.01 µg/L | 94.01 |
| 13C2-PFDoA | 11193 | 2.32 | 100.00 | 93.38 µg/L | 93.38 |
| 13C2-PFTeDA | 12997 | 2.47 | 100.00 | 90.60 µg/L | 90.60 |
| 13C6-PFHxA | 22921 | 1.43 | 100.00 | 107.06 µg/L | 107.06 |
| 13C9-PFDA | 30245 | 2.13 | 100.00 | 105.83 µg/L | 105.83 |



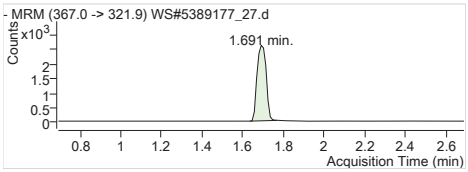



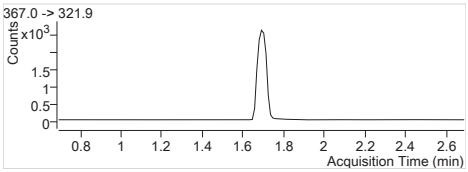

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



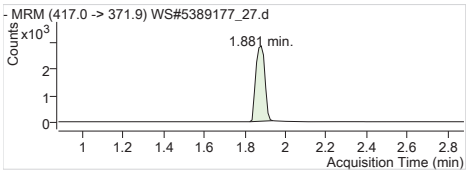



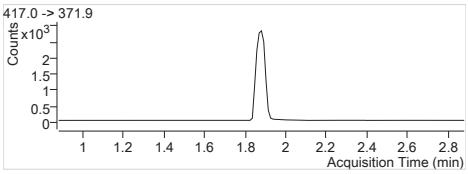

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: CC



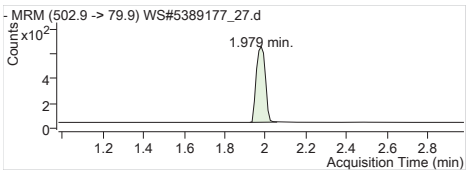



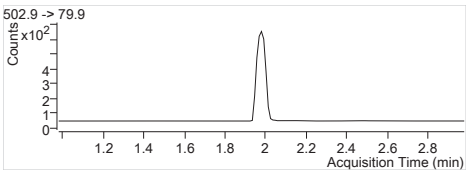

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: CC



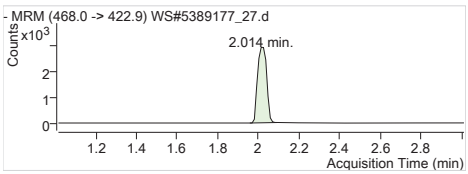



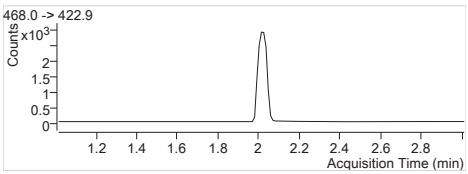

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



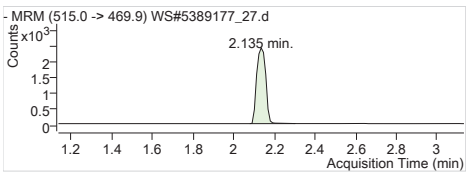



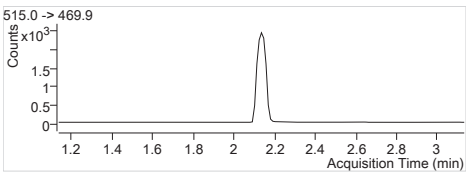

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



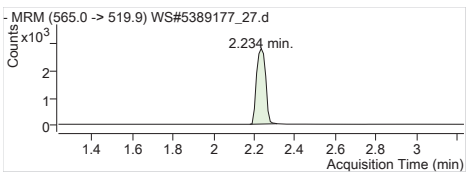



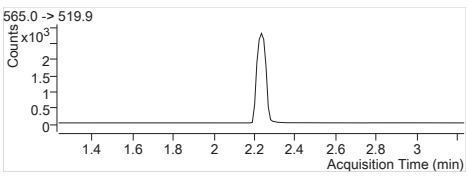

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: CC



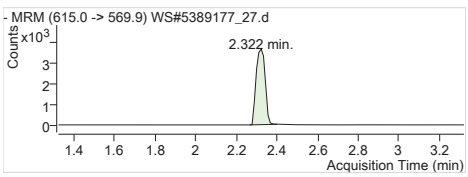



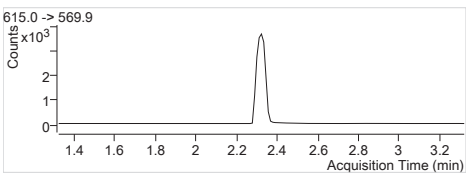

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



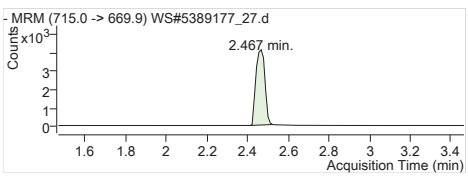



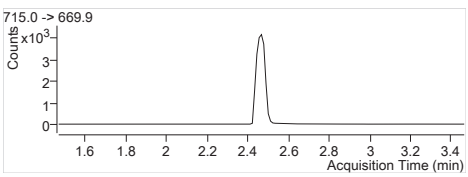

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: CC



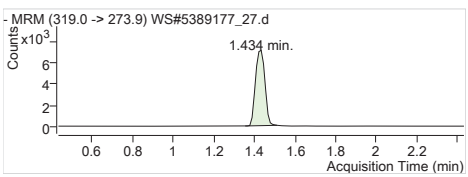



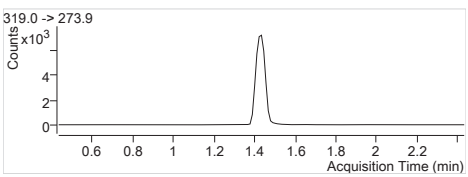

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



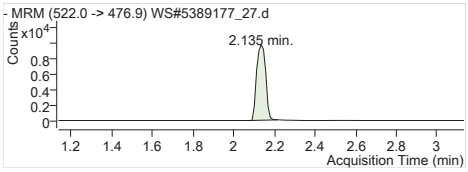



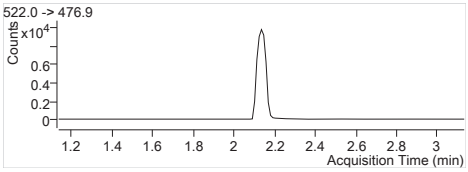

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



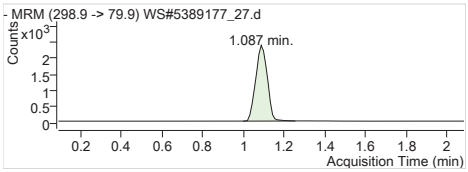



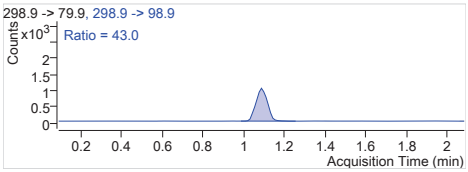

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



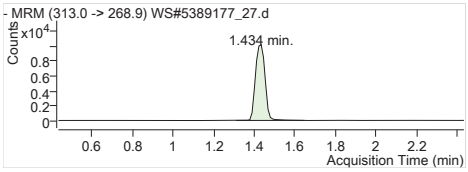



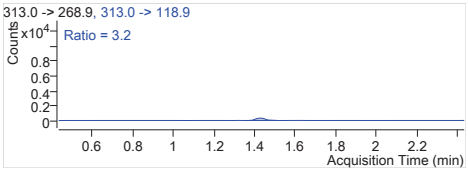

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



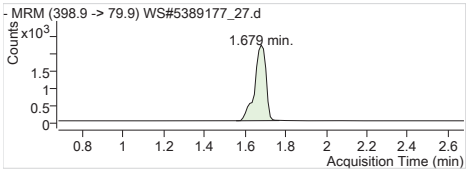



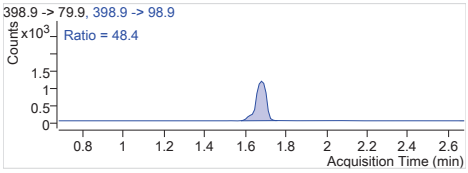

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 13.51 µg/L
Area ratio: 6.22059
Sample type: CC



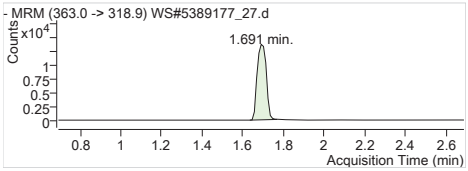



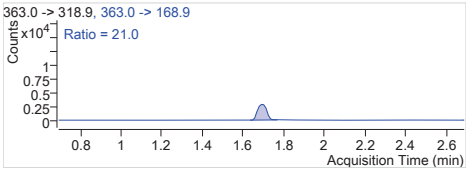

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 12.03 µg/L
Area ratio: 4.96847
Sample type: CC



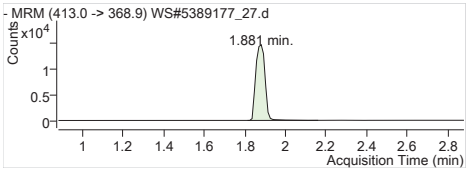



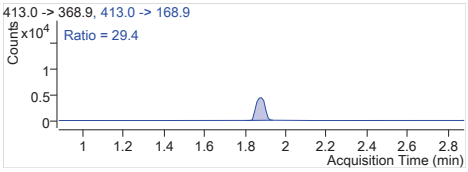

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 12.82 µg/L
Area ratio: 5.73262
Sample type: CC



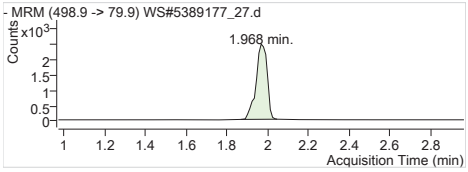



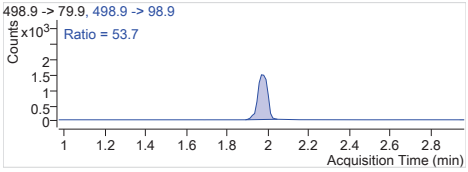

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.83 µg/L
Area ratio: 5.29117
Sample type: CC



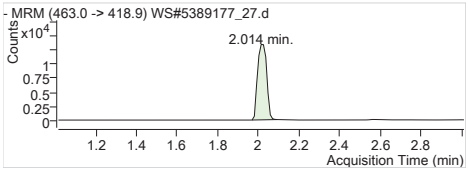



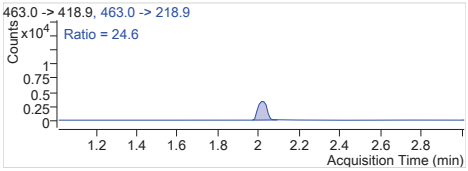

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 12.60 µg/L
Area ratio: 5.36258
Sample type: CC



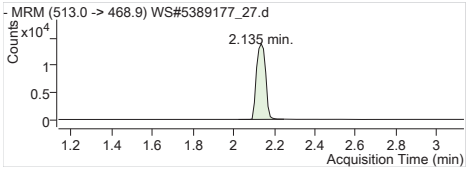



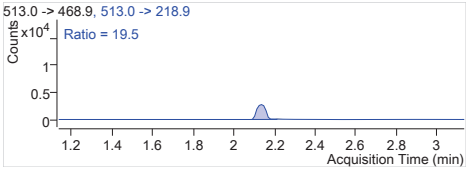

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 13.04 µg/L
Area ratio: 4.92774
Sample type: CC



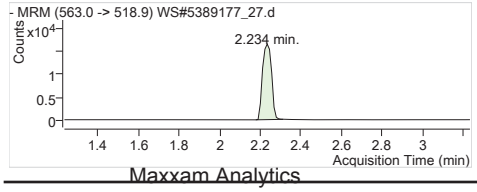



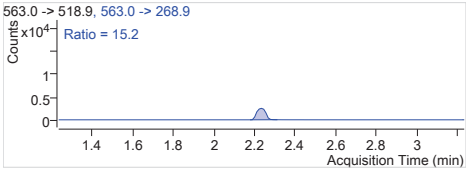

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 12.43 µg/L
Area ratio: 4.69265
Sample type: CC



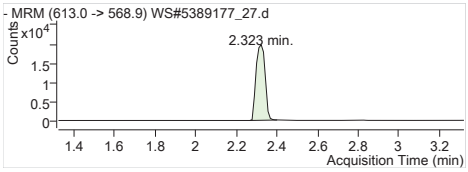



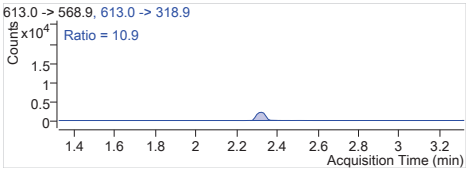

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 12.14 µg/L
Area ratio: 5.82195
Sample type: CC



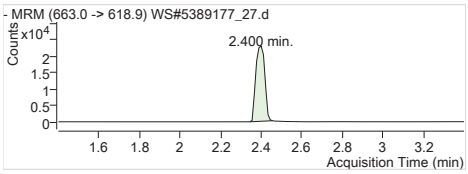



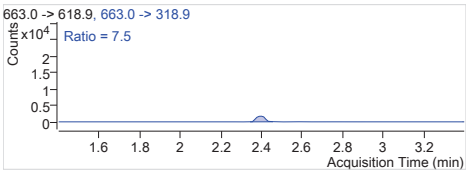

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 13.52 µg/L
Area ratio: 5.97881
Sample type: CC



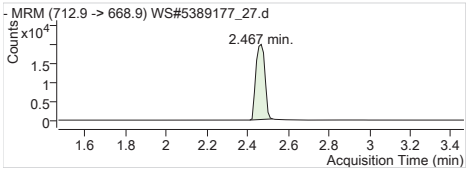



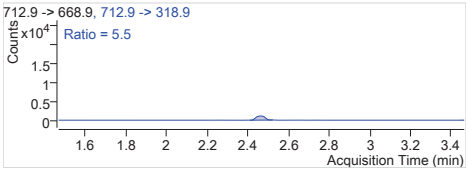

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 12.55 µg/L
Area ratio: 5.46708
Sample type: CC



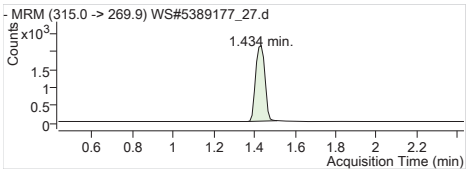



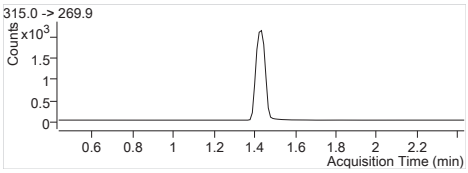

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 13.74 µg/L
Area ratio: 5.56981
Sample type: CC



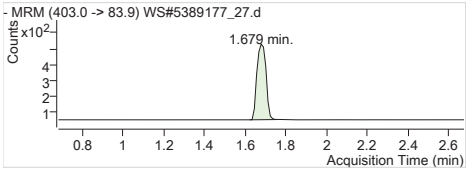



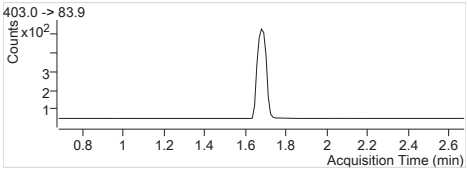

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 13.55 µg/L
Area ratio: 4.78459
Sample type: CC



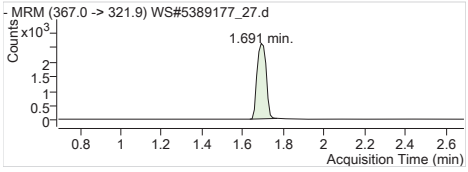



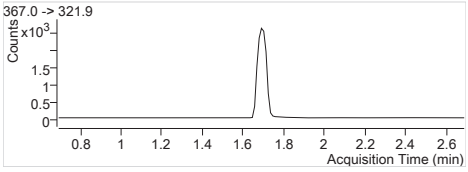

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 104.12 µg/L
Area ratio: 0.29192
Sample type: CC



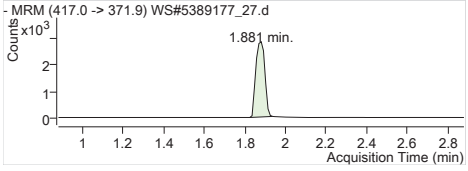



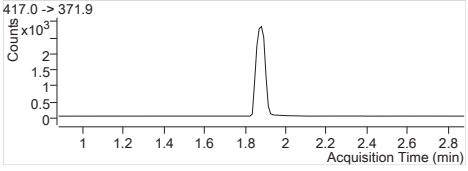

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 90.36 µg/L
Area ratio: 0.06527
Sample type: CC



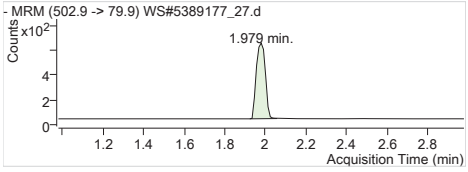



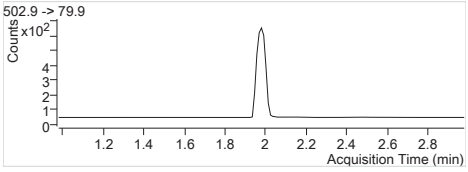

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 94.34 µg/L
Area ratio: 0.35182
Sample type: CC



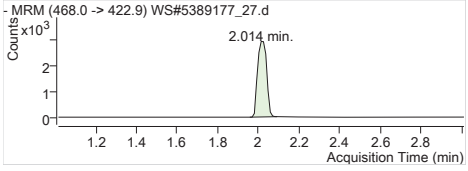



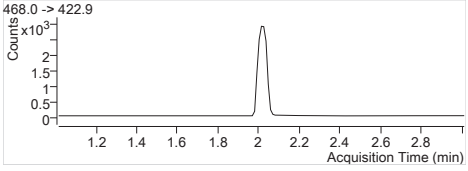

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 94.60 µg/L
Area ratio: 0.37747
Sample type: CC



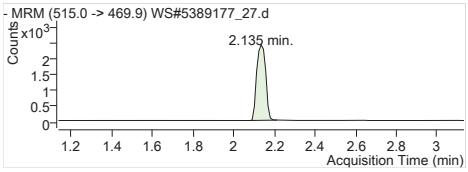



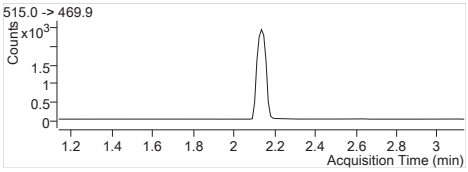

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 92.70 µg/L
Area ratio: 0.08211
Sample type: CC



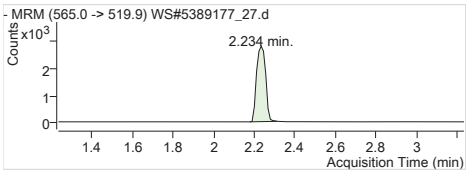



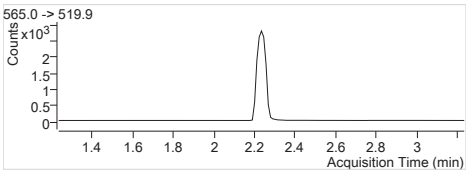

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 96.84 µg/L
Area ratio: 0.38956
Sample type: CC



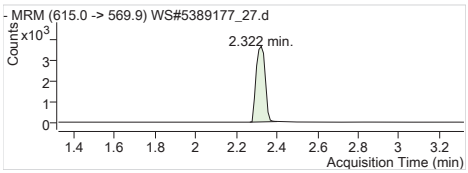



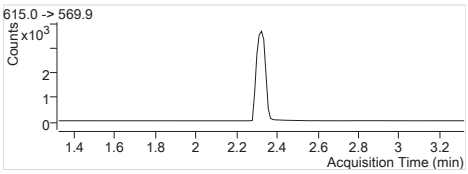

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 97.08 µg/L
Area ratio: 0.24454
Sample type: CC



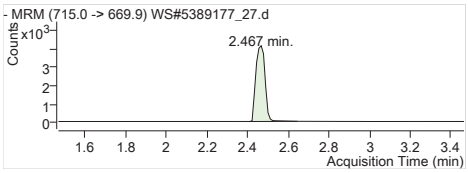



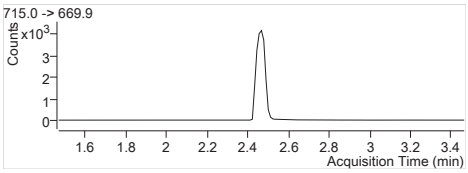

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 94.01 µg/L
Area ratio: 0.28243
Sample type: CC



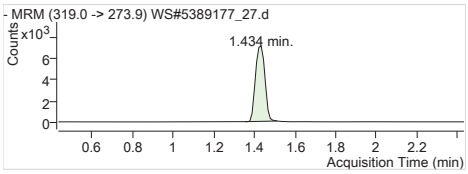



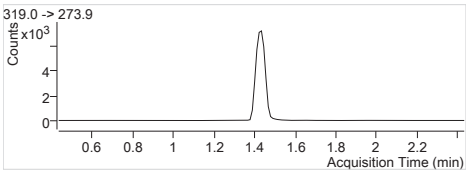

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 93.38 µg/L
Area ratio: 0.37008
Sample type: CC



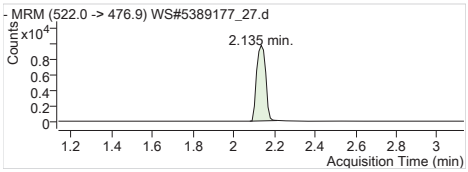



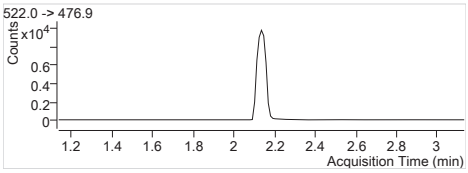

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 90.60 µg/L
Area ratio: 0.42972
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 107.06 µg/L
Area ratio: 0
Sample type: CC



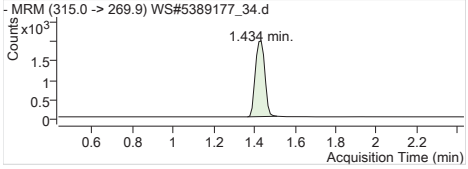

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 105.83 µg/L
Area ratio: 0
Sample type: CC

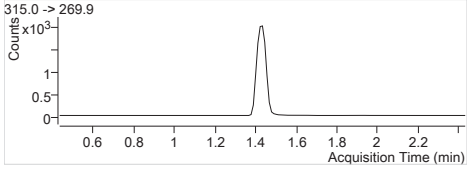
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_34.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A5 |
| **Acq. Date** | 2018/02/09 2:40:13 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

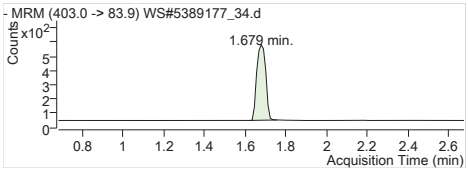
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6392 | 1.43 | 1 µg/L | | |
| MPFHxS | 1641 | 1.68 | 1 µg/L | | |
| MPFHpA | 8167 | 1.69 | 1 µg/L | | |
| MPFOA | 9017 | 1.88 | 1 µg/L | | |
| MPFOS | 1964 | 1.98 | 1 µg/L | | |
| MPFNA | 8662 | 2.02 | 1 µg/L | | |
| MPFDA | 6972 | 2.14 | 1 µg/L | | |
| MPFUnA | 8506 | 2.23 | 1 µg/L | | |
| MPFDoA | 11795 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13090 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 23371 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 30394 | 2.13 | 1 µg/L | | |

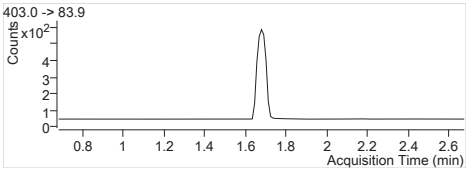
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 8590 | 1.09 | 12.50 | 11.37 µg/L | 90.96 |
| PFHxA 1 | 33063 | 1.43 | 12.50 | 12.52 µg/L | 100.13 |
| PFHxS 1 | 8736 | 1.68 | 12.50 | 11.92 µg/L | 95.34 |
| PFHpA 1 | 43035 | 1.69 | 12.50 | 12.78 µg/L | 102.25 |
| PFOA 1 | 47570 | 1.88 | 12.50 | 12.40 µg/L | 99.20 |
| PFOS 1 | 9087 | 1.97 | 12.50 | 12.25 µg/L | 97.99 |
| PFNA 1 | 41263 | 2.01 | 12.50 | 12.61 µg/L | 100.90 |
| PFDA 1 | 45094 | 2.14 | 12.50 | 13.47 µg/L | 107.79 |
| PFUnA 1 | 49938 | 2.23 | 12.50 | 13.28 µg/L | 106.21 |
| PFDoA 1 | 64421 | 2.32 | 12.50 | 12.54 µg/L | 100.33 |
| PFTrDA 1 | 70006 | 2.40 | 12.50 | 13.19 µg/L | 105.53 |
| PFTeDA 1 | 60170 | 2.47 | 12.50 | 13.02 µg/L | 104.18 |
| 13C2-PFHxA | 6392 | 1.43 | 100.00 | 97.55 µg/L | 97.55 |
| 18O2-PFHxS | 1641 | 1.68 | 100.00 | 97.20 µg/L | 97.20 |
| 13C4-PFHpA | 8167 | 1.69 | 100.00 | 93.71 µg/L | 93.71 |
| 13C4-PFOA | 9017 | 1.88 | 100.00 | 96.70 µg/L | 96.70 |
| 13C4-PFOS | 1964 | 1.98 | 100.00 | 94.88 µg/L | 94.88 |
| 13C5-PFNA | 8662 | 2.02 | 100.00 | 92.14 µg/L | 92.14 |
| 13C2-PFDA | 6891 | 2.14 | 100.00 | 90.01 µg/L | 90.01 |
| 13C2-PFUnA | 8506 | 2.23 | 100.00 | 93.16 µg/L | 93.16 |
| 13C2-PFDoA | 11795 | 2.32 | 100.00 | 97.92 µg/L | 97.92 |
| 13C2-PFTeDA | 13281 | 2.47 | 100.00 | 92.13 µg/L | 92.13 |
| 13C6-PFHxA | 23371 | 1.43 | 100.00 | 109.17 µg/L | 109.17 |
| 13C9-PFDA | 30394 | 2.13 | 100.00 | 106.35 µg/L | 106.35 |



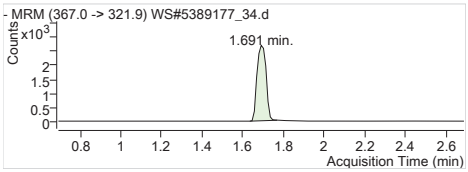



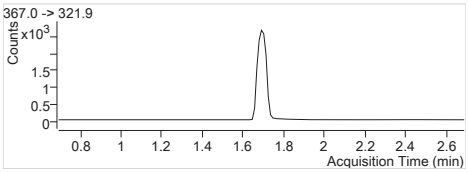

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



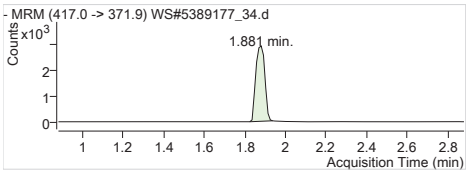



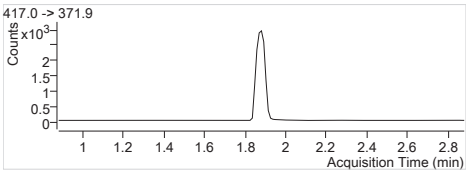

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: CC



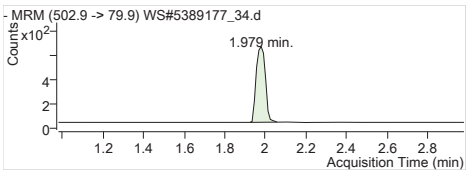



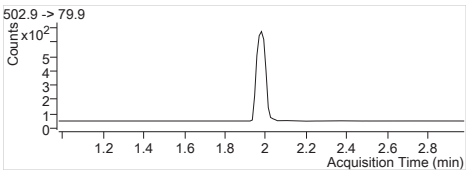

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: CC



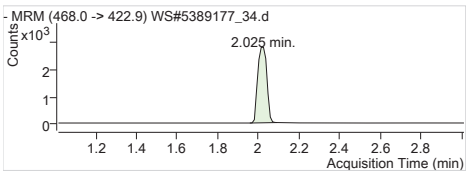



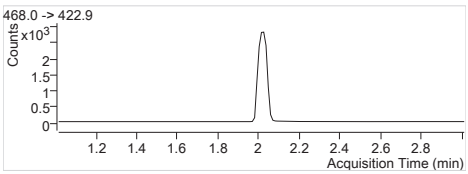

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



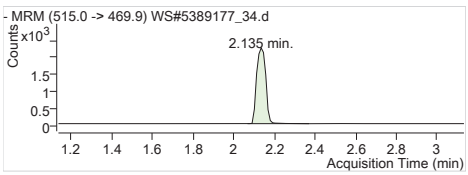



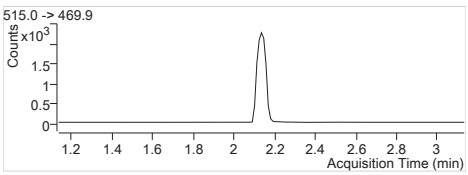

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



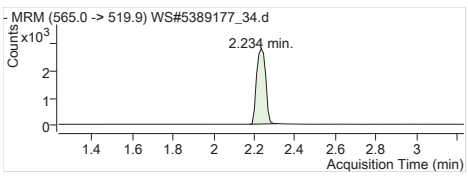



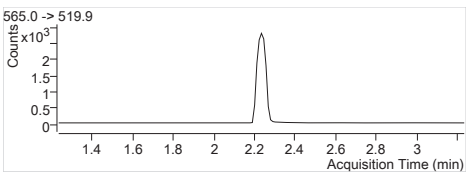

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.014)
Concentration: 1 µg/L
Sample type: CC



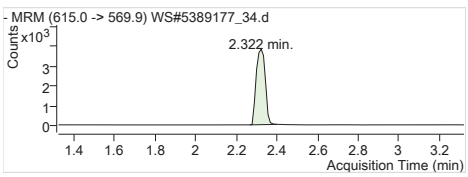



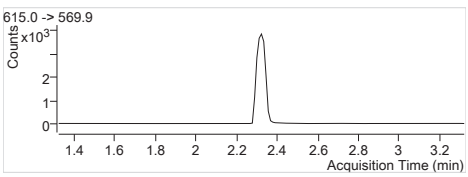

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



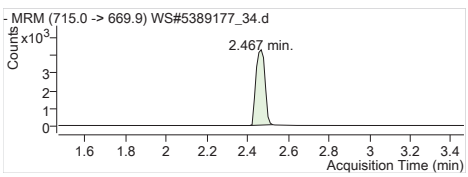



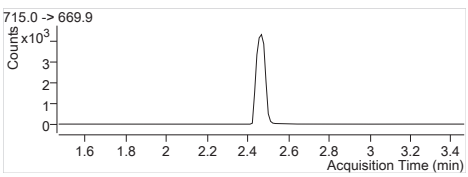

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: CC



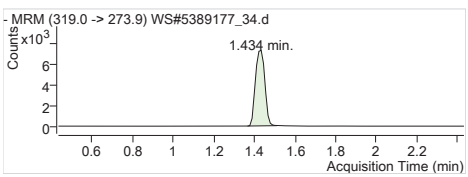



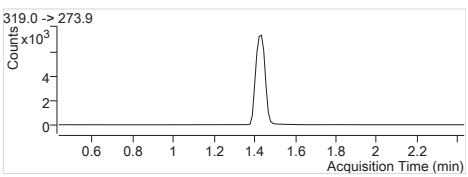

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



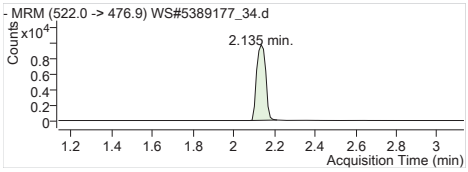



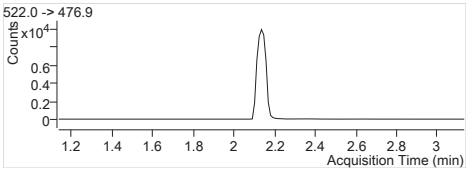

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



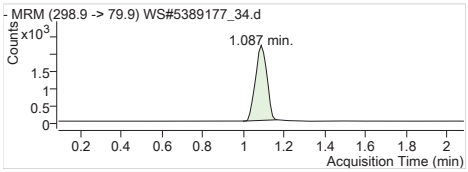



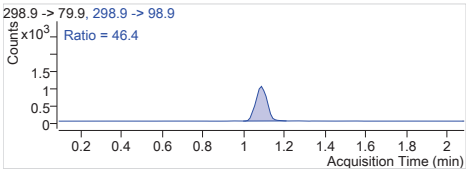

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



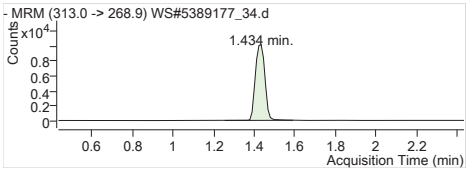



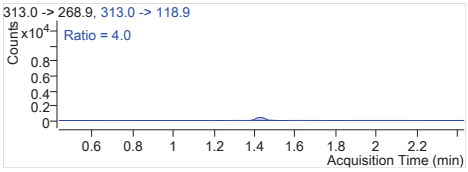

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



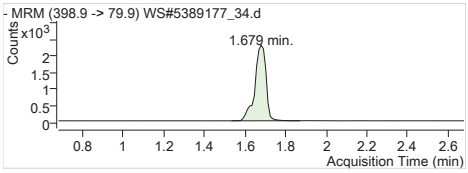



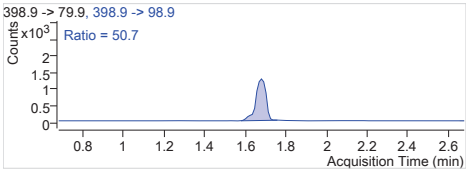

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 11.37 µg/L
Area ratio: 5.23461
Sample type: CC



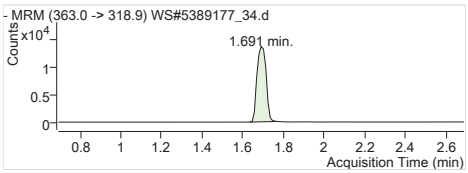



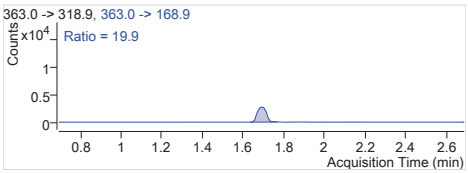

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 12.52 µg/L
Area ratio: 5.17256
Sample type: CC



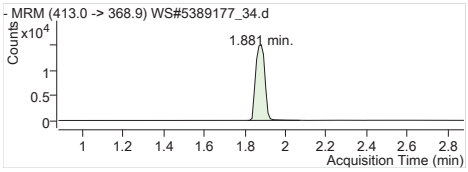



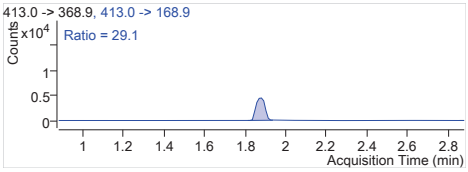

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 11.92 µg/L
Area ratio: 5.32358
Sample type: CC



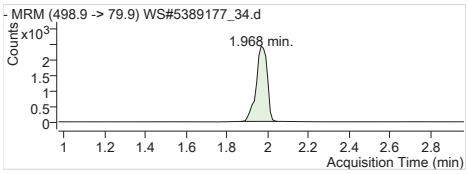



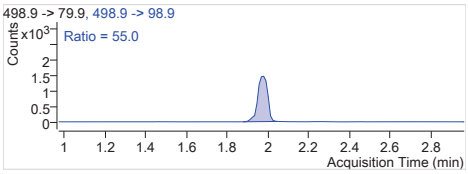

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.78 µg/L
Area ratio: 5.26938
Sample type: CC



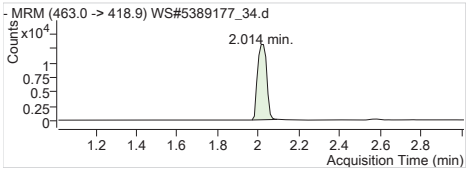



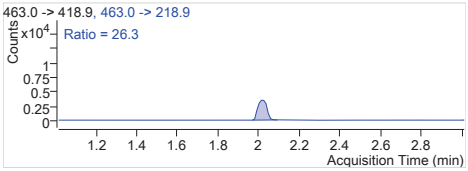

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 12.40 µg/L
Area ratio: 5.27559
Sample type: CC



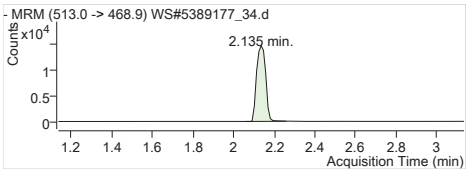



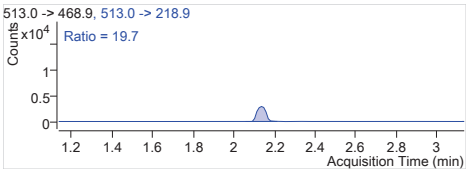

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 12.25 µg/L
Area ratio: 4.62678
Sample type: CC



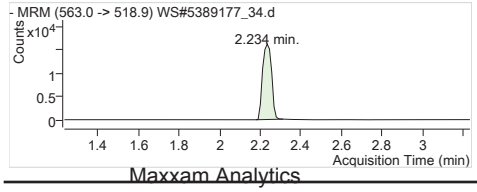



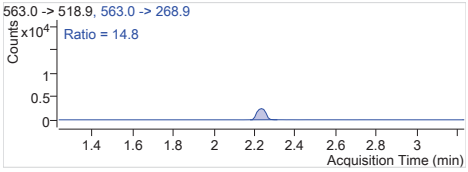

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 12.61 µg/L
Area ratio: 4.76368
Sample type: CC



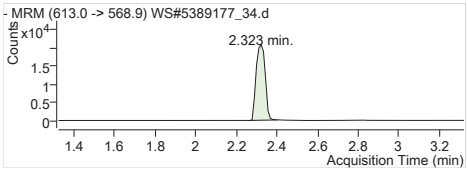



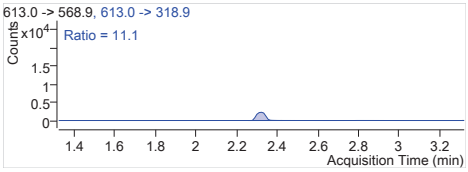

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 13.47 µg/L
Area ratio: 6.46787
Sample type: CC



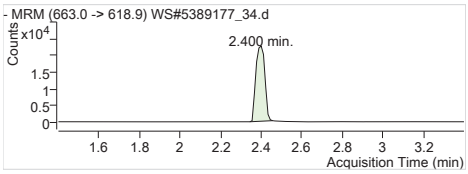



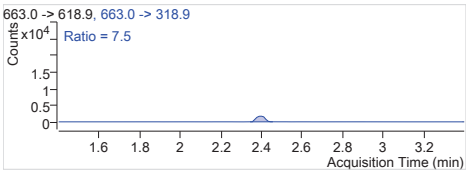

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 13.28 µg/L
Area ratio: 5.87091
Sample type: CC



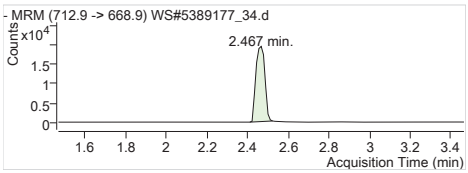



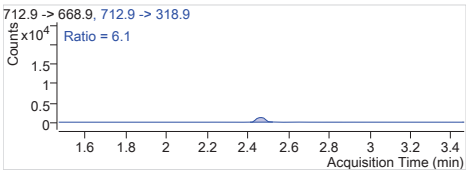

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 12.54 µg/L
Area ratio: 5.46172
Sample type: CC



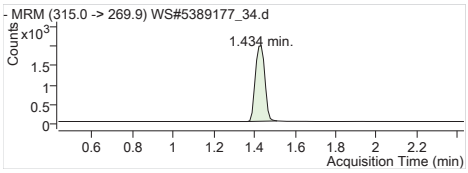



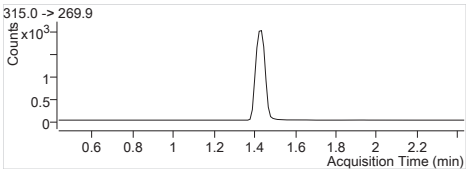

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 13.19 µg/L
Area ratio: 5.34805
Sample type: CC



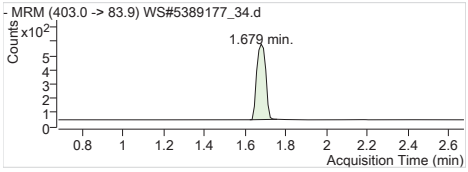



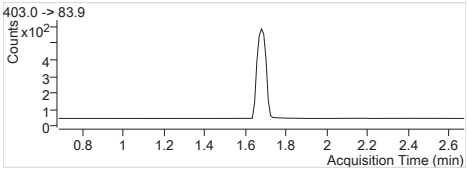

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 13.02 µg/L
Area ratio: 4.59664
Sample type: CC



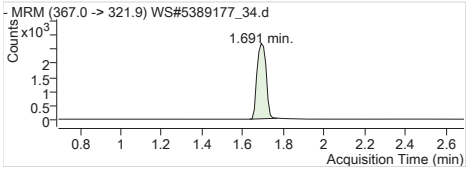



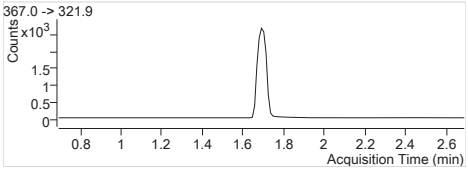

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 97.55 µg/L
Area ratio: 0.27350
Sample type: CC



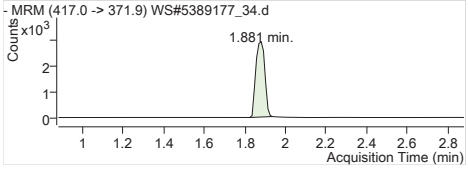



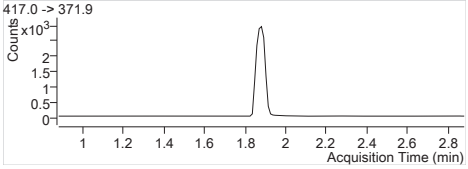

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 97.20 µg/L
Area ratio: 0.07022
Sample type: CC



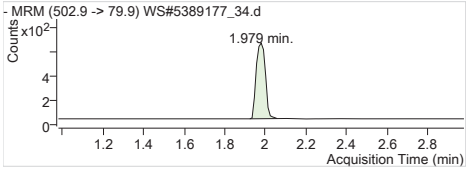



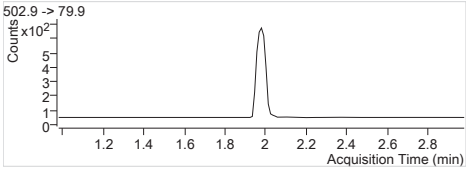

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 93.71 µg/L
Area ratio: 0.34945
Sample type: CC



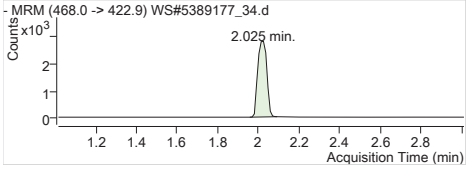



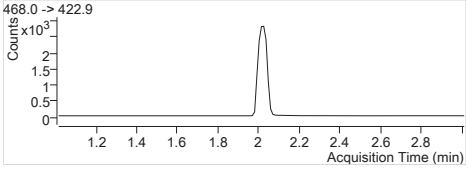

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 96.70 µg/L
Area ratio: 0.38582
Sample type: CC



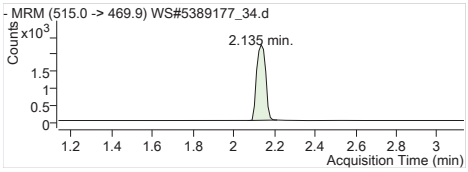



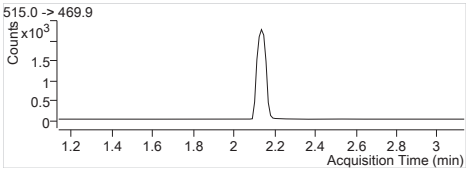

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 94.88 µg/L
Area ratio: 0.08404
Sample type: CC



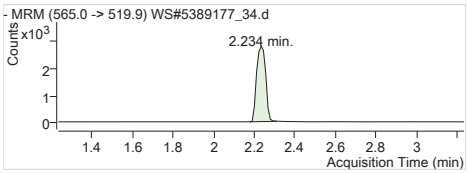



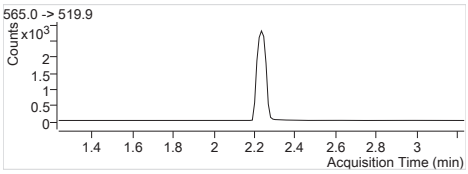

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.014)
Calc. conc. 92.14 µg/L
Area ratio: 0.37063
Sample type: CC



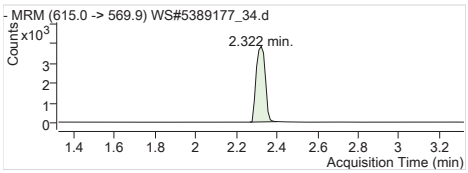



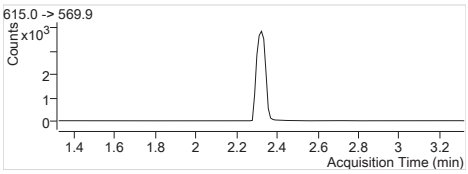

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 90.01 µg/L
Area ratio: 0.22672
Sample type: CC



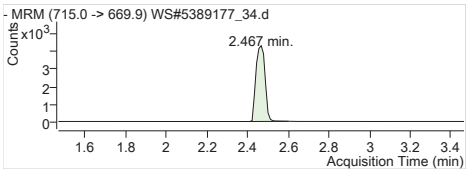



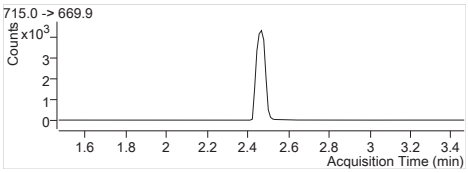

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 93.16 µg/L
Area ratio: 0.27986
Sample type: CC



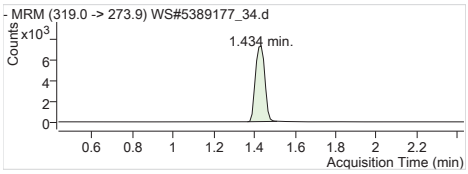



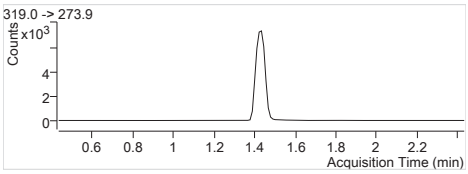

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 97.92 µg/L
Area ratio: 0.38807
Sample type: CC



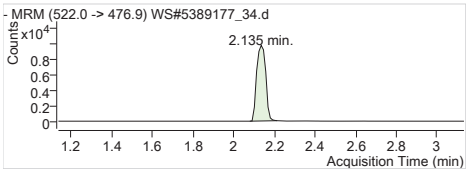



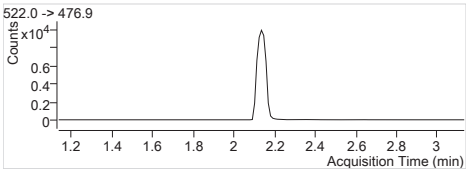

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 92.13 µg/L
Area ratio: 0.43696
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 109.17 µg/L
Area ratio: 0
Sample type: CC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 106.35 µg/L
Area ratio: 0
Sample type: CC

# Quantitation Results

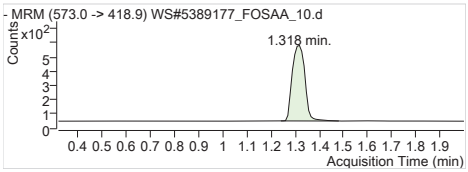
Agilent Technologies

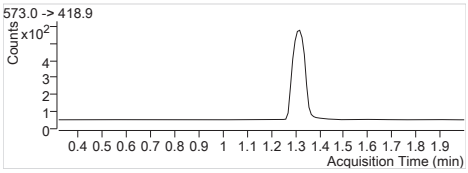
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A2 |
| **Acq. Date** | 2018/02/08 6:23:15 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

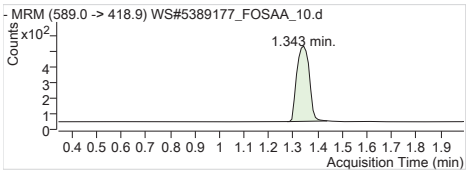
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1934 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1726 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 24330 | 0.91 | 1 µg/L | | |

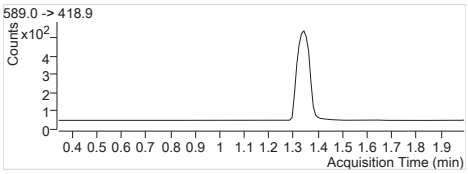
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 654 | 1.31 | 0.83 | 0.90 µg/L | 108.39 |
| EtFOSAA 1 | 657 | 1.34 | 0.83 | 0.87 µg/L | 104.99 |
| D3-MeFOSAA | 1932 | 1.32 | 100.00 | 95.32 µg/L | 95.32 |
| D5-EtFOSAA | 1750 | 1.34 | 100.00 | 94.78 µg/L | 94.78 |
| 13C9-PFDA | 23423 | 0.91 | 100.00 | 108.17 µg/L | 108.17 |



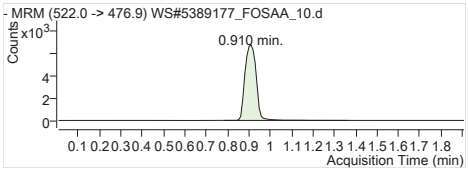



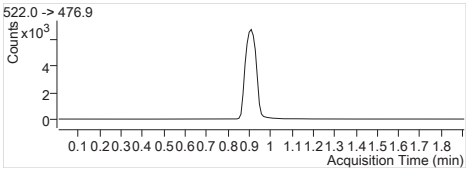

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: CC



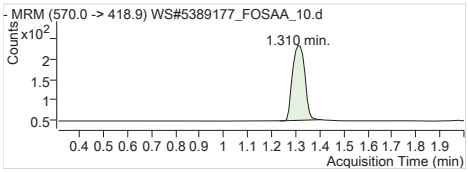



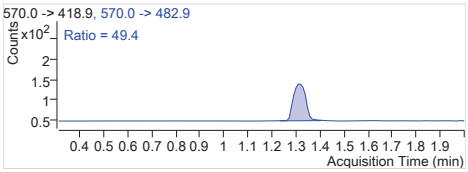

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: CC



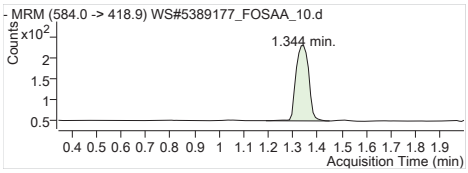



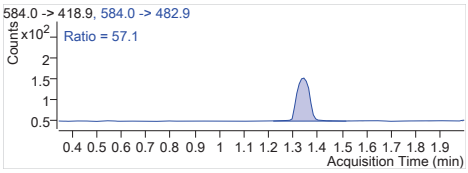

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: CC



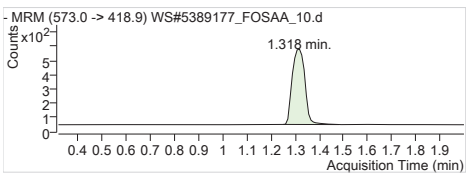



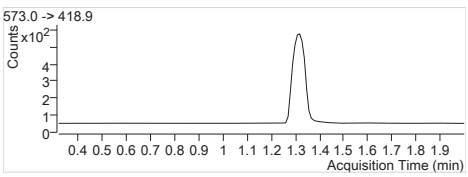

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 0.90 µg/L
Area ratio: 0.33816
Sample type: CC



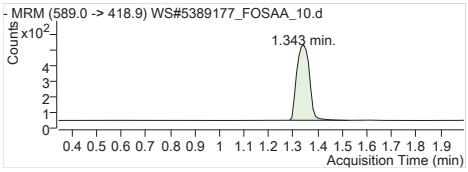



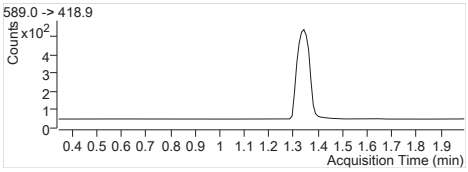

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 0.87 µg/L
Area ratio: 0.38065
Sample type: CC



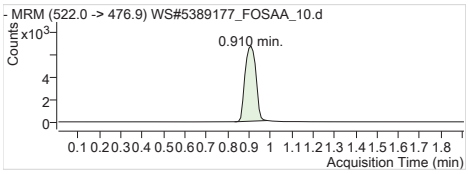



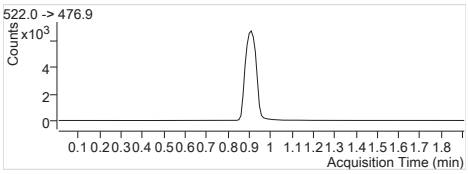

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 95.32 µg/L
Area ratio: 0.07941
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 94.78 µg/L |
| Area ratio: | 0.07193 |
| Sample type: | CC |



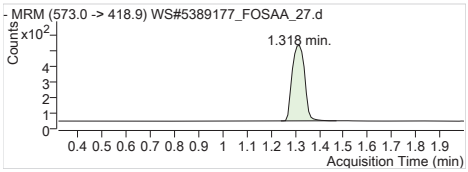

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 108.17 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

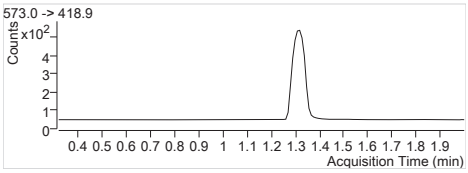
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_27.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A5 |
| **Acq. Date** | 2018/02/08 7:04:09 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

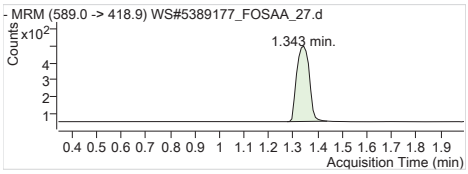
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1752 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1604 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 22437 | 0.91 | 1 µg/L | | |

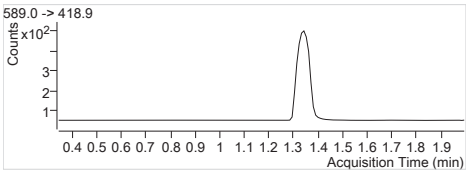
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 8245 | 1.31 | 12.50 | 12.90 µg/L | 103.20 |
| EtFOSAA 1 | 8848 | 1.33 | 12.50 | 13.06 µg/L | 104.45 |
| D3-MeFOSAA | 1754 | 1.32 | 100.00 | 93.84 µg/L | 93.84 |
| D5-EtFOSAA | 1623 | 1.34 | 100.00 | 95.32 µg/L | 95.32 |
| 13C9-PFDA | 21696 | 0.91 | 100.00 | 100.20 µg/L | 100.20 |



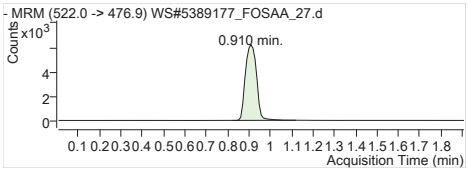



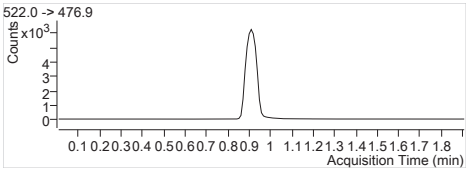

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: CC



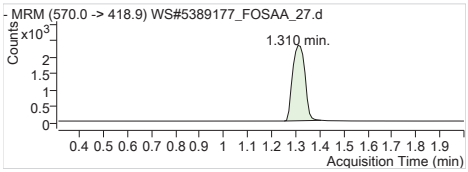



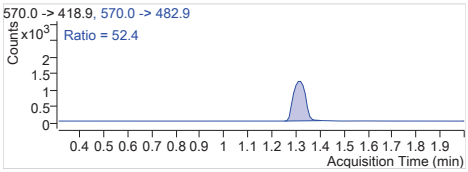

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: CC



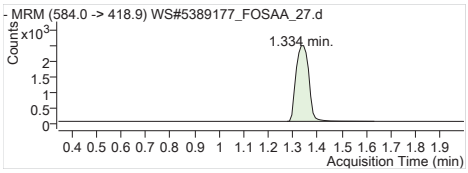



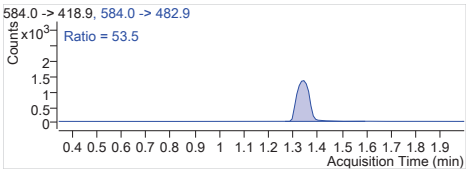

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: CC



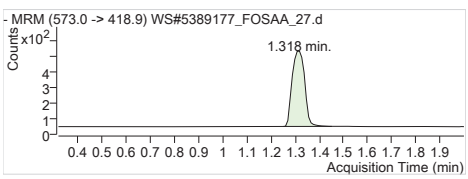



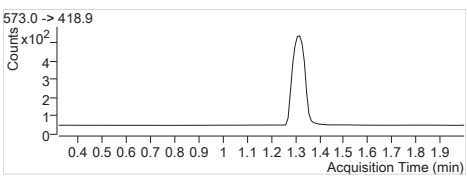

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 12.90 µg/L
Area ratio: 4.70605
Sample type: CC



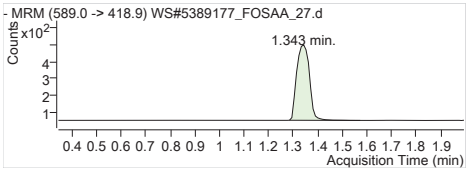



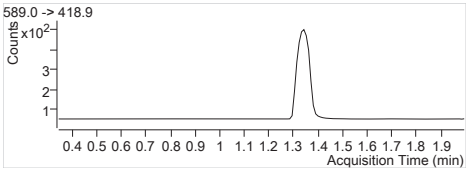

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.344)
Calc. conc. 13.06 µg/L
Area ratio: 5.51621
Sample type: CC



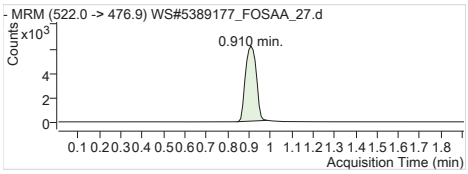



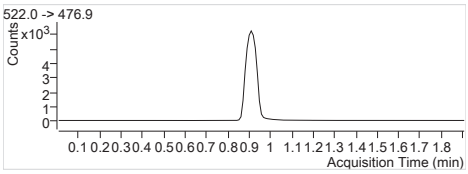

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 93.84 µg/L
Area ratio: 0.07817
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 95.32 µg/L |
| Area ratio: | 0.07234 |
| Sample type: | CC |



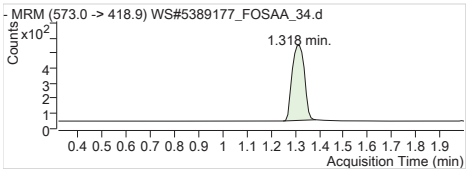

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 100.20 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

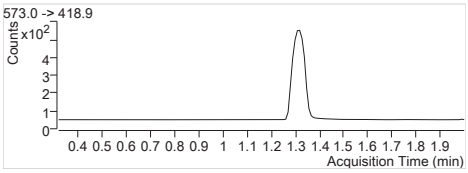
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_34.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A5 |
| **Acq. Date** | 2018/02/08 7:21:00 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

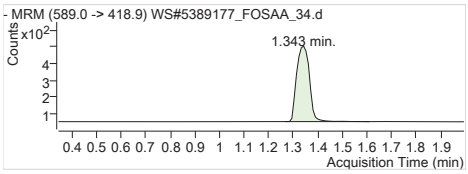
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1770 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1647 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 22407 | 0.91 | 1 µg/L | | |

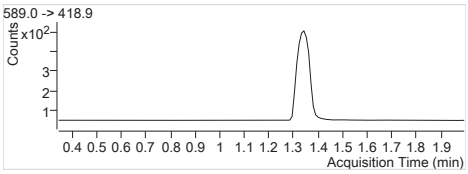
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 8302 | 1.31 | 12.50 | 12.86 µg/L | 102.85 |
| EtFOSAA 1 | 8688 | 1.33 | 12.50 | 12.48 µg/L | 99.87 |
| D3-MeFOSAA | 1815 | 1.32 | 100.00 | 97.23 µg/L | 97.23 |
| D5-EtFOSAA | 1630 | 1.34 | 100.00 | 95.86 µg/L | 95.86 |
| 13C9-PFDA | 21686 | 0.91 | 100.00 | 100.15 µg/L | 100.15 |



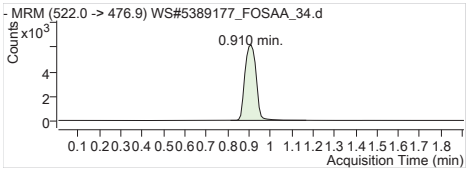



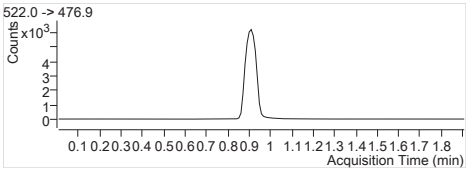

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: CC



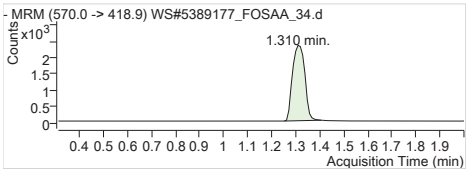



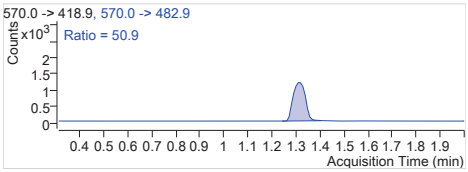

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: CC



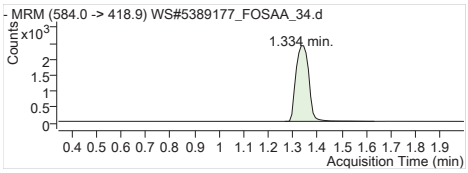



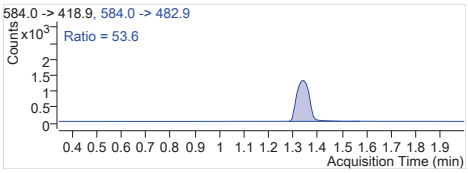

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: CC



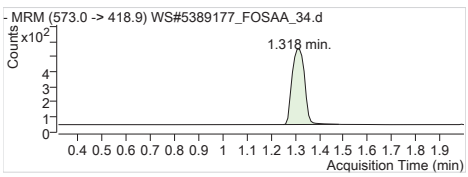



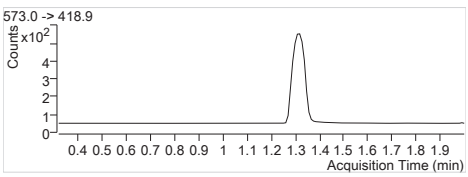

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 12.86 µg/L
Area ratio: 4.69040
Sample type: CC



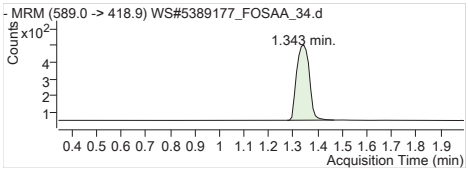



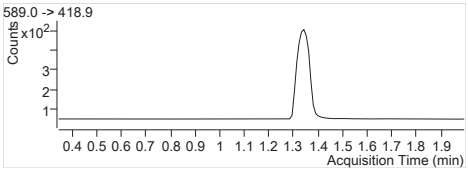

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.344)
Calc. conc. 12.48 µg/L
Area ratio: 5.27505
Sample type: CC



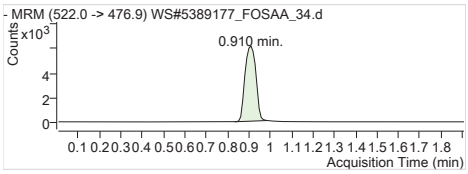



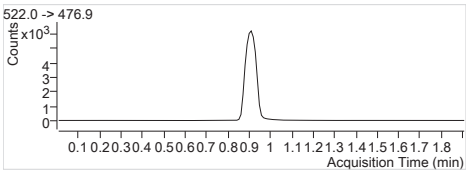

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 97.23 µg/L
Area ratio: 0.08100
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 95.86 µg/L |
| Area ratio: | 0.07275 |
| Sample type: | CC |



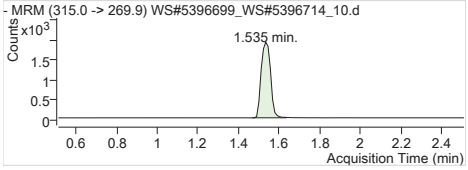

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 100.15 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

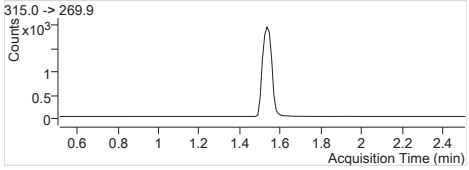
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A2 |
| **Acq. Date** | 2018/02/15 4:55:18 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

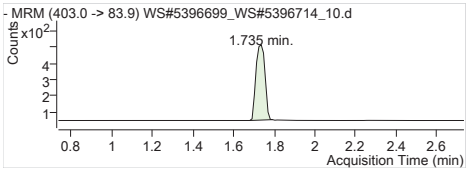
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6103 | 1.53 | 1 µg/L | | |
| MPFHxS | 1431 | 1.74 | 1 µg/L | | |
| MPFHpA | 7408 | 1.78 | 1 µg/L | | |
| MPFOA | 6593 | 1.96 | 1 µg/L | | |
| MPFOS | 1587 | 2.01 | 1 µg/L | | |
| MPFNA | 6732 | 2.09 | 1 µg/L | | |
| MPFDA | 5046 | 2.20 | 1 µg/L | | |
| MPFUnA | 6327 | 2.30 | 1 µg/L | | |
| MPFDoA | 8157 | 2.38 | 1 µg/L | | |
| MPFTeDA | 7028 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 25284 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 26238 | 2.20 | 1 µg/L | | |

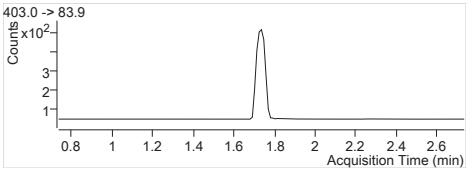
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 587 | 1.20 | 0.83 | 0.98 µg/L | 118.24 |
| PFHxA 1 | 2157 | 1.53 | 0.83 | 1.04 µg/L | 125.29 |
| PFHxS 1 | 605 | 1.72 | 0.83 | 0.99 µg/L | 119.14 |
| PFHpA 1 | 2693 | 1.78 | 0.83 | 0.88 µg/L | 106.00 |
| PFOA 1 | 3106 | 1.96 | 0.83 | 1.02 µg/L | 122.32 |
| PFOS 1 | 536 | 2.01 | 0.83 | 0.94 µg/L | 112.99 |
| PFNA 1 | 2277 | 2.09 | 0.83 | 1.03 µg/L | 123.98 |
| PFDA 1 | 2379 | 2.20 | 0.83 | 0.80 µg/L | 95.80 |
| PFUnA 1 | 2334 | 2.30 | 0.83 | 0.87 µg/L | 105.09 |
| PFDoA 1 | 3175 | 2.38 | 0.83 | 0.92 µg/L | 110.46 |
| PFTrDA 1 | 3314 | 2.44 | 0.83 | 0.95 µg/L | 114.56 |
| PFTeDA 1 | 2539 | 2.51 | 0.83 | 0.90 µg/L | 108.79 |
| 13C2-PFHxA | 6039 | 1.53 | 100.00 | 101.41 µg/L | 101.41 |
| 18O2-PFHxS | 1431 | 1.74 | 100.00 | 103.09 µg/L | 103.09 |
| 13C4-PFHpA | 7408 | 1.78 | 100.00 | 104.26 µg/L | 104.26 |
| 13C4-PFOA | 6593 | 1.96 | 100.00 | 97.75 µg/L | 97.75 |
| 13C4-PFOS | 1587 | 2.01 | 100.00 | 101.80 µg/L | 101.80 |
| 13C5-PFNA | 6731 | 2.09 | 100.00 | 106.96 µg/L | 106.96 |
| 13C2-PFDA | 4998 | 2.20 | 100.00 | 104.90 µg/L | 104.90 |
| 13C2-PFUnA | 6327 | 2.30 | 100.00 | 102.57 µg/L | 102.57 |
| 13C2-PFDoA | 8157 | 2.38 | 100.00 | 101.59 µg/L | 101.59 |
| 13C2-PFTeDA | 7085 | 2.51 | 100.00 | 99.82 µg/L | 99.82 |
| 13C6-PFHxA | 25284 | 1.53 | 100.00 | 103.11 µg/L | 103.11 |
| 13C9-PFDA | 26238 | 2.20 | 100.00 | 107.77 µg/L | 107.77 |



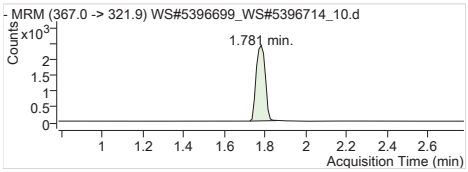



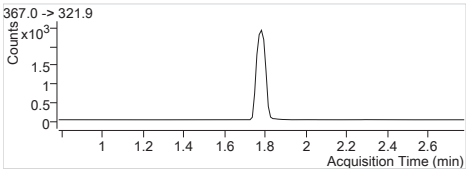

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



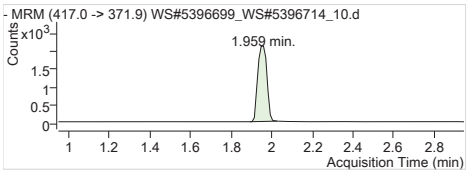



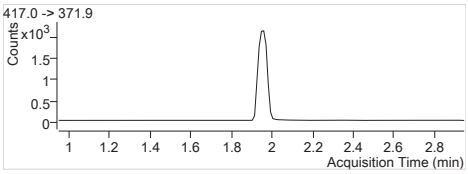

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: CC



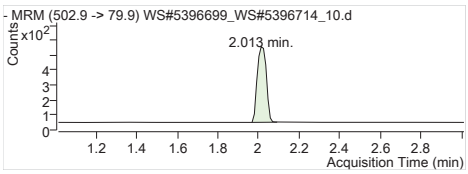



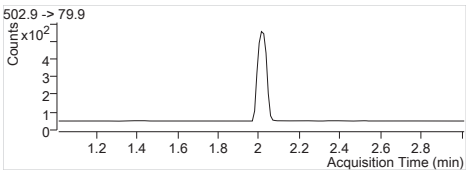

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: CC



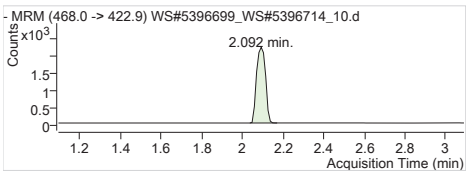



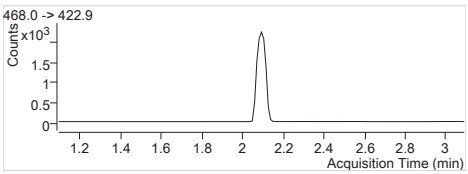

**MPFOA** Internal Standard
RT (Exp. RT): 1.959 (1.948)
Concentration: 1 µg/L
Sample type: CC



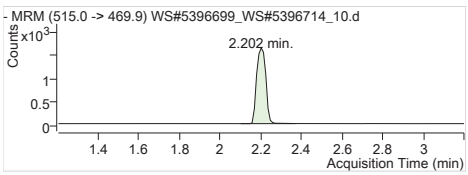



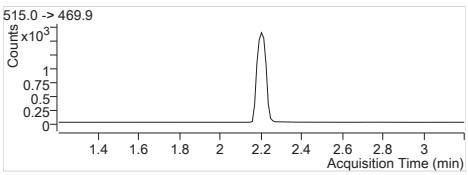

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: CC



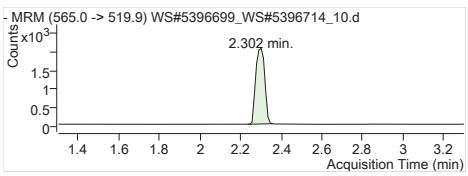



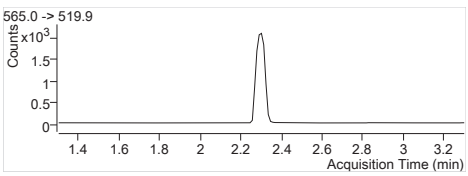

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: CC



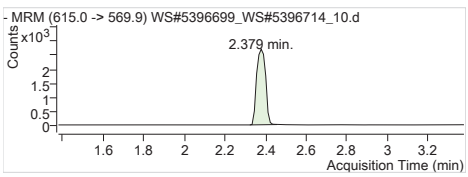



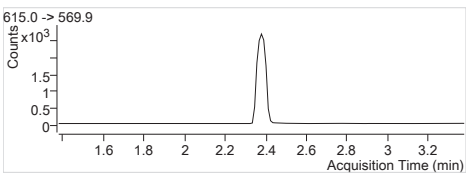

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: CC



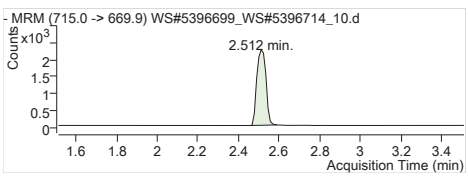



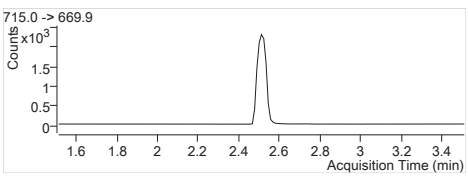

**MPFUnA** Internal Standard
RT (Exp. RT): 2.302 (2.302)
Concentration: 1 µg/L
Sample type: CC



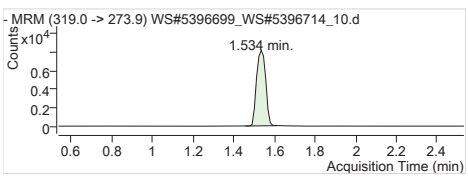



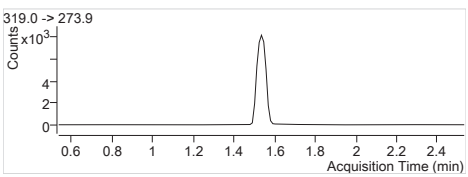

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: CC



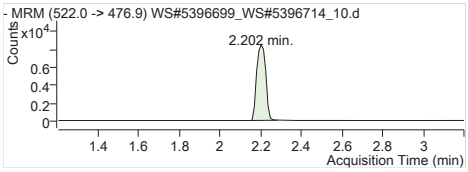



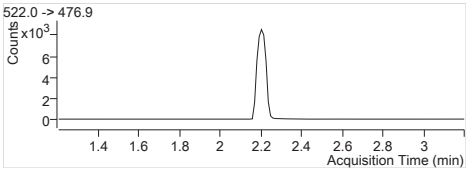

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: CC



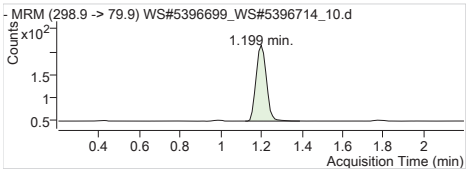



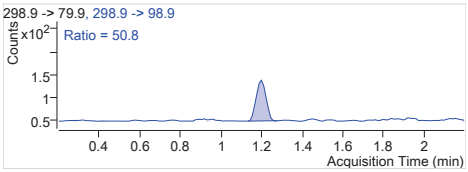

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: CC



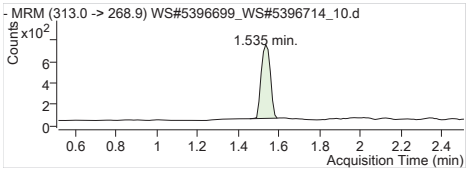



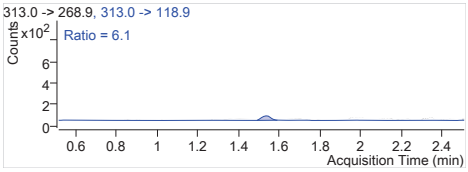

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: CC



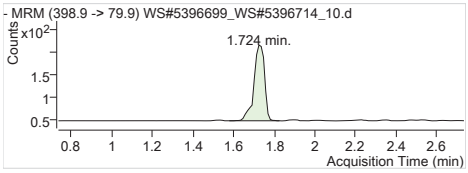



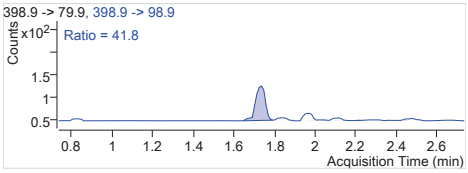

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.199 (1.199)
Calc. conc. 0.98 µg/L
Area ratio: 0.41020
Sample type: CC



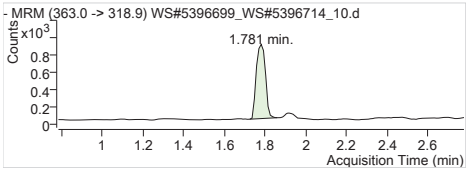



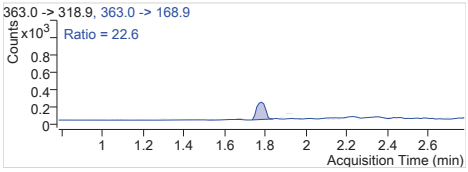

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 1.04 µg/L
Area ratio: 0.35343
Sample type: CC



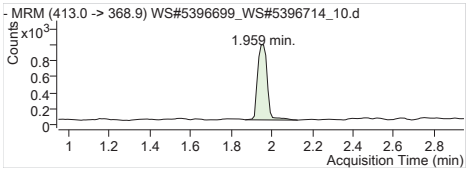



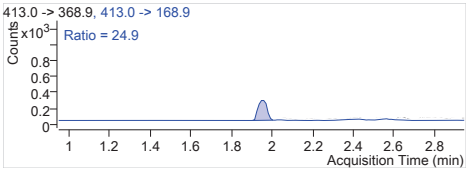

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.724 (1.735)
Calc. conc. 0.99 µg/L
Area ratio: 0.42278
Sample type: CC



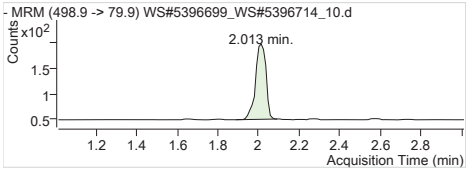



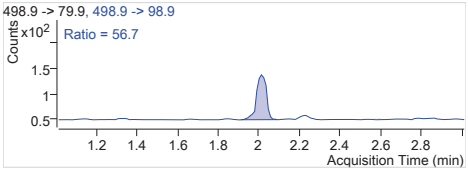

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 0.88 µg/L
Area ratio: 0.36353
Sample type: CC



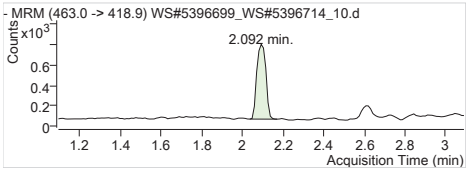



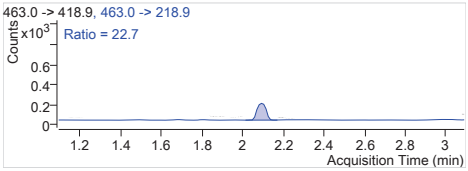

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.959 (1.948)
Calc. conc. 1.02 µg/L
Area ratio: 0.47111
Sample type: CC



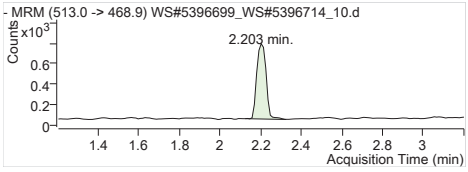



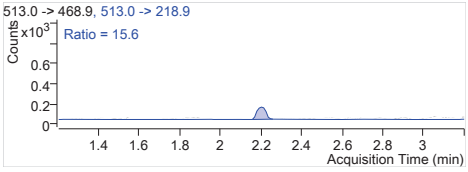

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 0.94 µg/L
Area ratio: 0.33774
Sample type: CC



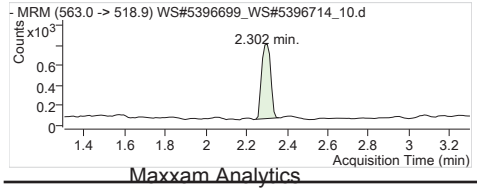



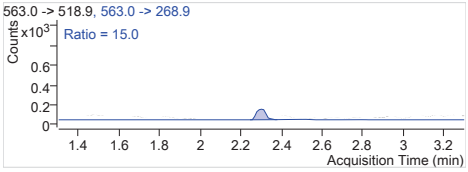

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 1.03 µg/L
Area ratio: 0.33824
Sample type: CC



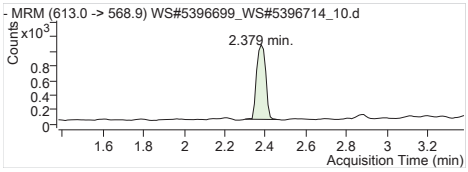



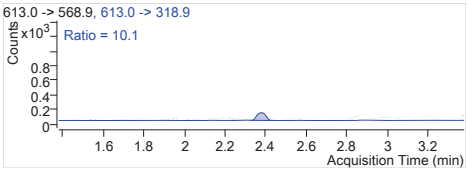

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 0.80 µg/L
Area ratio: 0.47146
Sample type: CC



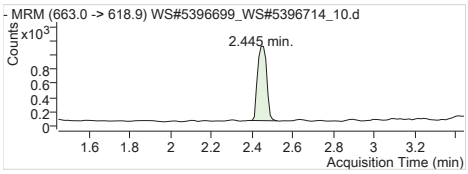



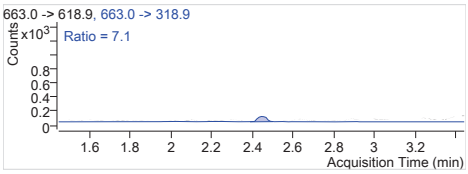

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 0.87 µg/L
Area ratio: 0.36890
Sample type: CC



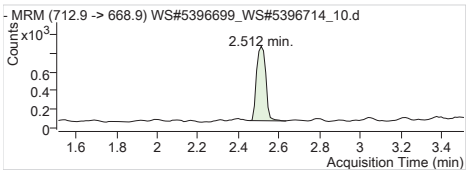



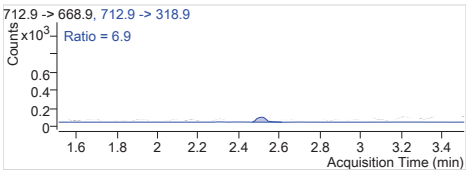

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 0.92 µg/L
Area ratio: 0.38924
Sample type: CC



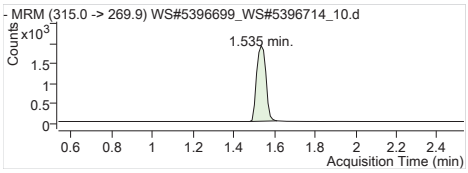



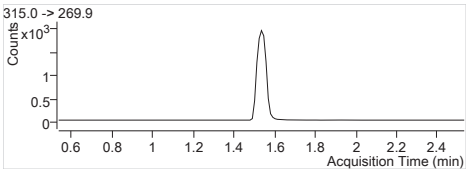

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.445 (2.445)
Calc. conc. 0.95 µg/L
Area ratio: 0.47154
Sample type: CC



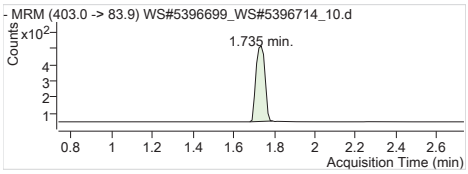



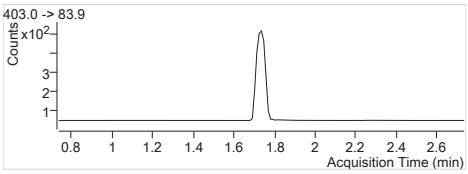

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 0.90 µg/L
Area ratio: 0.36127
Sample type: CC



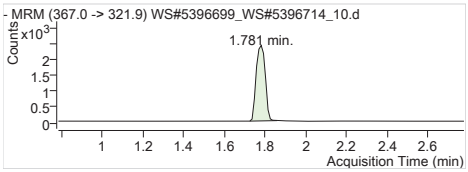



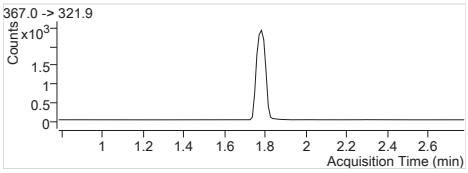

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.535 (1.535)
Calc. conc. 101.41 µg/L
Area ratio: 0.23885
Sample type: CC



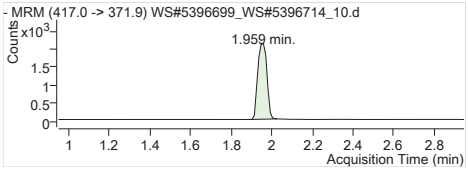



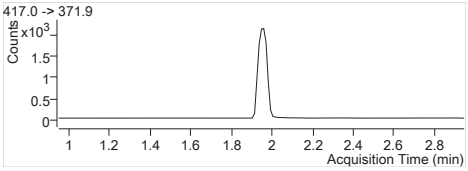

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.735 (1.735)
Calc. conc. 103.09 µg/L
Area ratio: 0.05660
Sample type: CC



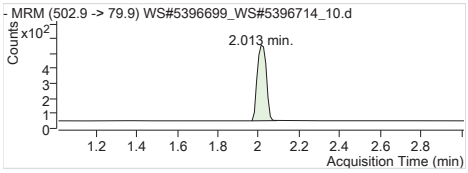



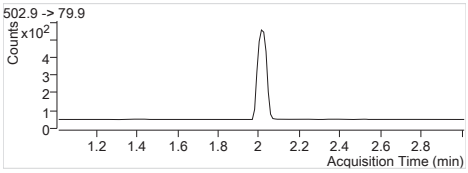

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 104.26 µg/L
Area ratio: 0.29299
Sample type: CC



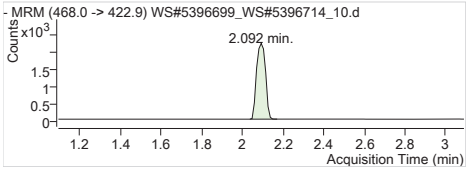



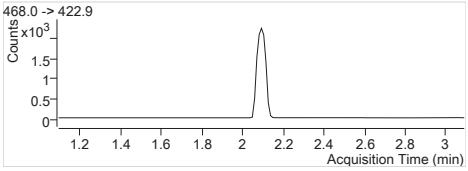

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.959 (1.948)
Calc. conc. 97.75 µg/L
Area ratio: 0.26076
Sample type: CC



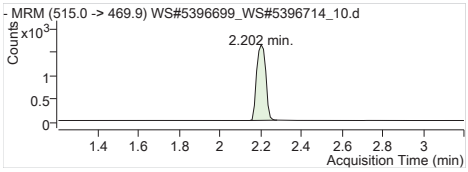



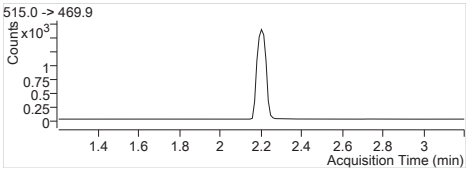

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 101.80 µg/L
Area ratio: 0.06277
Sample type: CC



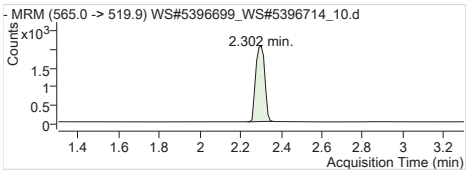



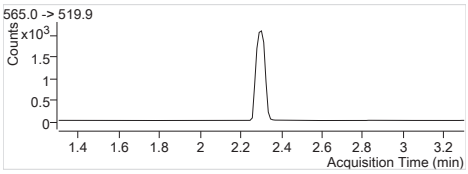

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 106.96 µg/L
Area ratio: 0.26622
Sample type: CC



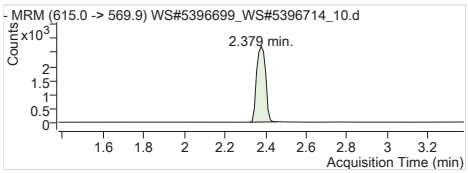



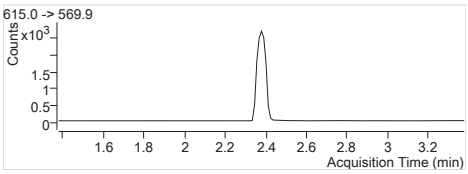

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 104.90 µg/L
Area ratio: 0.19049
Sample type: CC



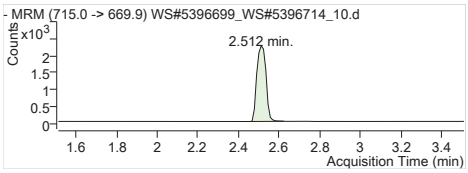



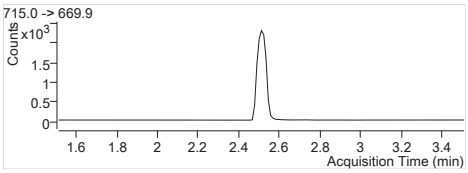

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 102.57 µg/L
Area ratio: 0.24114
Sample type: CC



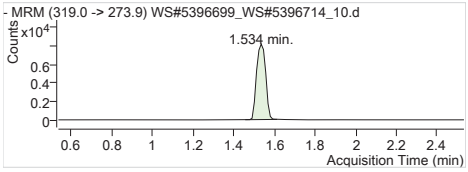



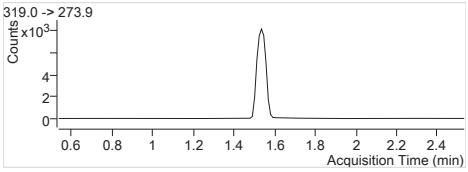

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 101.59 µg/L
Area ratio: 0.31088
Sample type: CC



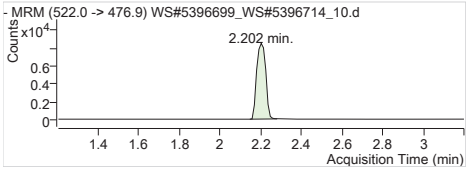



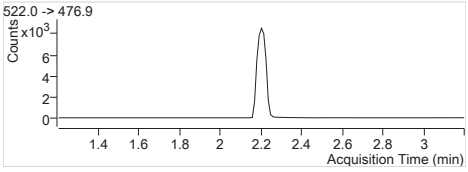

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 99.82 µg/L
Area ratio: 0.27003
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 103.11 µg/L
Area ratio: 0
Sample type: CC



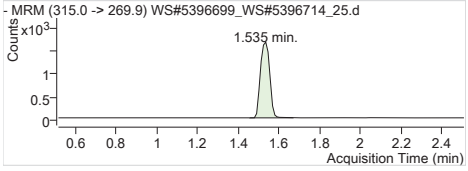

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 107.77 µg/L
Area ratio: 0
Sample type: CC

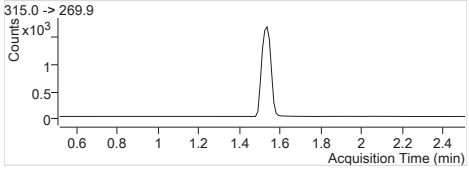
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_25.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/15 6:09:18 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

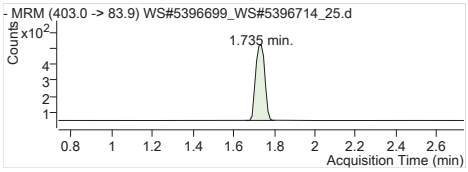
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5243 | 1.53 | 1 µg/L | | |
| MPFHxS | 1488 | 1.74 | 1 µg/L | | |
| MPFHpA | 6713 | 1.78 | 1 µg/L | | |
| MPFOA | 6107 | 1.95 | 1 µg/L | | |
| MPFOS | 1371 | 2.01 | 1 µg/L | | |
| MPFNA | 5792 | 2.09 | 1 µg/L | | |
| MPFDA | 4470 | 2.20 | 1 µg/L | | |
| MPFUnA | 5530 | 2.29 | 1 µg/L | | |
| MPFDoA | 7425 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6845 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 23327 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 24750 | 2.20 | 1 µg/L | | |

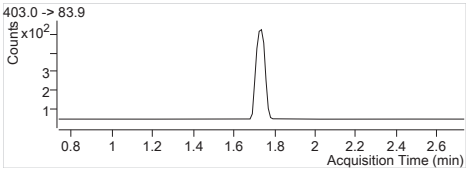
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 10082 | 1.19 | 12.50 | 9.96 µg/L | 79.68 |
| PFHxA 1 | 35158 | 1.53 | 12.50 | 12.51 µg/L | 100.08 |
| PFHxS 1 | 10049 | 1.72 | 12.50 | 10.18 µg/L | 81.46 |
| PFHpA 1 | 46961 | 1.78 | 12.50 | 12.15 µg/L | 97.21 |
| PFOA 1 | 49000 | 1.95 | 12.50 | 13.04 µg/L | 104.31 |
| PFOS 1 | 9506 | 2.01 | 12.50 | 12.86 µg/L | 102.88 |
| PFNA 1 | 38198 | 2.09 | 12.50 | 11.94 µg/L | 95.51 |
| PFDA 1 | 39347 | 2.20 | 12.50 | 12.09 µg/L | 96.76 |
| PFUnA 1 | 39896 | 2.29 | 12.50 | 12.19 µg/L | 97.56 |
| PFDoA 1 | 52915 | 2.38 | 12.50 | 12.49 µg/L | 99.95 |
| PFTrDA 1 | 56339 | 2.44 | 12.50 | 12.38 µg/L | 99.01 |
| PFTeDA 1 | 44336 | 2.51 | 12.50 | 12.25 µg/L | 97.98 |
| 13C2-PFHxA | 5213 | 1.53 | 100.00 | 94.88 µg/L | 94.88 |
| 18O2-PFHxS | 1488 | 1.74 | 100.00 | 116.18 µg/L | 116.18 |
| 13C4-PFHpA | 6713 | 1.78 | 100.00 | 102.40 µg/L | 102.40 |
| 13C4-PFOA | 6107 | 1.95 | 100.00 | 98.14 µg/L | 98.14 |
| 13C4-PFOS | 1371 | 2.01 | 100.00 | 95.32 µg/L | 95.32 |
| 13C5-PFNA | 5748 | 2.09 | 100.00 | 99.00 µg/L | 99.00 |
| 13C2-PFDA | 4444 | 2.20 | 100.00 | 98.88 µg/L | 98.88 |
| 13C2-PFUnA | 5530 | 2.29 | 100.00 | 95.04 µg/L | 95.04 |
| 13C2-PFDoA | 7425 | 2.38 | 100.00 | 98.03 µg/L | 98.03 |
| 13C2-PFTeDA | 6903 | 2.51 | 100.00 | 103.10 µg/L | 103.10 |
| 13C6-PFHxA | 23327 | 1.53 | 100.00 | 95.13 µg/L | 95.13 |
| 13C9-PFDA | 24750 | 2.20 | 100.00 | 101.66 µg/L | 101.66 |



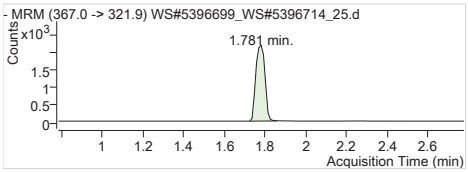



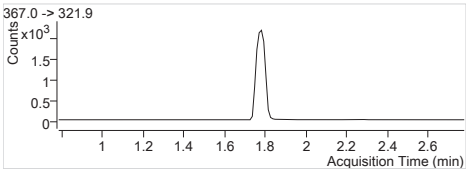

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



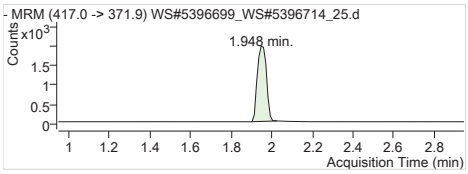



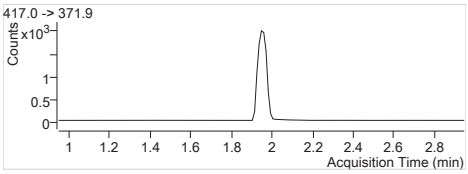

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: CC



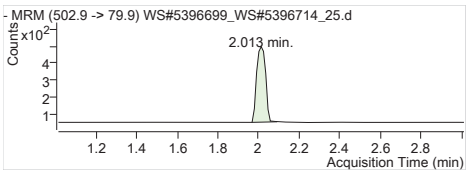



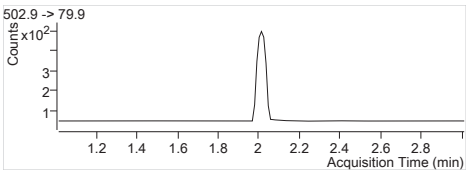

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: CC



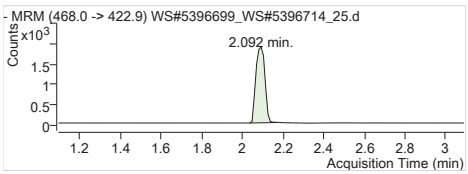



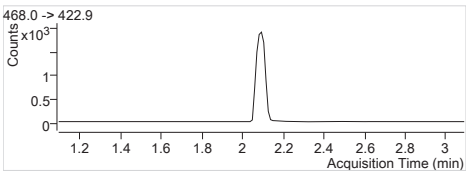

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: CC



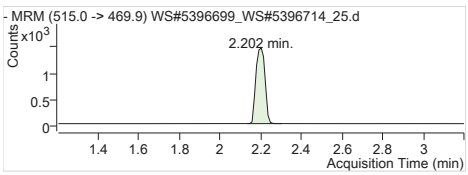



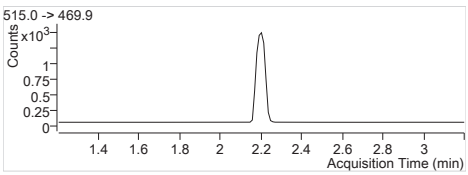

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: CC



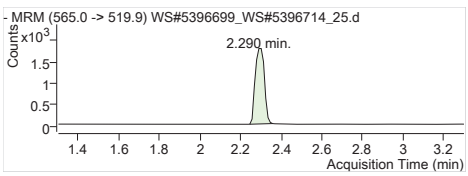



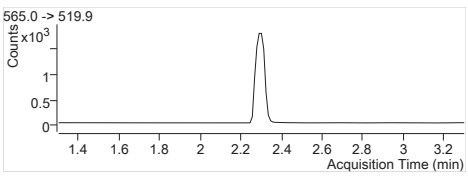

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: CC



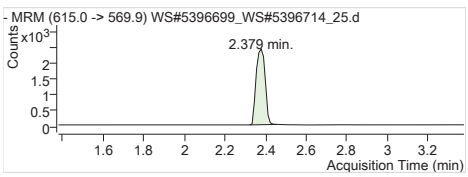



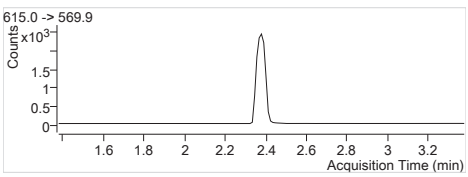

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: CC



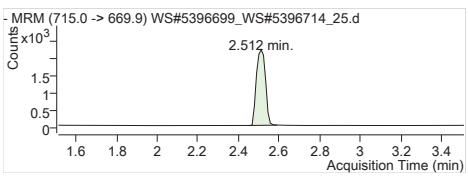



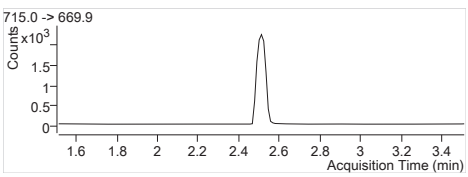

**MPFUnA** Internal Standard
RT (Exp. RT): 2.290 (2.302)
Concentration: 1 µg/L
Sample type: CC



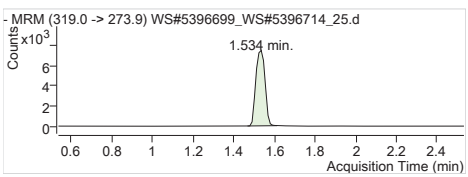



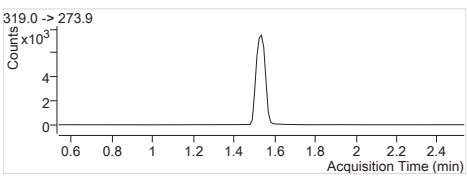

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: CC



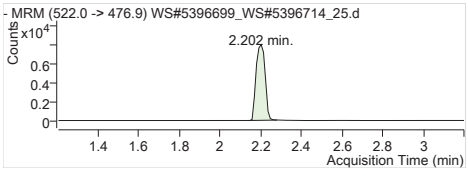



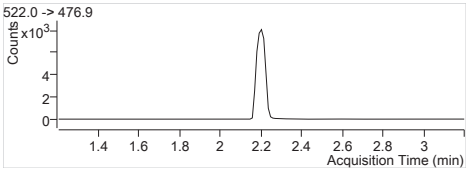

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: CC



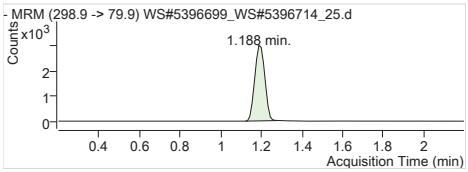



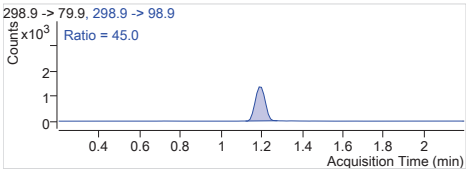

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: CC



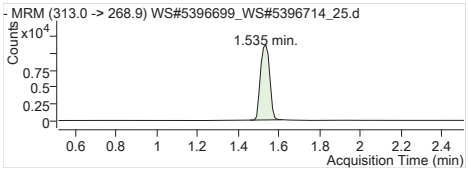



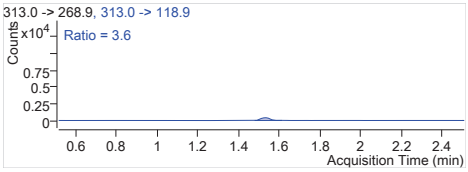

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: CC



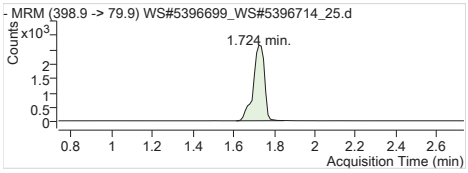



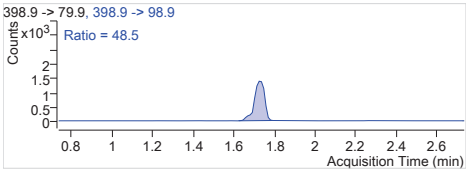

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.188 (1.199)
Calc. conc. 9.96 µg/L
Area ratio: 6.77554
Sample type: CC



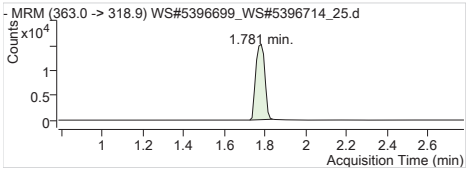



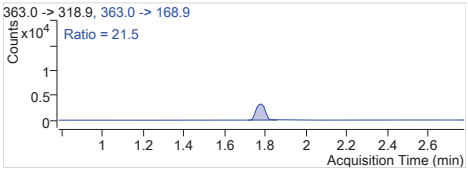

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 12.51 µg/L
Area ratio: 6.70570
Sample type: CC



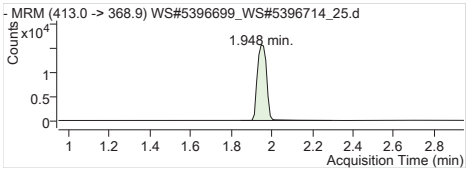



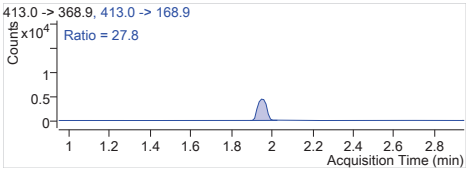

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.724 (1.735)
Calc. conc. 10.18 µg/L
Area ratio: 6.75336
Sample type: CC



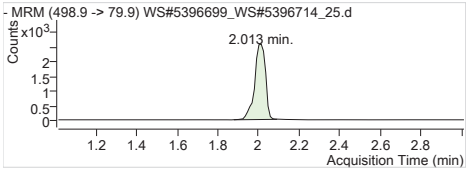



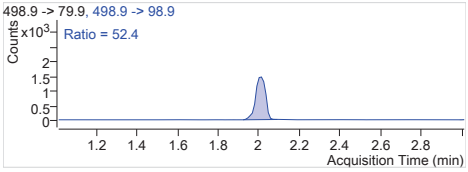

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 12.15 µg/L
Area ratio: 6.99553
Sample type: CC



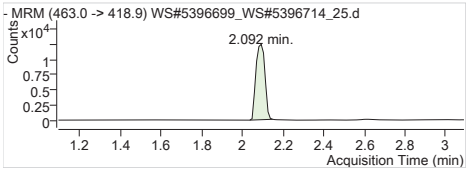



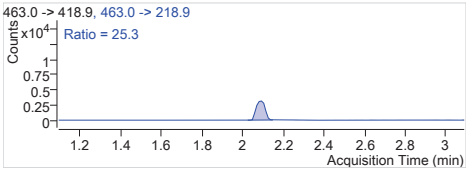

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.948 (1.948)
Calc. conc. 13.04 µg/L
Area ratio: 8.02358
Sample type: CC



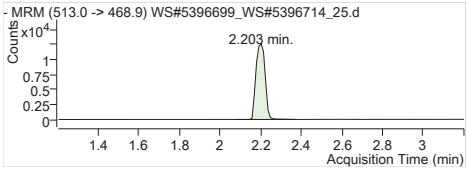



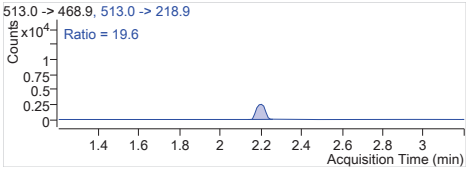

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 12.86 µg/L
Area ratio: 6.93363
Sample type: CC



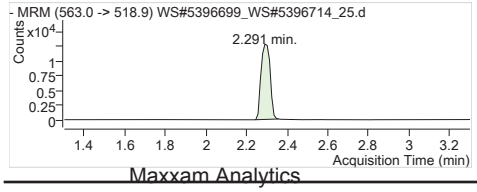



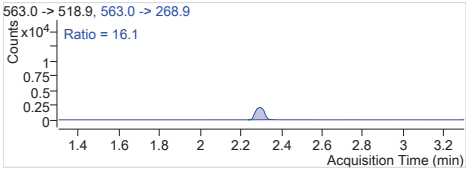

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 11.94 µg/L
Area ratio: 6.59496
Sample type: CC



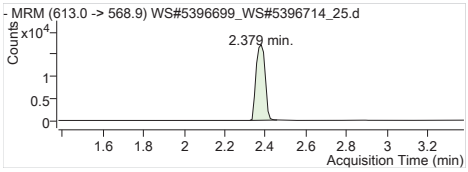



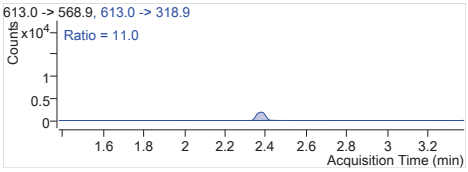

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 12.09 µg/L
Area ratio: 8.80246
Sample type: CC



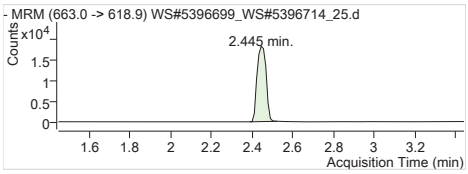



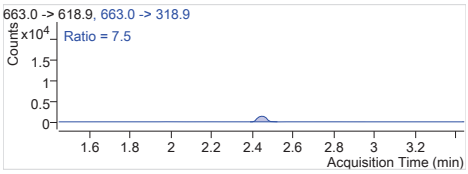

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.291 (2.302)
Calc. conc. 12.19 µg/L
Area ratio: 7.21447
Sample type: CC



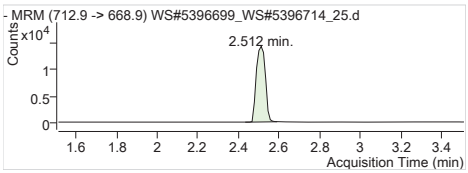



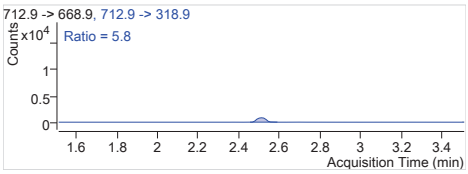

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 12.49 µg/L
Area ratio: 7.12660
Sample type: CC



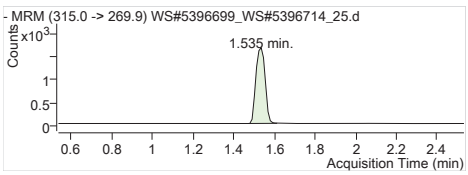



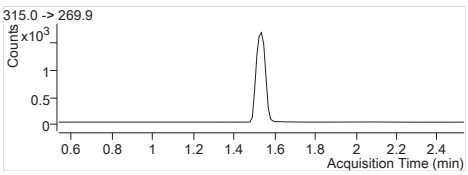

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.445 (2.445)
Calc. conc. 12.38 µg/L
Area ratio: 8.23068
Sample type: CC



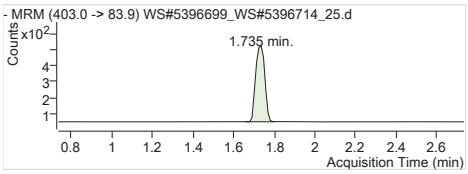



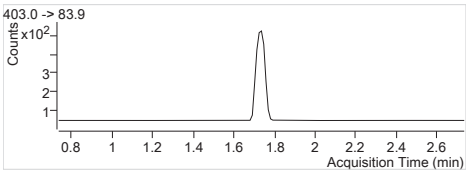

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 12.25 µg/L
Area ratio: 6.47714
Sample type: CC



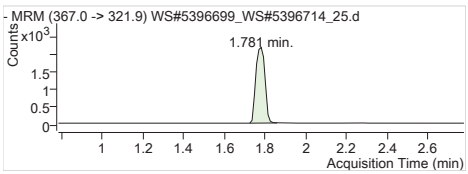



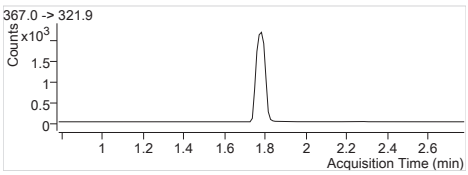

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.535 (1.535)
Calc. conc. 94.88 µg/L
Area ratio: 0.22347
Sample type: CC



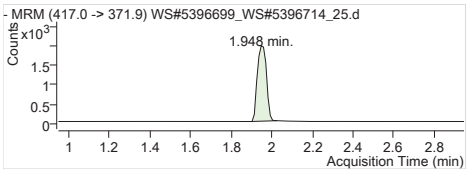



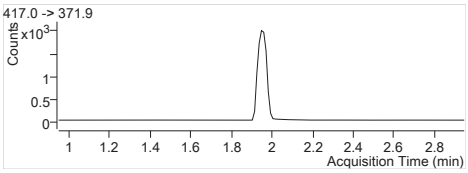

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.735 (1.735)
Calc. conc. 116.18 µg/L
Area ratio: 0.06379
Sample type: CC



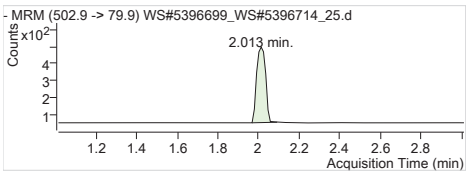



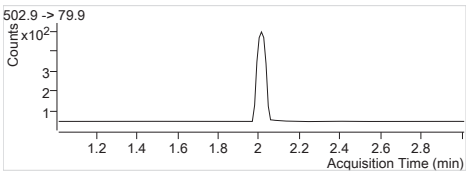

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 102.40 µg/L
Area ratio: 0.28778
Sample type: CC



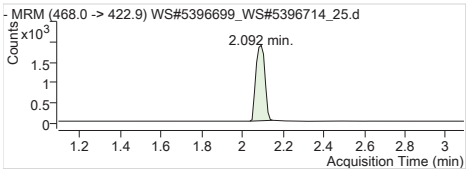



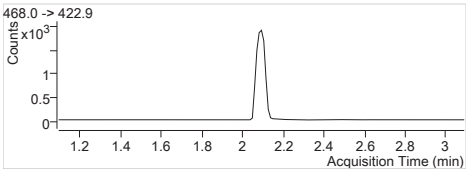

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.948 (1.948)
Calc. conc. 98.14 µg/L
Area ratio: 0.26180
Sample type: CC



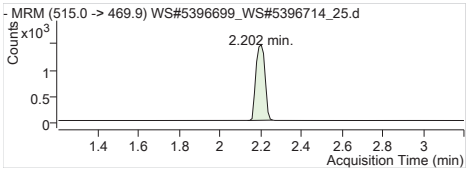



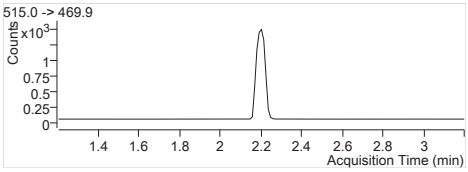

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 95.32 µg/L
Area ratio: 0.05877
Sample type: CC



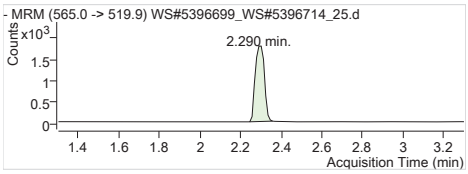



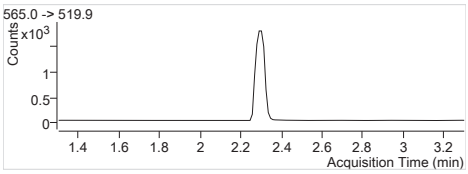

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 99.00 µg/L
Area ratio: 0.24641
Sample type: CC



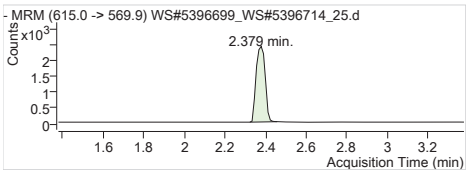



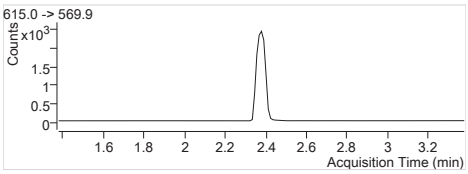

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 98.88 µg/L
Area ratio: 0.17956
Sample type: CC



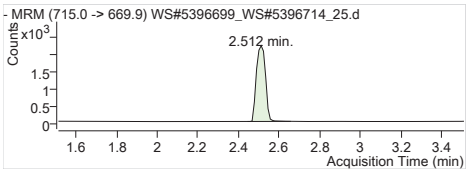



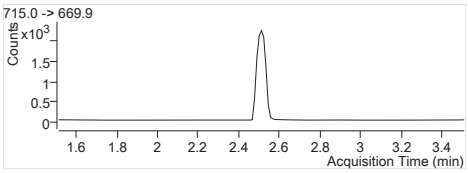

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.290 (2.302)
Calc. conc. 95.04 µg/L
Area ratio: 0.22343
Sample type: CC



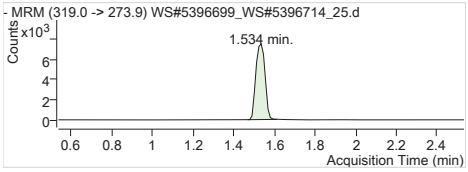



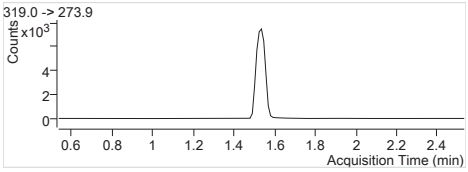

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 98.03 µg/L
Area ratio: 0.30000
Sample type: CC



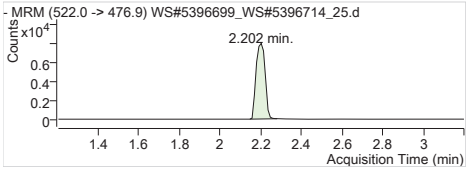



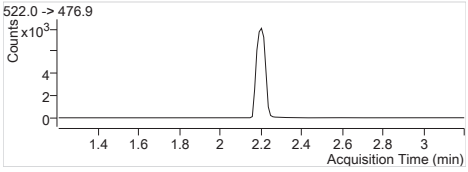

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 103.10 µg/L
Area ratio: 0.27891
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 95.13 µg/L
Area ratio: 0
Sample type: CC



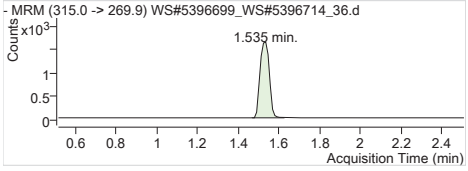

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 101.66 µg/L
Area ratio: 0
Sample type: CC

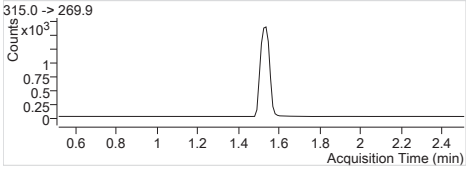
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_36.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/15 7:03:36 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

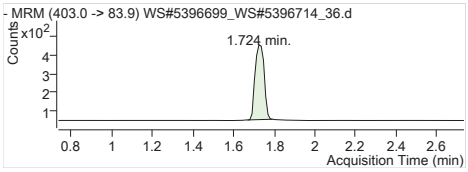
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5131 | 1.53 | 1 µg/L | | |
| MPFHxS | 1246 | 1.72 | 1 µg/L | | |
| MPFHpA | 6682 | 1.77 | 1 µg/L | | |
| MPFOA | 6362 | 1.95 | 1 µg/L | | |
| MPFOS | 1447 | 2.01 | 1 µg/L | | |
| MPFNA | 6000 | 2.09 | 1 µg/L | | |
| MPFDA | 4614 | 2.20 | 1 µg/L | | |
| MPFUnA | 5902 | 2.29 | 1 µg/L | | |
| MPFDoA | 7321 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6965 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 23287 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 24591 | 2.20 | 1 µg/L | | |

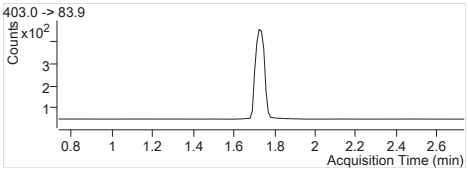
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 10254 | 1.19 | 12.50 | 12.01 µg/L | 96.08 |
| PFHxA 1 | 36952 | 1.53 | 12.50 | 13.41 µg/L | 107.25 |
| PFHxS 1 | 9775 | 1.72 | 12.50 | 11.77 µg/L | 94.15 |
| PFHpA 1 | 47685 | 1.77 | 12.50 | 12.39 µg/L | 99.13 |
| PFOA 1 | 49398 | 1.95 | 12.50 | 12.63 µg/L | 101.01 |
| PFOS 1 | 9576 | 2.00 | 12.50 | 12.29 µg/L | 98.31 |
| PFNA 1 | 39300 | 2.09 | 12.50 | 11.86 µg/L | 94.88 |
| PFDA 1 | 39872 | 2.20 | 12.50 | 11.88 µg/L | 95.01 |
| PFUnA 1 | 41882 | 2.29 | 12.50 | 12.00 µg/L | 96.00 |
| PFDoA 1 | 54333 | 2.38 | 12.50 | 13.00 µg/L | 104.01 |
| PFTrDA 1 | 54911 | 2.44 | 12.50 | 11.87 µg/L | 94.92 |
| PFTeDA 1 | 44587 | 2.51 | 12.50 | 12.11 µg/L | 96.86 |
| 13C2-PFHxA | 5104 | 1.53 | 100.00 | 93.06 µg/L | 93.06 |
| 18O2-PFHxS | 1246 | 1.72 | 100.00 | 97.46 µg/L | 97.46 |
| 13C4-PFHpA | 6682 | 1.77 | 100.00 | 102.11 µg/L | 102.11 |
| 13C4-PFOA | 6362 | 1.95 | 100.00 | 102.41 µg/L | 102.41 |
| 13C4-PFOS | 1447 | 2.01 | 100.00 | 100.78 µg/L | 100.78 |
| 13C5-PFNA | 5978 | 2.09 | 100.00 | 103.14 µg/L | 103.14 |
| 13C2-PFDA | 4602 | 2.20 | 100.00 | 103.06 µg/L | 103.06 |
| 13C2-PFUnA | 5902 | 2.29 | 100.00 | 102.09 µg/L | 102.09 |
| 13C2-PFDoA | 7321 | 2.38 | 100.00 | 97.28 µg/L | 97.28 |
| 13C2-PFTeDA | 7046 | 2.51 | 100.00 | 105.92 µg/L | 105.92 |
| 13C6-PFHxA | 23287 | 1.53 | 100.00 | 94.97 µg/L | 94.97 |
| 13C9-PFDA | 24591 | 2.20 | 100.00 | 101.00 µg/L | 101.00 |



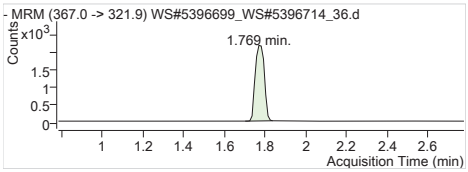



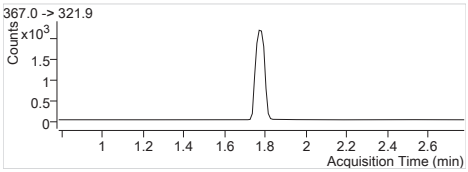

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



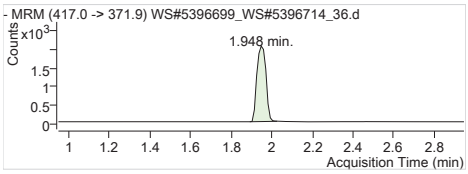



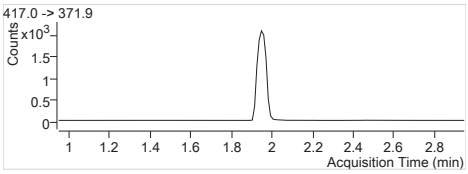

**MPFHxS** Internal Standard
RT (Exp. RT): 1.724 (1.735)
Concentration: 1 µg/L
Sample type: CC



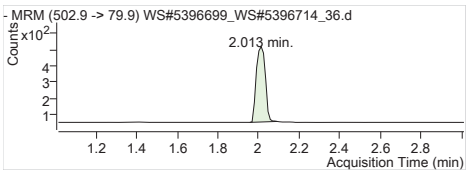



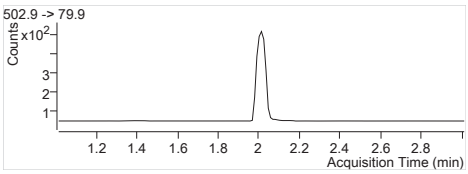

**MPFHpA** Internal Standard
RT (Exp. RT): 1.769 (1.781)
Concentration: 1 µg/L
Sample type: CC



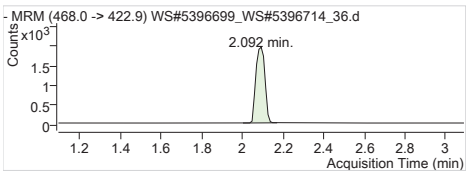



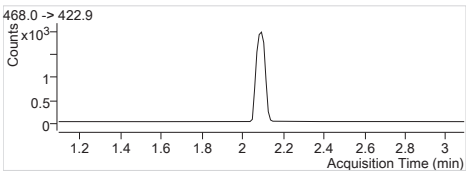

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: CC



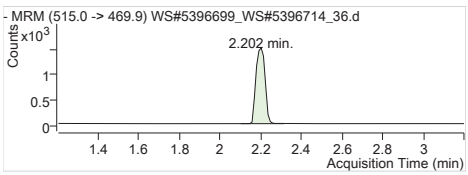



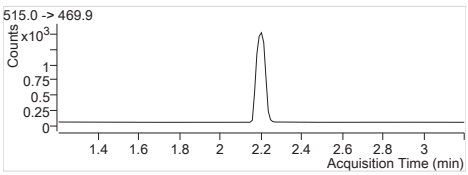

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: CC



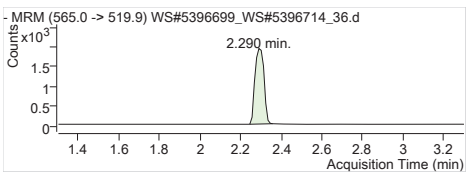



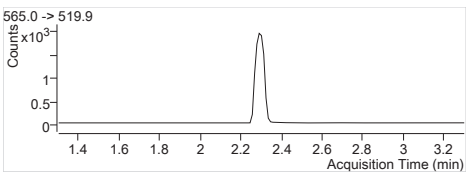

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: CC



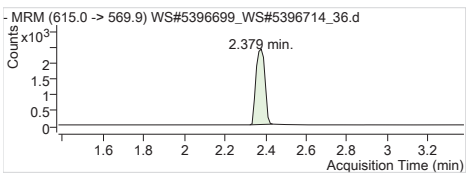



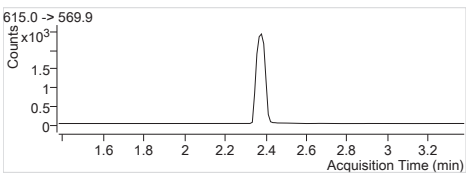

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: CC



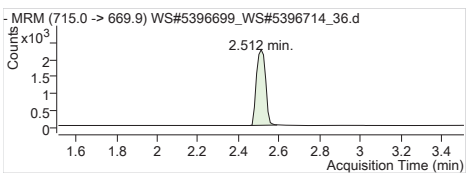



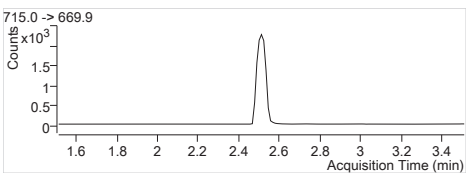

**MPFUnA** Internal Standard
RT (Exp. RT): 2.290 (2.302)
Concentration: 1 µg/L
Sample type: CC



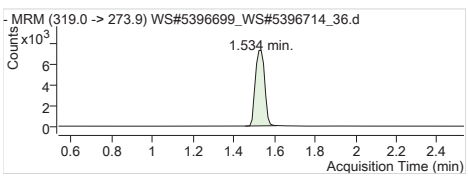



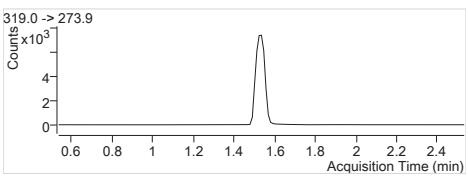

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: CC



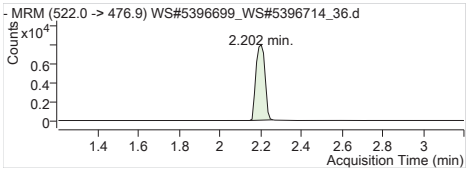



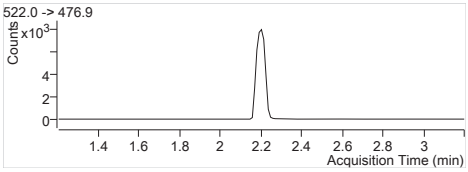

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: CC



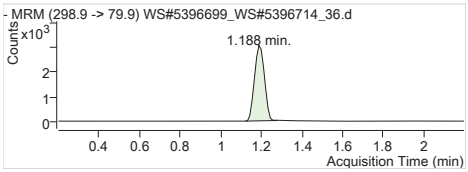



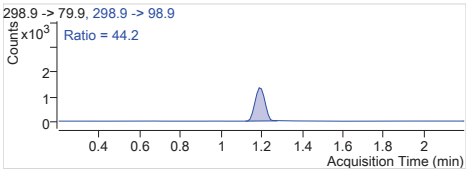

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: CC



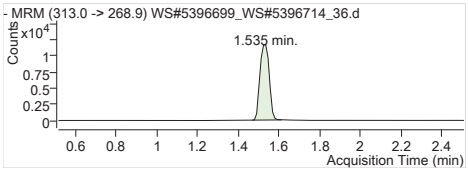



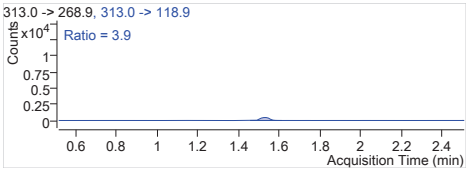

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: CC



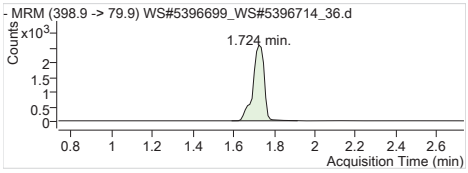



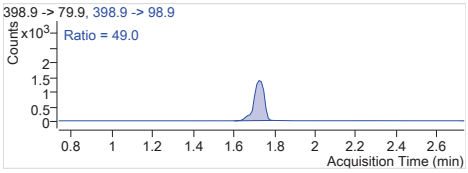

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.188 (1.199)
Calc. conc. 12.01 µg/L
Area ratio: 8.22953
Sample type: CC



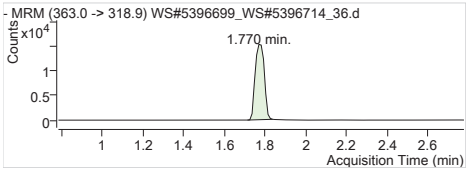



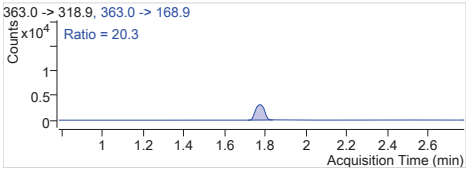

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 13.41 µg/L
Area ratio: 7.20172
Sample type: CC



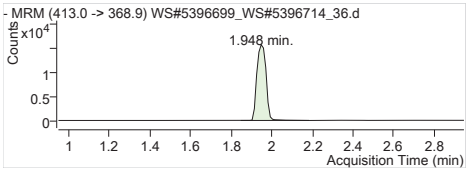



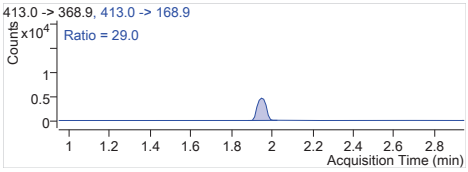

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.724 (1.735)
Calc. conc. 11.77 µg/L
Area ratio: 7.84510
Sample type: CC



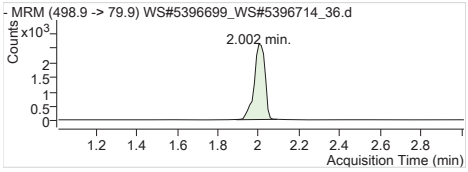



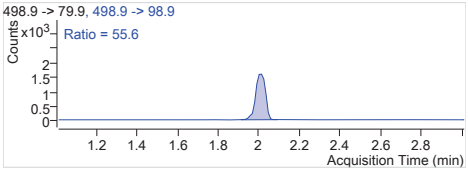

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.770 (1.781)
Calc. conc. 12.39 µg/L
Area ratio: 7.13634
Sample type: CC



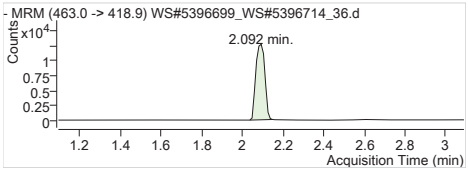



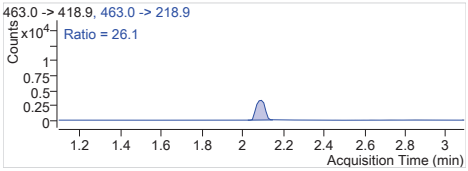

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.948 (1.948)
Calc. conc. 12.63 µg/L
Area ratio: 7.76454
Sample type: CC



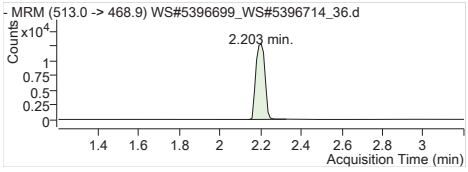



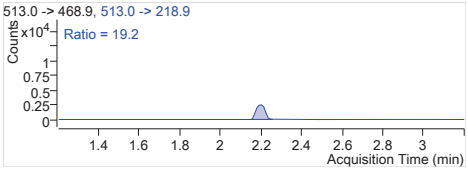

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.002 (2.013)
Calc. conc. 12.29 µg/L
Area ratio: 6.61783
Sample type: CC



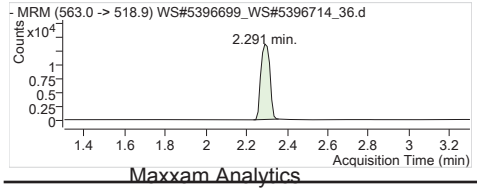



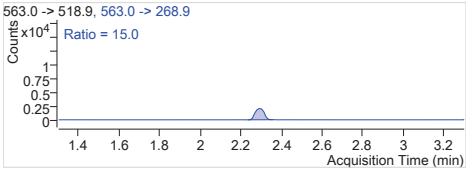

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 11.86 µg/L
Area ratio: 6.55000
Sample type: CC



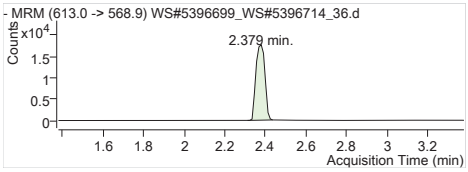



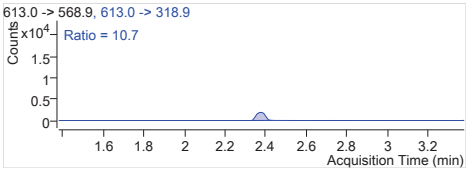

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 11.88 µg/L
Area ratio: 8.64153
Sample type: CC



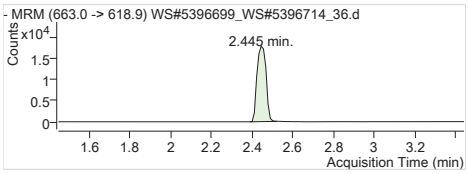



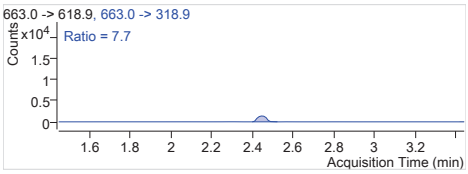

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.291 (2.302)
Calc. conc. 12.00 µg/L
Area ratio: 7.09624
Sample type: CC



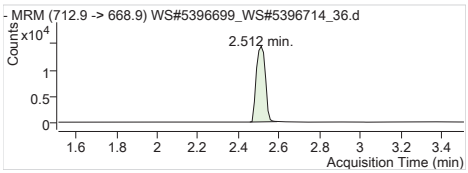



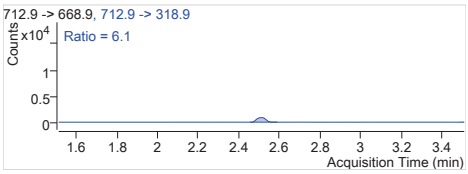

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.379 (2.379) |
| Calc. conc. | 13.00 µg/L |
| Area ratio: | 7.42153 |
| Sample type: | CC |



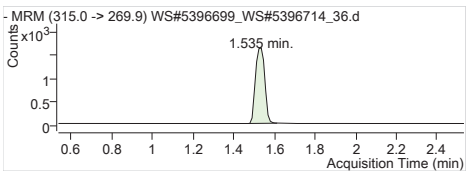



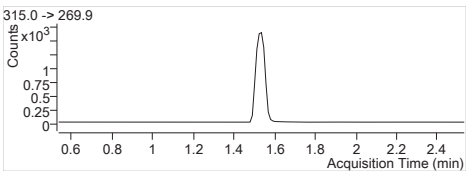

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.445 (2.445) |
| Calc. conc. | 11.87 µg/L |
| Area ratio: | 7.88385 |
| Sample type: | CC |



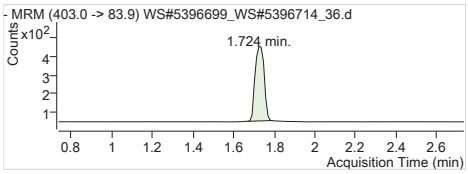



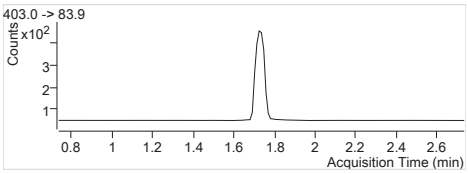

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.512 (2.512) |
| Calc. conc. | 12.11 µg/L |
| Area ratio: | 6.40158 |
| Sample type: | CC |



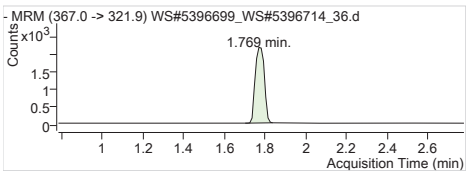



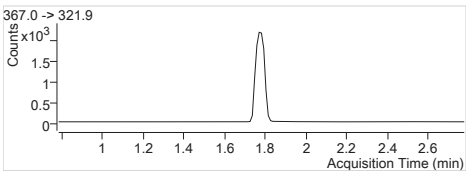

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 93.06 µg/L |
| Area ratio: | 0.21918 |
| Sample type: | CC |



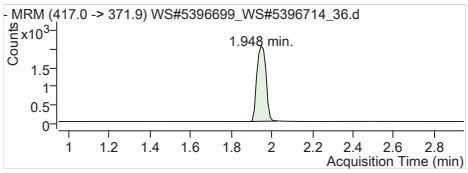



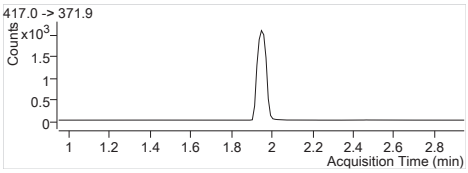

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.724 (1.735) |
| Calc. conc. | 97.46 µg/L |
| Area ratio: | 0.05351 |
| Sample type: | CC |



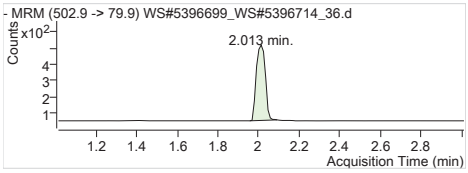



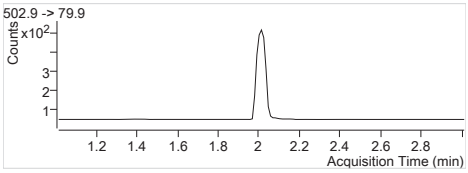

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.769 (1.781) |
| Calc. conc. | 102.11 µg/L |
| Area ratio: | 0.28694 |
| Sample type: | CC |



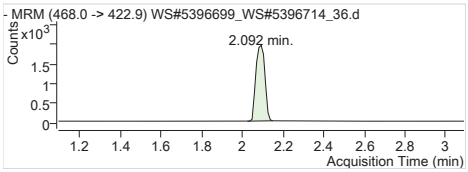



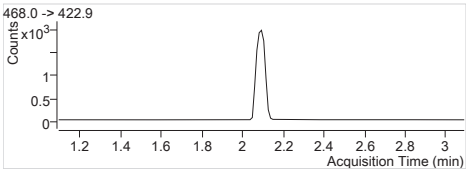

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.948 (1.948) |
| Calc. conc. | 102.41 µg/L |
| Area ratio: | 0.27320 |
| Sample type: | CC |



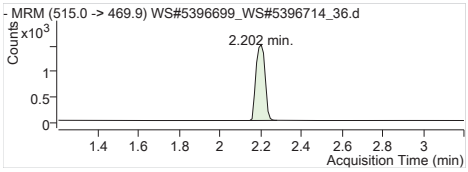



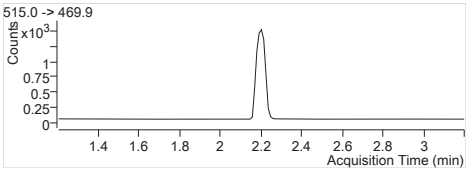

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 100.78 µg/L |
| Area ratio: | 0.06214 |
| Sample type: | CC |



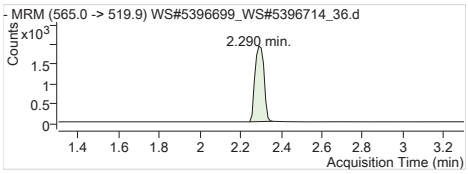



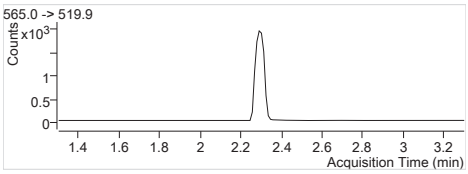

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 103.14 µg/L |
| Area ratio: | 0.25671 |
| Sample type: | CC |



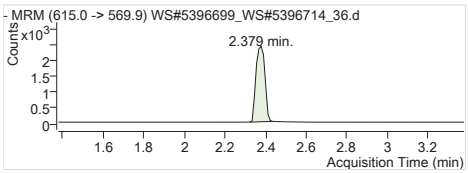



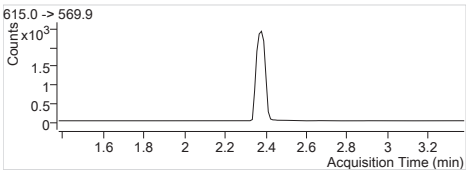

| | |
|---|---|
| **13C2-PFDA** | 515.0 -> 469.9 |
| RT (Exp. RT): | 2.202 (2.202) |
| Calc. conc. | 103.06 µg/L |
| Area ratio: | 0.18714 |
| Sample type: | CC |



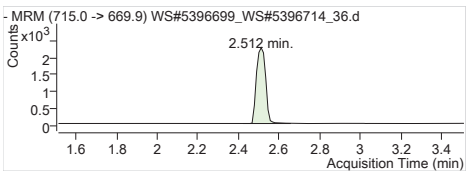



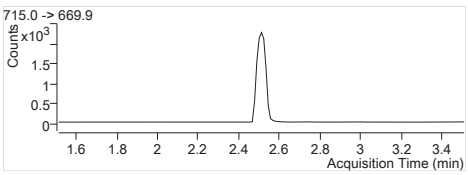

| | |
|---|---|
| **13C2-PFUnA** | 565.0 -> 519.9 |
| RT (Exp. RT): | 2.290 (2.302) |
| Calc. conc. | 102.09 µg/L |
| Area ratio: | 0.24001 |
| Sample type: | CC |



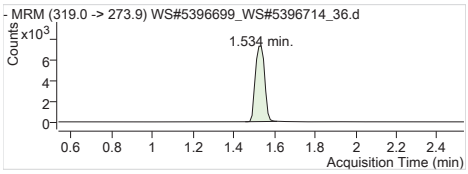



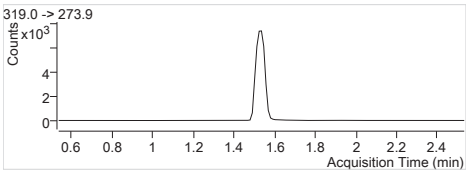

| | |
|---|---|
| **13C2-PFDoA** | 615.0 -> 569.9 |
| RT (Exp. RT): | 2.379 (2.379) |
| Calc. conc. | 97.28 µg/L |
| Area ratio: | 0.29771 |
| Sample type: | CC |



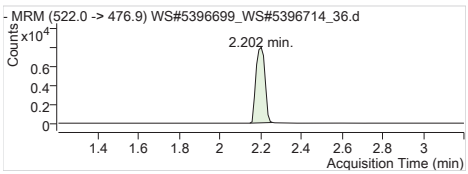



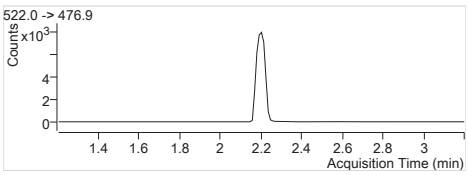

| | |
|---|---|
| **13C2-PFTeDA** | 715.0 -> 669.9 |
| RT (Exp. RT): | 2.512 (2.512) |
| Calc. conc. | 105.92 µg/L |
| Area ratio: | 0.28653 |
| Sample type: | CC |




| | |
|---|---|
| **13C6-PFHxA** | 319.0 -> 273.9 |
| RT (Exp. RT): | 1.534 (1.534) |
| Calc. conc. | 94.97 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |



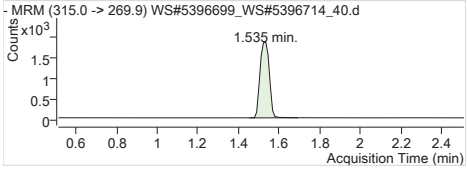

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 2.202 (2.202) |
| Calc. conc. | 101.00 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

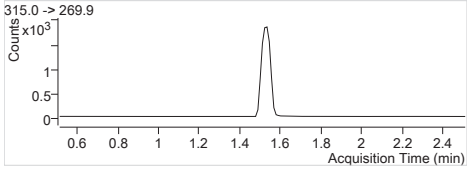
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_40.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/15 7:23:19 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

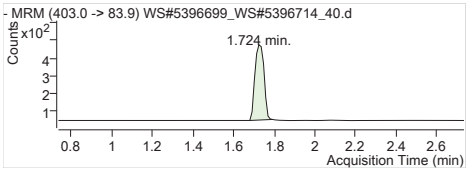
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5783 | 1.53 | 1 µg/L | | |
| MPFHxS | 1315 | 1.72 | 1 µg/L | | |
| MPFHpA | 7044 | 1.77 | 1 µg/L | | |
| MPFOA | 6464 | 1.95 | 1 µg/L | | |
| MPFOS | 1458 | 2.01 | 1 µg/L | | |
| MPFNA | 5798 | 2.09 | 1 µg/L | | |
| MPFDA | 4456 | 2.20 | 1 µg/L | | |
| MPFUnA | 6093 | 2.29 | 1 µg/L | | |
| MPFDoA | 7597 | 2.38 | 1 µg/L | | |
| MPFTeDA | 7433 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 22514 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 24736 | 2.20 | 1 µg/L | | |

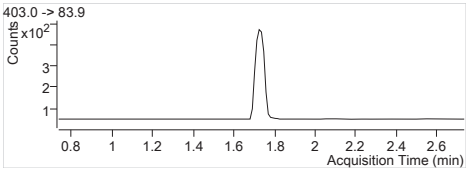
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 10240 | 1.19 | 12.50 | 11.39 µg/L | 91.09 |
| PFHxA 1 | 35827 | 1.53 | 12.50 | 11.59 µg/L | 92.71 |
| PFHxS 1 | 10185 | 1.72 | 12.50 | 11.62 µg/L | 92.99 |
| PFHpA 1 | 47871 | 1.77 | 12.50 | 11.81 µg/L | 94.50 |
| PFOA 1 | 48146 | 1.95 | 12.50 | 12.12 µg/L | 96.98 |
| PFOS 1 | 9596 | 2.00 | 12.50 | 12.22 µg/L | 97.79 |
| PFNA 1 | 39411 | 2.09 | 12.50 | 12.29 µg/L | 98.33 |
| PFDA 1 | 40650 | 2.20 | 12.50 | 12.53 µg/L | 100.23 |
| PFUnA 1 | 41167 | 2.29 | 12.50 | 11.44 µg/L | 91.50 |
| PFDoA 1 | 53422 | 2.38 | 12.50 | 12.33 µg/L | 98.65 |
| PFTrDA 1 | 58326 | 2.44 | 12.50 | 11.81 µg/L | 94.49 |
| PFTeDA 1 | 45687 | 2.51 | 12.50 | 11.63 µg/L | 93.07 |
| 13C2-PFHxA | 5683 | 1.53 | 100.00 | 107.17 µg/L | 107.17 |
| 18O2-PFHxS | 1315 | 1.72 | 100.00 | 106.38 µg/L | 106.38 |
| 13C4-PFHpA | 7044 | 1.77 | 100.00 | 111.33 µg/L | 111.33 |
| 13C4-PFOA | 6464 | 1.95 | 100.00 | 107.63 µg/L | 107.63 |
| 13C4-PFOS | 1458 | 2.01 | 100.00 | 105.03 µg/L | 105.03 |
| 13C5-PFNA | 5798 | 2.09 | 100.00 | 103.47 µg/L | 103.47 |
| 13C2-PFDA | 4332 | 2.20 | 100.00 | 96.44 µg/L | 96.44 |
| 13C2-PFUnA | 6093 | 2.29 | 100.00 | 104.77 µg/L | 104.77 |
| 13C2-PFDoA | 7597 | 2.38 | 100.00 | 100.36 µg/L | 100.36 |
| 13C2-PFTeDA | 7533 | 2.51 | 100.00 | 112.57 µg/L | 112.57 |
| 13C6-PFHxA | 22514 | 1.53 | 100.00 | 91.82 µg/L | 91.82 |
| 13C9-PFDA | 24736 | 2.20 | 100.00 | 101.60 µg/L | 101.60 |



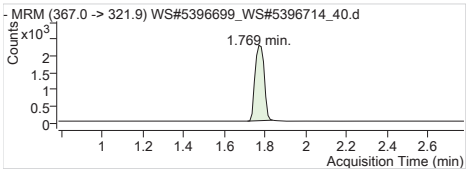



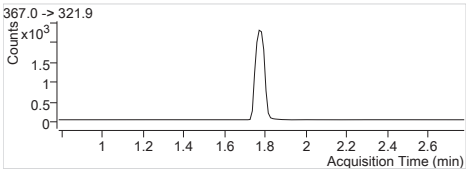

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



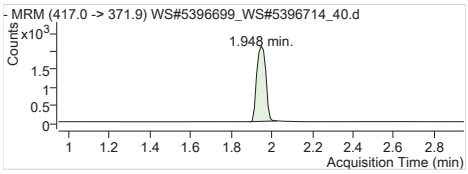



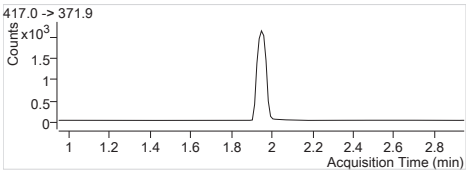

**MPFHxS** Internal Standard
RT (Exp. RT): 1.724 (1.735)
Concentration: 1 µg/L
Sample type: CC



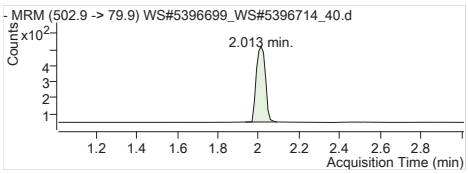



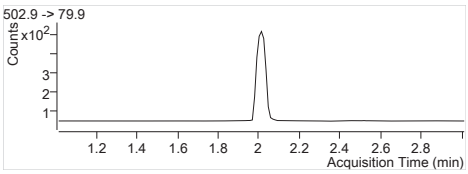

**MPFHpA** Internal Standard
RT (Exp. RT): 1.769 (1.781)
Concentration: 1 µg/L
Sample type: CC



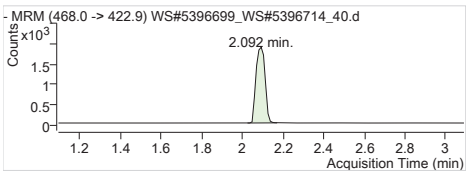



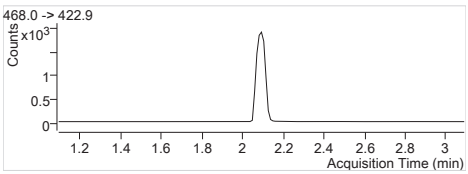

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: CC



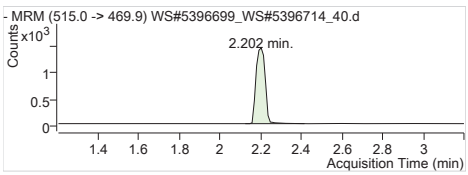



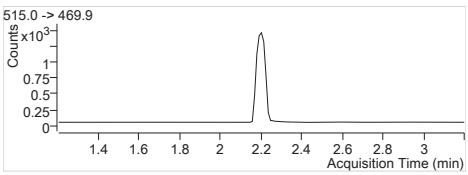

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: CC



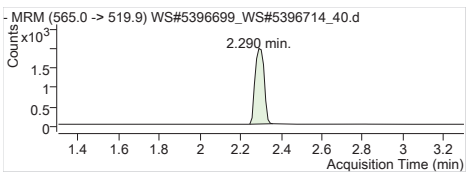



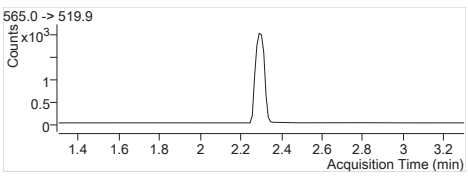

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: CC



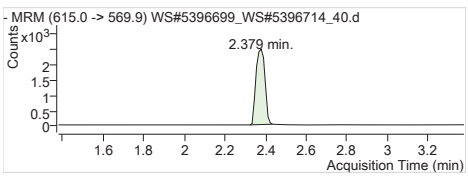



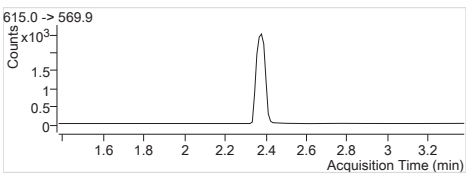

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: CC



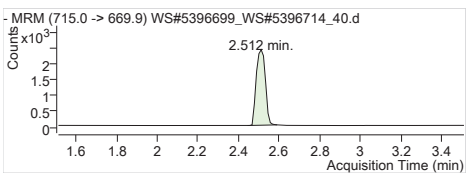



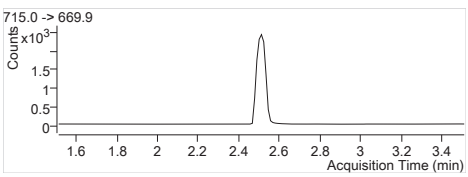

**MPFUnA** Internal Standard
RT (Exp. RT): 2.290 (2.302)
Concentration: 1 µg/L
Sample type: CC



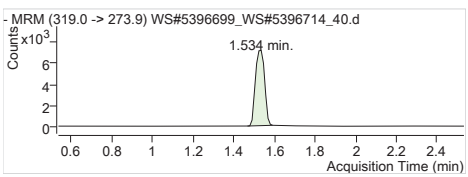



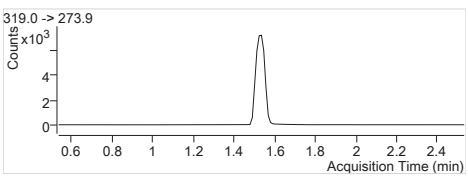

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: CC



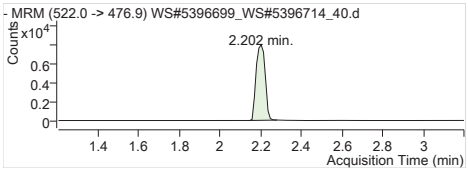



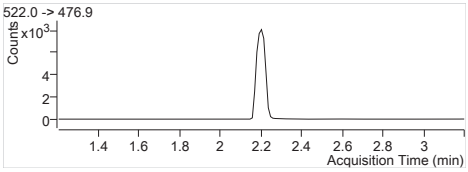

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: CC



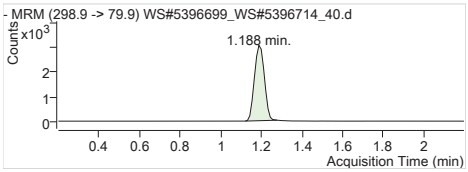



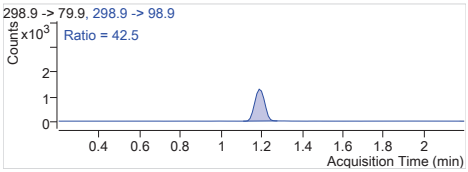

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: CC



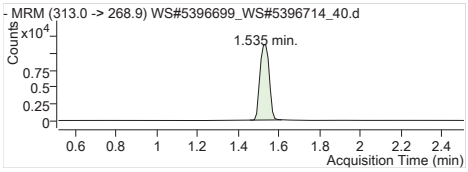



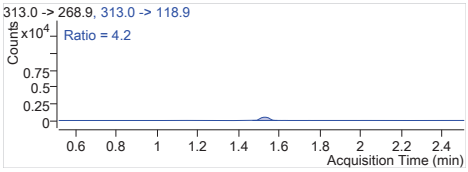

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: CC



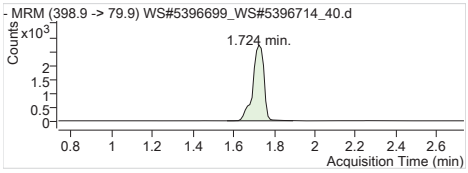



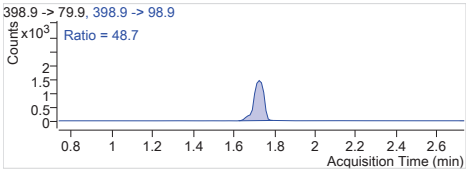

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.188 (1.199)
Calc. conc. 11.39 µg/L
Area ratio: 7.78707
Sample type: CC



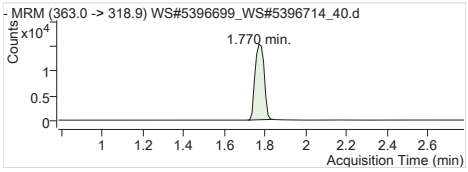



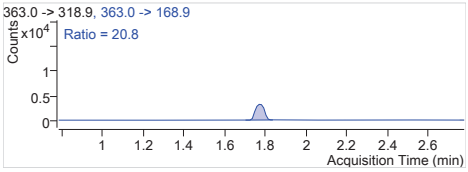

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 11.59 µg/L
Area ratio: 6.19523
Sample type: CC



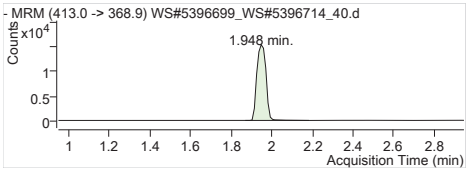



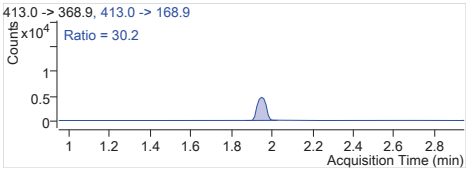

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.724 (1.735)
Calc. conc. 11.62 µg/L
Area ratio: 7.74525
Sample type: CC



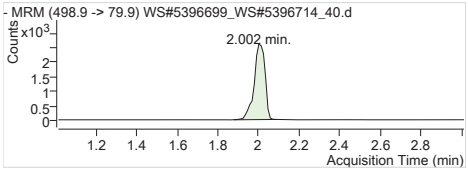



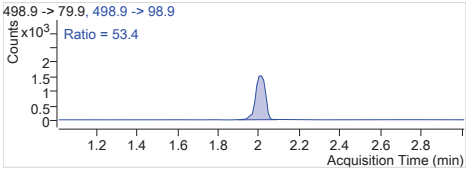

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.770 (1.781)
Calc. conc. 11.81 µg/L
Area ratio: 6.79600
Sample type: CC



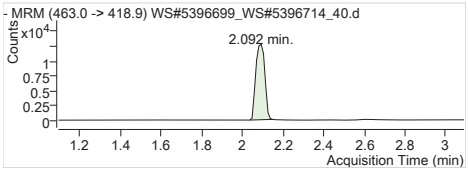



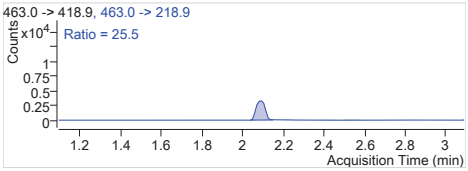

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.948 (1.948)
Calc. conc. 12.12 µg/L
Area ratio: 7.44833
Sample type: CC



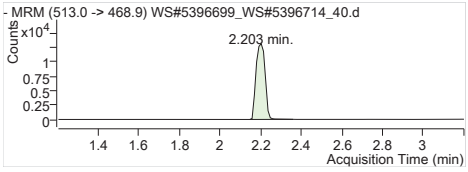



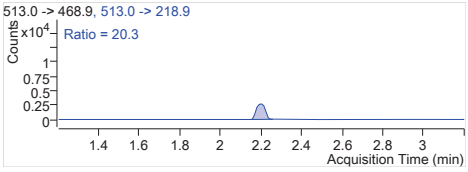

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.002 (2.013)
Calc. conc. 12.22 µg/L
Area ratio: 6.58162
Sample type: CC



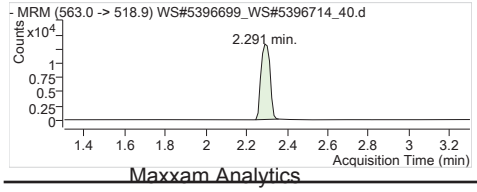



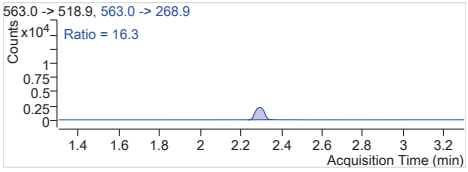

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 12.29 µg/L
Area ratio: 6.79734
Sample type: CC



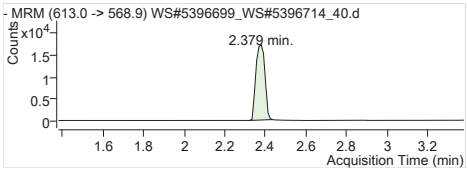



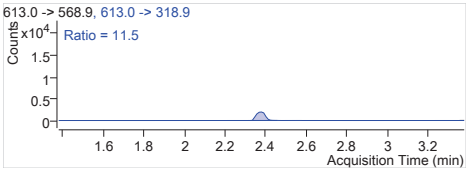

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 12.53 µg/L
Area ratio: 9.12253
Sample type: CC



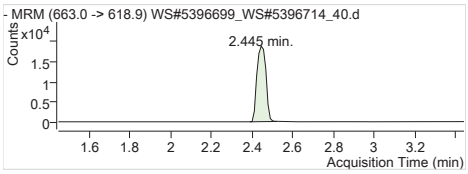



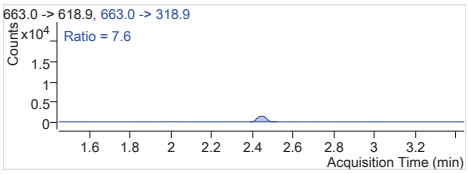

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.291 (2.302)
Calc. conc. 11.44 µg/L
Area ratio: 6.75644
Sample type: CC



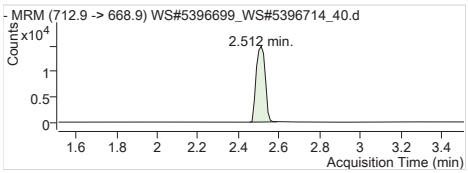



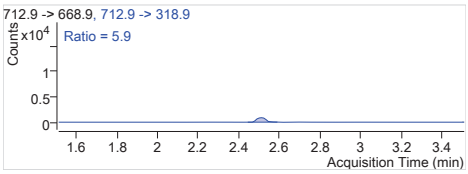

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 12.33 µg/L
Area ratio: 7.03199
Sample type: CC



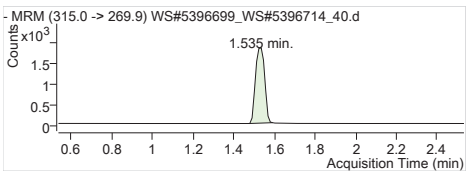



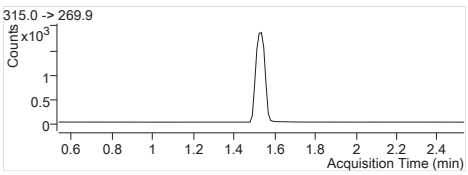

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.445 (2.445)
Calc. conc. 11.81 µg/L
Area ratio: 7.84690
Sample type: CC



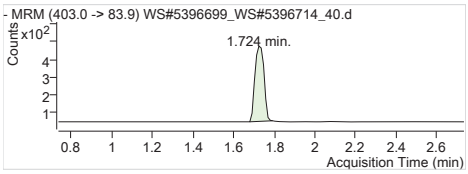



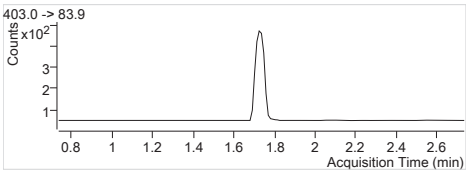

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 11.63 µg/L
Area ratio: 6.14651
Sample type: CC



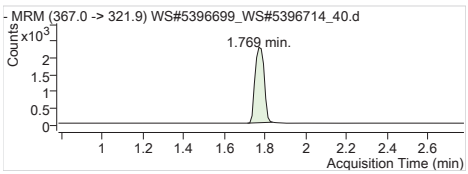



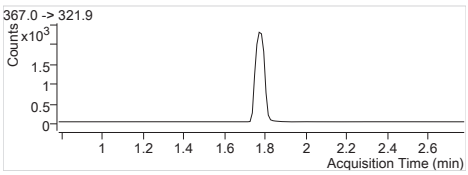

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.535 (1.535)
Calc. conc. 107.17 µg/L
Area ratio: 0.25242
Sample type: CC



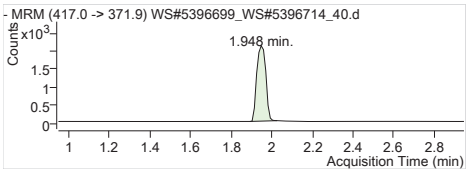



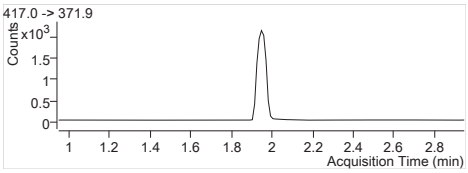

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.724 (1.735)
Calc. conc. 106.38 µg/L
Area ratio: 0.05841
Sample type: CC



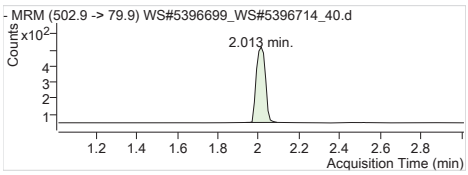



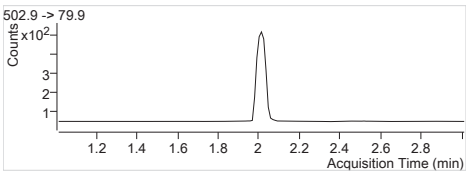

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.769 (1.781)
Calc. conc. 111.33 µg/L
Area ratio: 0.31287
Sample type: CC



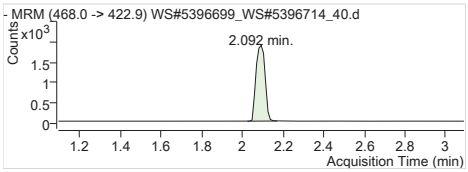



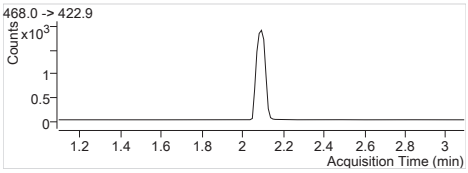

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.948 (1.948)
Calc. conc. 107.63 µg/L
Area ratio: 0.28711
Sample type: CC



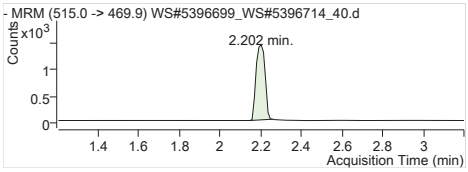



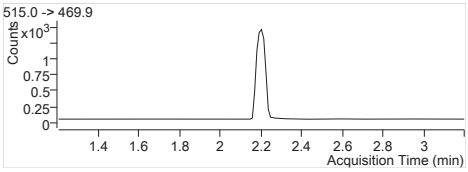

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 105.03 µg/L
Area ratio: 0.06476
Sample type: CC



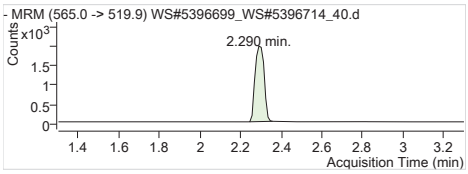



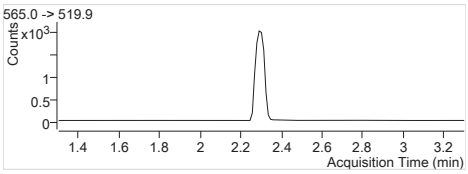

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 103.47 µg/L
Area ratio: 0.25753
Sample type: CC



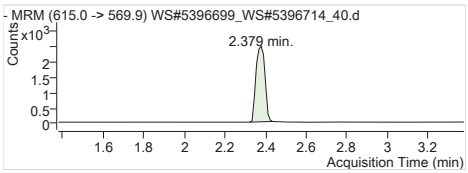



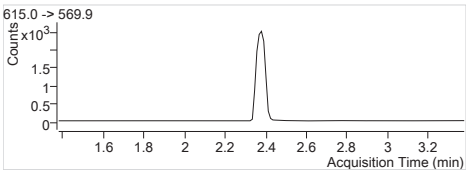

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 96.44 µg/L
Area ratio: 0.17513
Sample type: CC



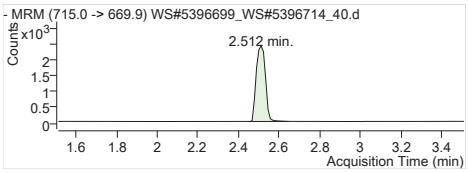



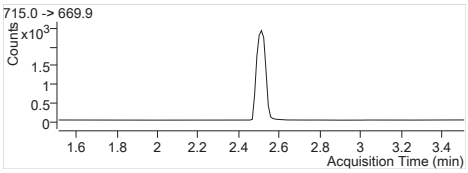

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.290 (2.302)
Calc. conc. 104.77 µg/L
Area ratio: 0.24632
Sample type: CC



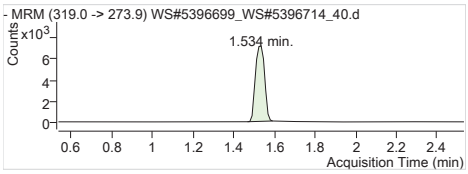



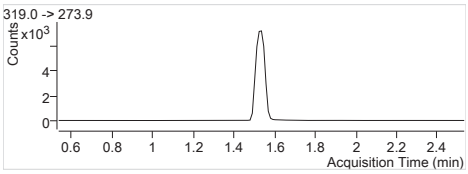

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 100.36 µg/L
Area ratio: 0.30712
Sample type: CC



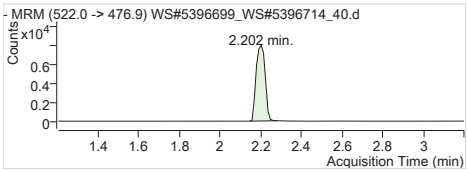



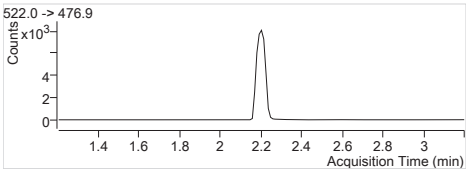

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 112.57 µg/L
Area ratio: 0.30454
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 91.82 µg/L
Area ratio: 0
Sample type: CC



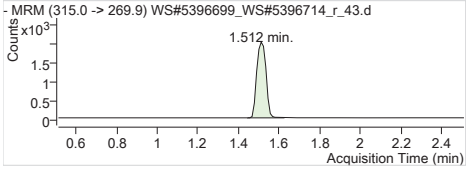

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 101.60 µg/L
Area ratio: 0
Sample type: CC

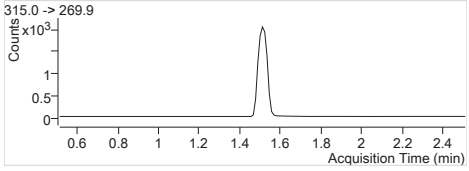
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_r_43.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A2 |
| **Acq. Date** | 2018/02/16 8:47:49 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

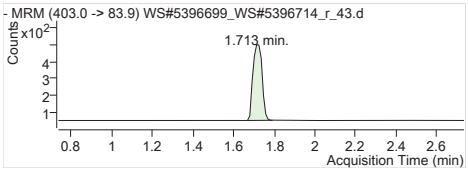
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6354 | 1.51 | 1 µg/L | | |
| MPFHxS | 1422 | 1.71 | 1 µg/L | | |
| MPFHpA | 8443 | 1.76 | 1 µg/L | | |
| MPFOA | 8504 | 1.94 | 1 µg/L | | |
| MPFOS | 1781 | 2.00 | 1 µg/L | | |
| MPFNA | 8200 | 2.07 | 1 µg/L | | |
| MPFDA | 6256 | 2.19 | 1 µg/L | | |
| MPFUnA | 7507 | 2.28 | 1 µg/L | | |
| MPFDoA | 9664 | 2.37 | 1 µg/L | | |
| MPFTeDA | 9370 | 2.50 | 1 µg/L | | |
| 13C6-PFHxA IS | 28040 | 1.51 | 1 µg/L | | |
| 13C9-PFDA IS | 32416 | 2.19 | 1 µg/L | | |

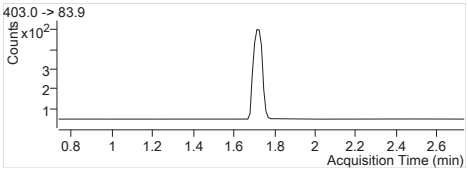
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 604 | 1.18 | 0.83 | 0.02 µg/L | 120.72 |
| PFHxA 1 | 2391 | 1.51 | 0.83 | 0.03 µg/L | 130.27 |
| PFHxS 1 | 683 | 1.71 | 0.83 | 0.03 µg/L | 129.20 |
| PFHpA 1 | 2733 | 1.76 | 0.83 | 0.02 µg/L | 97.84 |
| PFOA 1 | 3381 | 1.94 | 0.83 | 0.02 µg/L | 108.22 |
| PFOS 1 | 650 | 2.00 | 0.83 | 0.02 µg/L | 118.92 |
| PFNA 1 | 2825 | 2.07 | 0.83 | 0.02 µg/L | 125.30 |
| PFDA 1 | 2831 | 2.19 | 0.83 | 0.02 µg/L | 92.70 |
| PFUnA 1 | 2926 | 2.28 | 0.83 | 0.02 µg/L | 109.25 |
| PFDoA 1 | 3770 | 2.37 | 0.83 | 0.02 µg/L | 110.64 |
| PFTrDA 1 | 4217 | 2.43 | 0.83 | 0.02 µg/L | 110.75 |
| PFTeDA 1 | 3363 | 2.50 | 0.83 | 0.02 µg/L | 108.27 |
| 13C2-PFHxA | 6303 | 1.51 | 100.00 | 95.44 µg/L | 95.44 |
| 18O2-PFHxS | 1422 | 1.71 | 100.00 | 92.37 µg/L | 92.37 |
| 13C4-PFHpA | 8443 | 1.76 | 100.00 | 107.15 µg/L | 107.15 |
| 13C4-PFOA | 8504 | 1.94 | 100.00 | 113.69 µg/L | 113.69 |
| 13C4-PFOS | 1781 | 2.00 | 100.00 | 103.01 µg/L | 103.01 |
| 13C5-PFNA | 8179 | 2.07 | 100.00 | 117.19 µg/L | 117.19 |
| 13C2-PFDA | 6199 | 2.19 | 100.00 | 105.31 µg/L | 105.31 |
| 13C2-PFUnA | 7507 | 2.28 | 100.00 | 98.50 µg/L | 98.50 |
| 13C2-PFDoA | 9664 | 2.37 | 100.00 | 97.42 µg/L | 97.42 |
| 13C2-PFTeDA | 9508 | 2.50 | 100.00 | 108.42 µg/L | 108.42 |
| 13C6-PFHxA | 28040 | 1.51 | 100.00 | 2.74 µg/L | 114.35 |
| 13C9-PFDA | 32416 | 2.19 | 100.00 | 3.20 µg/L | 133.14 |



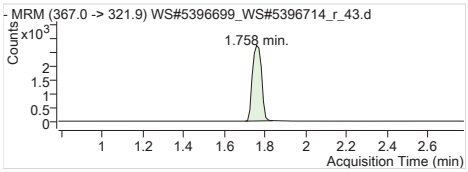



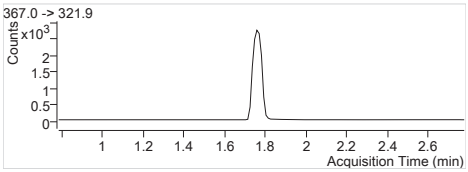

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.512 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



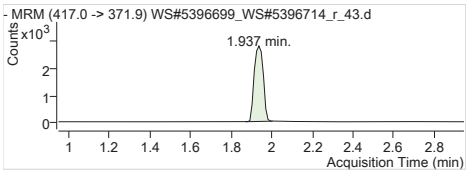



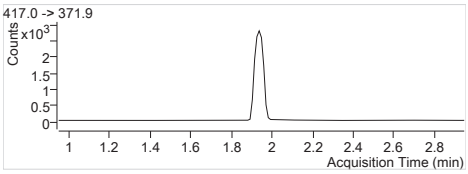

**MPFHxS** Internal Standard
RT (Exp. RT): 1.713 (1.735)
Concentration: 1 µg/L
Sample type: CC



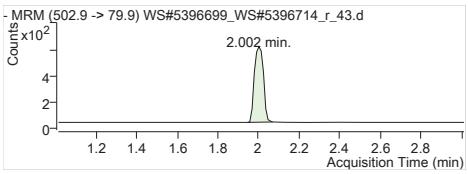



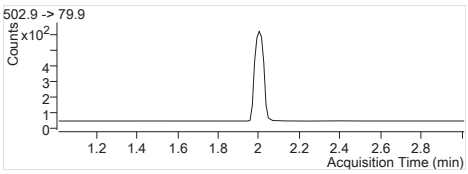

**MPFHpA** Internal Standard
RT (Exp. RT): 1.758 (1.781)
Concentration: 1 µg/L
Sample type: CC



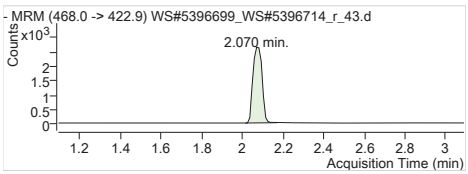



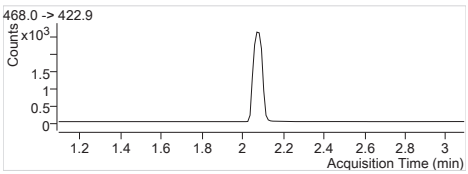

**MPFOA** Internal Standard
RT (Exp. RT): 1.937 (1.948)
Concentration: 1 µg/L
Sample type: CC



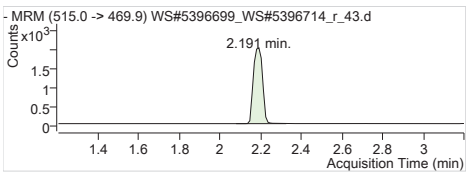



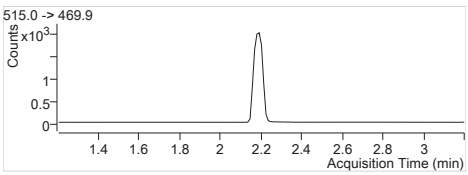

**MPFOS** Internal Standard
RT (Exp. RT): 2.002 (2.013)
Concentration: 1 µg/L
Sample type: CC



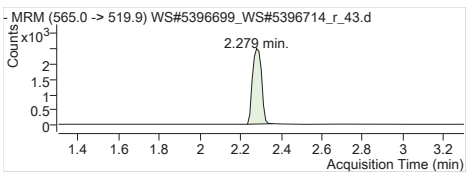



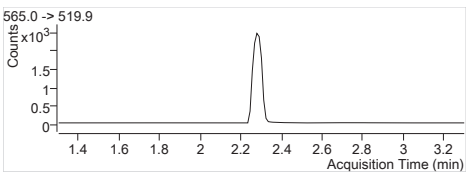

**MPFNA** Internal Standard
RT (Exp. RT): 2.070 (2.092)
Concentration: 1 µg/L
Sample type: CC



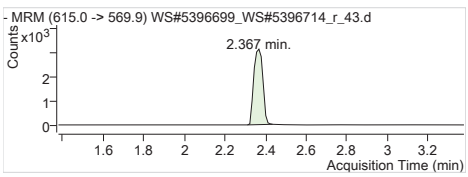



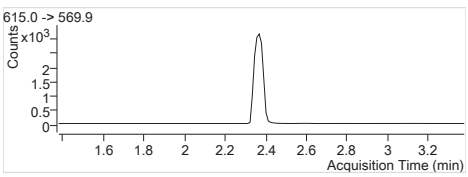

**MPFDA** Internal Standard
RT (Exp. RT): 2.191 (2.202)
Concentration: 1 µg/L
Sample type: CC



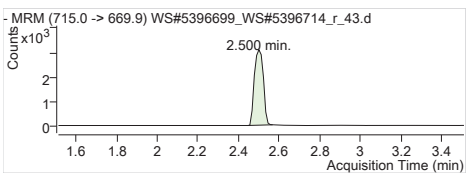



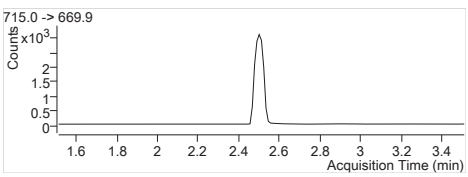

**MPFUnA** Internal Standard
RT (Exp. RT): 2.279 (2.302)
Concentration: 1 µg/L
Sample type: CC



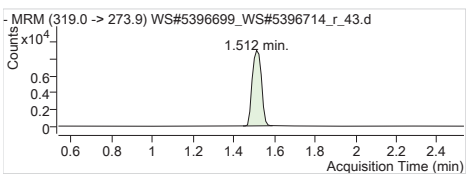



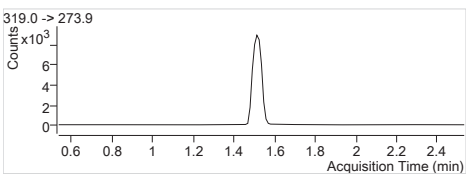

**MPFDoA** Internal Standard
RT (Exp. RT): 2.367 (2.379)
Concentration: 1 µg/L
Sample type: CC



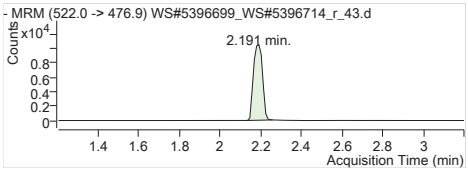



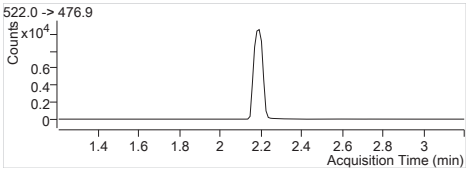

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.500 (2.512)
Concentration: 1 µg/L
Sample type: CC



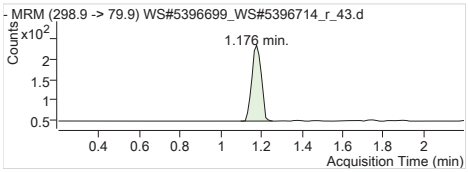



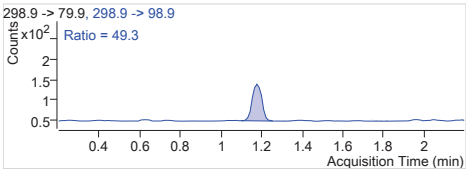

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.512 (1.534)
Concentration: 1 µg/L
Sample type: CC



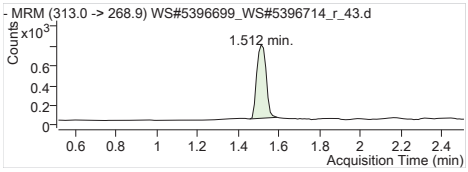



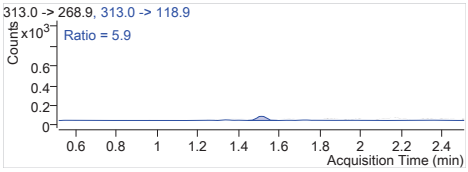

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.191 (2.202)
Concentration: 1 µg/L
Sample type: CC



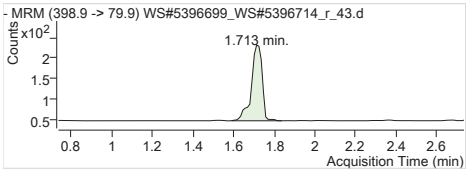



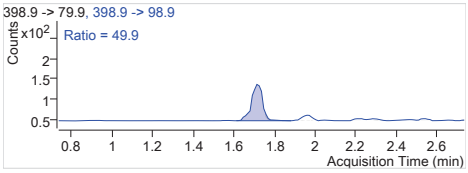

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.176 (1.199)
Calc. conc. 0.02 µg/L
Area ratio: 0.42475
Sample type: CC



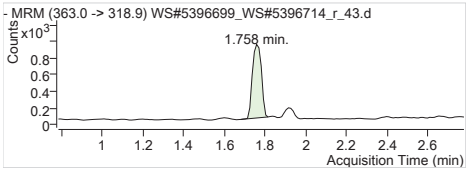



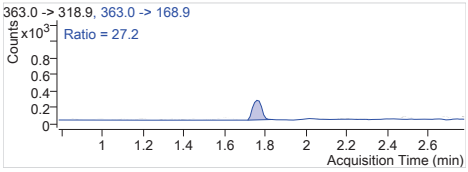

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.512 (1.512)
Calc. conc. 0.03 µg/L
Area ratio: 0.37630
Sample type: CC



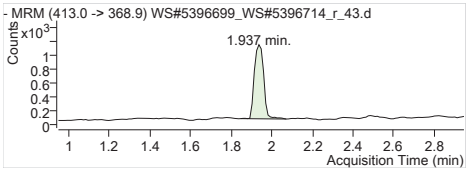



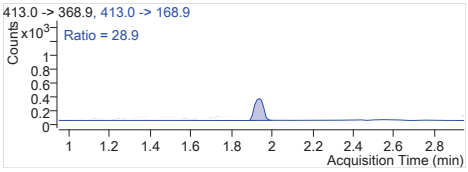

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.713 (1.735)
Calc. conc. 0.03 µg/L
Area ratio: 0.48031
Sample type: CC



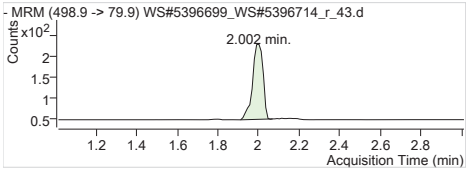



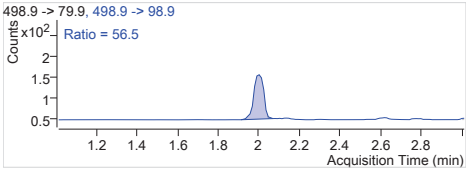

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.758 (1.781)
Calc. conc. 0.02 µg/L
Area ratio: 0.32370
Sample type: CC



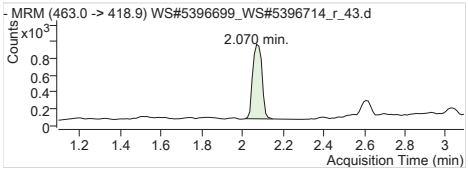



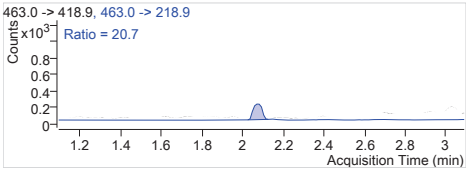

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.937 (1.948)
Calc. conc. 0.02 µg/L
Area ratio: 0.39758
Sample type: CC



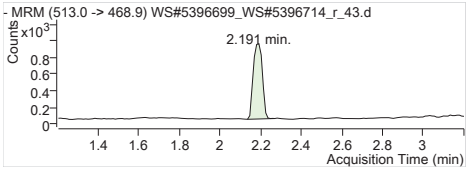



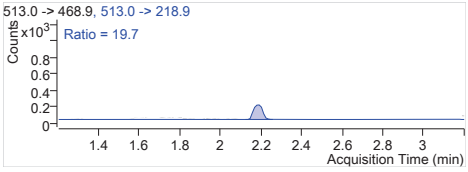

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.002 (2.013)
Calc. conc. 0.02 µg/L
Area ratio: 0.36496
Sample type: CC



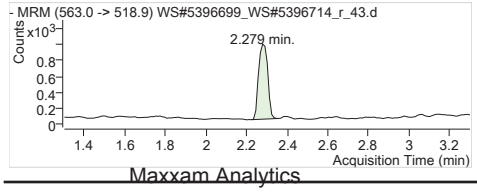



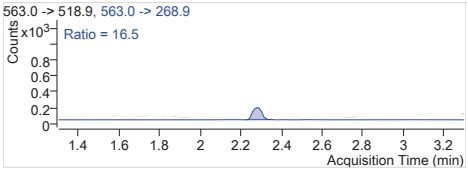

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.070 (2.092)
Calc. conc. 0.02 µg/L
Area ratio: 0.34451
Sample type: CC



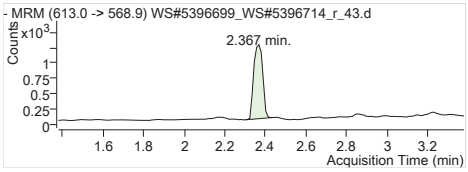



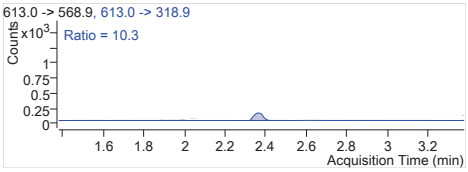

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.191 (2.203)
Calc. conc. 0.02 µg/L
Area ratio: 0.45253
Sample type: CC



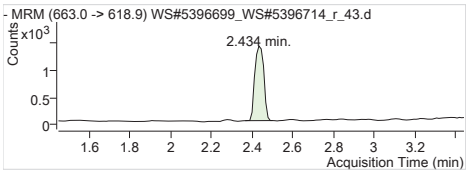



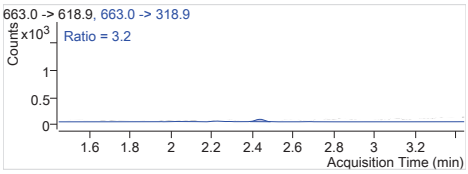

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.279 (2.302)
Calc. conc. 0.02 µg/L
Area ratio: 0.38977
Sample type: CC



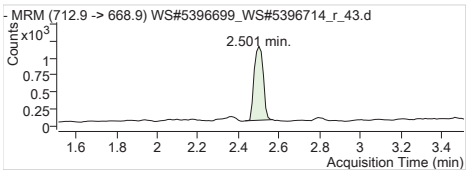



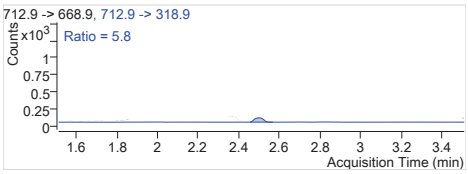

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.367 (2.379) |
| Calc. conc. | 0.02 µg/L |
| Area ratio: | 0.39011 |
| Sample type: | CC |



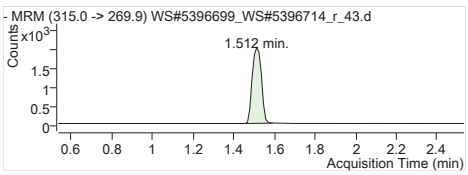



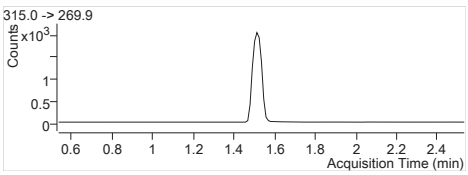

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.434 (2.445) |
| Calc. conc. | 0.02 µg/L |
| Area ratio: | 0.45005 |
| Sample type: | CC |



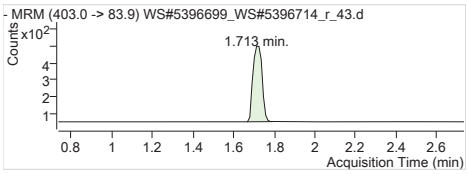



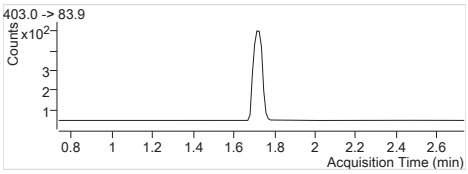

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.501 (2.512) |
| Calc. conc. | 0.02 µg/L |
| Area ratio: | 0.35891 |
| Sample type: | CC |



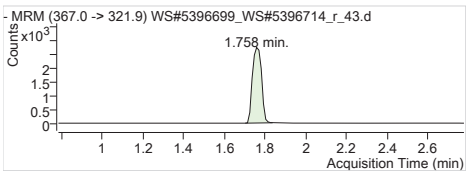



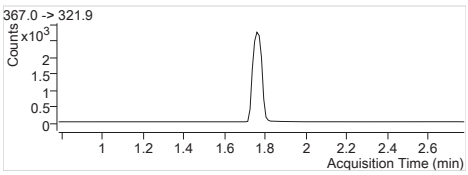

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.512 (1.535) |
| Calc. conc. | 95.44 µg/L |
| Area ratio: | 0.22479 |
| Sample type: | CC |



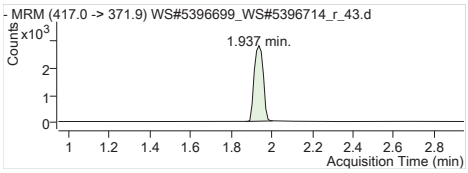



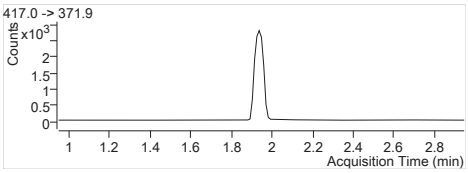

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.713 (1.735) |
| Calc. conc. | 92.37 µg/L |
| Area ratio: | 0.05071 |
| Sample type: | CC |



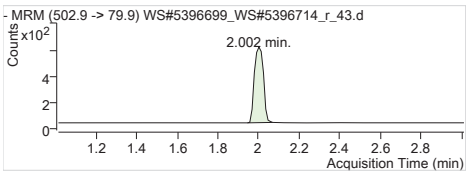



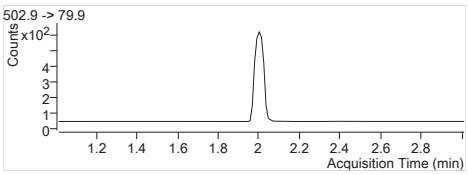

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.758 (1.781) |
| Calc. conc. | 107.15 µg/L |
| Area ratio: | 0.30111 |
| Sample type: | CC |



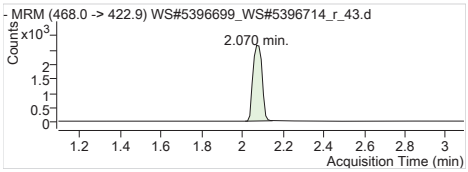



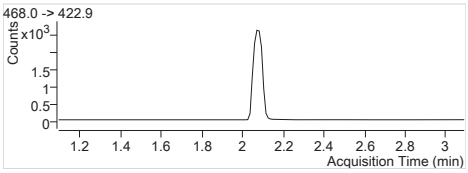

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.937 (1.948) |
| Calc. conc. | 113.69 µg/L |
| Area ratio: | 0.30328 |
| Sample type: | CC |



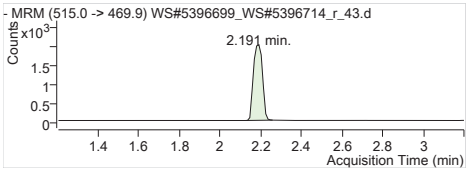



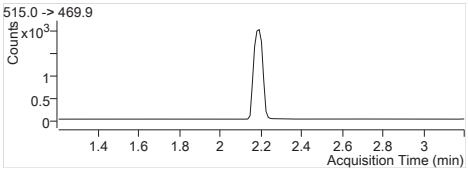

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.002 (2.013) |
| Calc. conc. | 103.01 µg/L |
| Area ratio: | 0.06352 |
| Sample type: | CC |



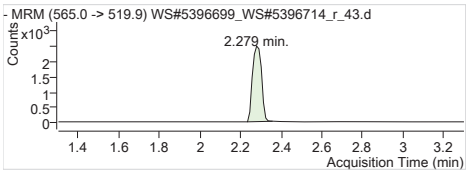



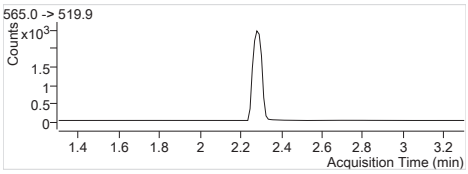

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.070 (2.092) |
| Calc. conc. | 117.19 µg/L |
| Area ratio: | 0.29169 |
| Sample type: | CC |



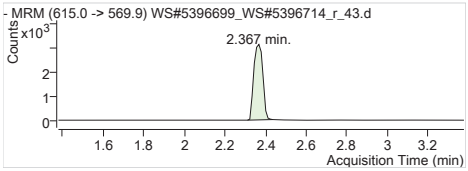



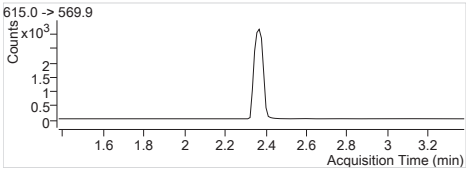

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.191 (2.202)
Calc. conc. 105.31 µg/L
Area ratio: 0.19123
Sample type: CC



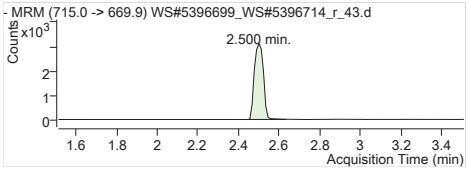



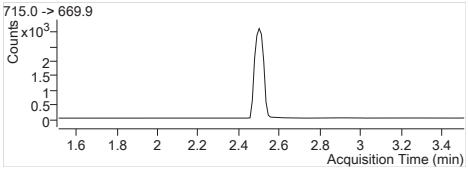

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.279 (2.302)
Calc. conc. 98.50 µg/L
Area ratio: 0.23158
Sample type: CC



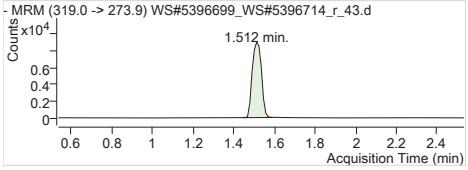



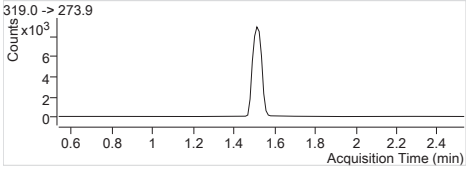

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.367 (2.379)
Calc. conc. 97.42 µg/L
Area ratio: 0.29812
Sample type: CC



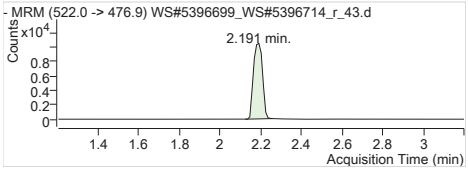



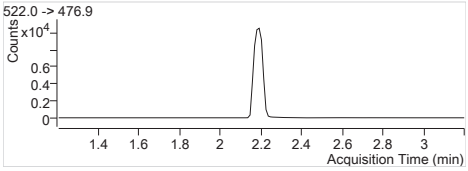

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.500 (2.512)
Calc. conc. 108.42 µg/L
Area ratio: 0.29331
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.512 (1.534)
Calc. conc. 2.74 µg/L
Area ratio: 0
Sample type: CC



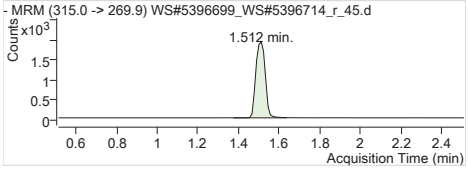

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.191 (2.202)
Calc. conc. 3.20 µg/L
Area ratio: 0
Sample type: CC

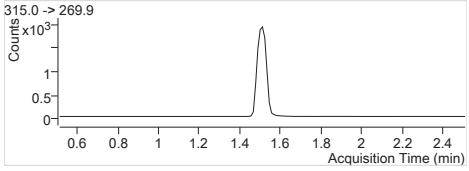
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_r_45.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/16 8:57:41 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

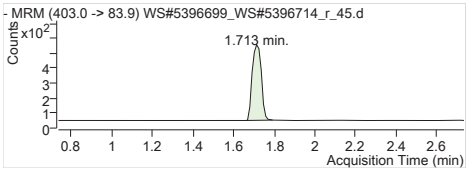
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6139 | 1.51 | 1 µg/L | | |
| MPFHxS | 1580 | 1.71 | 1 µg/L | | |
| MPFHpA | 7660 | 1.76 | 1 µg/L | | |
| MPFOA | 7892 | 1.94 | 1 µg/L | | |
| MPFOS | 1703 | 2.00 | 1 µg/L | | |
| MPFNA | 7129 | 2.07 | 1 µg/L | | |
| MPFDA | 5208 | 2.19 | 1 µg/L | | |
| MPFUnA | 6983 | 2.28 | 1 µg/L | | |
| MPFDoA | 8642 | 2.37 | 1 µg/L | | |
| MPFTeDA | 8576 | 2.50 | 1 µg/L | | |
| 13C6-PFHxA IS | 24438 | 1.51 | 1 µg/L | | |
| 13C9-PFDA IS | 28392 | 2.19 | 1 µg/L | | |

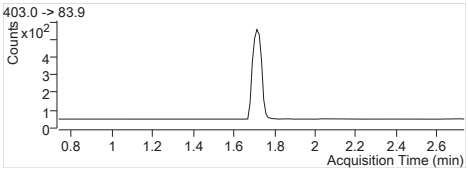
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 10566 | 1.17 | 12.50 | 9.84 µg/L | 78.68 |
| PFHxA 1 | 36648 | 1.51 | 12.50 | 11.18 µg/L | 89.45 |
| PFHxS 1 | 10206 | 1.71 | 12.50 | 9.76 µg/L | 78.05 |
| PFHpA 1 | 49299 | 1.76 | 12.50 | 11.20 µg/L | 89.60 |
| PFOA 1 | 56040 | 1.94 | 12.50 | 11.57 µg/L | 92.56 |
| PFOS 1 | 10326 | 1.99 | 12.50 | 11.29 µg/L | 90.30 |
| PFNA 1 | 46620 | 2.07 | 12.50 | 11.84 µg/L | 94.74 |
| PFDA 1 | 46085 | 2.18 | 12.50 | 12.16 µg/L | 97.26 |
| PFUnA 1 | 48890 | 2.28 | 12.50 | 11.84 µg/L | 94.74 |
| PFDoA 1 | 61990 | 2.37 | 12.50 | 12.57 µg/L | 100.59 |
| PFTrDA 1 | 68583 | 2.43 | 12.50 | 12.03 µg/L | 96.26 |
| PFTeDA 1 | 54399 | 2.50 | 12.50 | 12.00 µg/L | 95.99 |
| 13C2-PFHxA | 6037 | 1.51 | 100.00 | 104.88 µg/L | 104.88 |
| 18O2-PFHxS | 1580 | 1.71 | 100.00 | 117.76 µg/L | 117.76 |
| 13C4-PFHpA | 7660 | 1.76 | 100.00 | 111.54 µg/L | 111.54 |
| 13C4-PFOA | 7892 | 1.94 | 100.00 | 121.06 µg/L | 121.06 |
| 13C4-PFOS | 1703 | 2.00 | 100.00 | 113.02 µg/L | 113.02 |
| 13C5-PFNA | 7105 | 2.07 | 100.00 | 116.81 µg/L | 116.81 |
| 13C2-PFDA | 5189 | 2.19 | 100.00 | 100.65 µg/L | 100.65 |
| 13C2-PFUnA | 6983 | 2.28 | 100.00 | 104.61 µg/L | 104.61 |
| 13C2-PFDoA | 8642 | 2.37 | 100.00 | 99.46 µg/L | 99.46 |
| 13C2-PFTeDA | 8672 | 2.50 | 100.00 | 112.91 µg/L | 112.91 |
| 13C6-PFHxA | 24438 | 1.51 | 100.00 | 99.66 µg/L | 99.66 |
| 13C9-PFDA | 28392 | 2.19 | 100.00 | 116.62 µg/L | 116.62 |



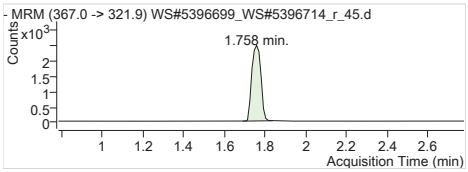



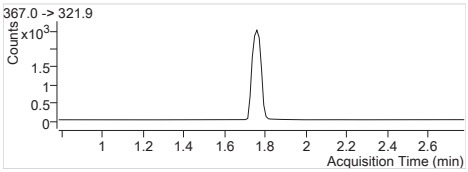

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.512 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



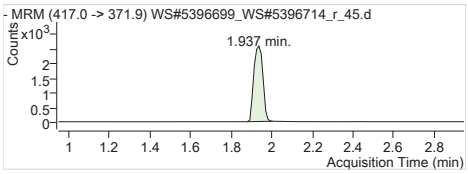



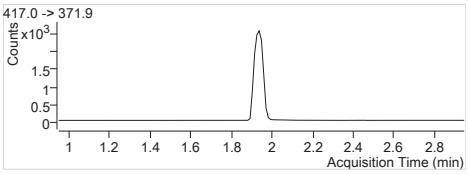

**MPFHxS** Internal Standard
RT (Exp. RT): 1.713 (1.735)
Concentration: 1 µg/L
Sample type: CC



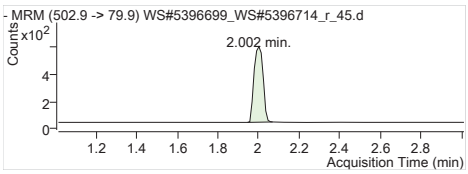



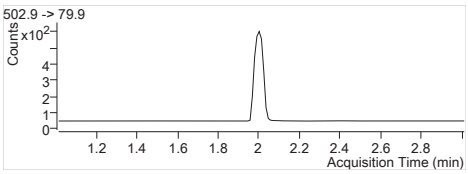

**MPFHpA** Internal Standard
RT (Exp. RT): 1.758 (1.781)
Concentration: 1 µg/L
Sample type: CC



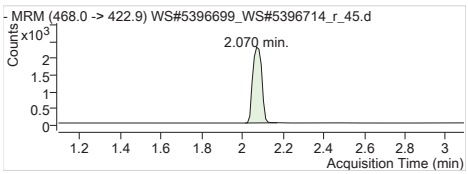



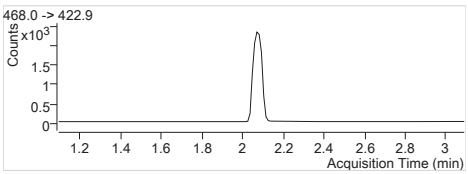

**MPFOA** Internal Standard
RT (Exp. RT): 1.937 (1.948)
Concentration: 1 µg/L
Sample type: CC



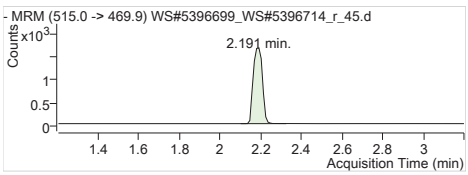



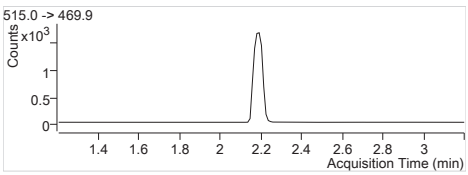

**MPFOS** Internal Standard
RT (Exp. RT): 2.002 (2.013)
Concentration: 1 µg/L
Sample type: CC



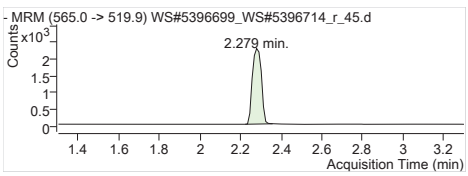



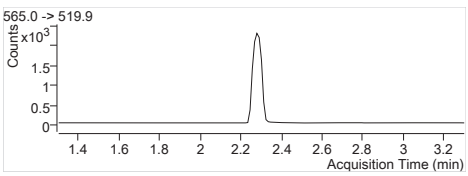

**MPFNA** Internal Standard
RT (Exp. RT): 2.070 (2.092)
Concentration: 1 µg/L
Sample type: CC



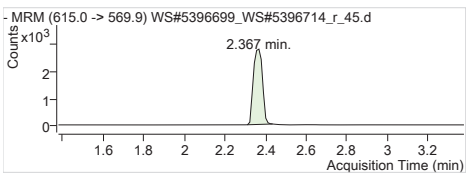



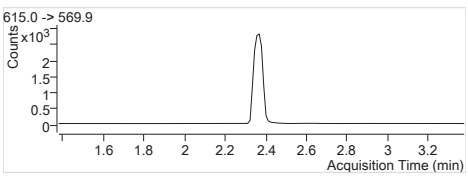

**MPFDA** Internal Standard
RT (Exp. RT): 2.191 (2.202)
Concentration: 1 µg/L
Sample type: CC



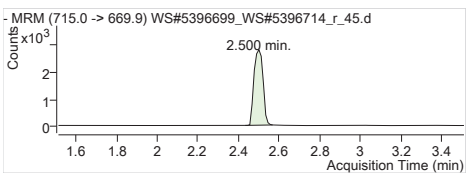



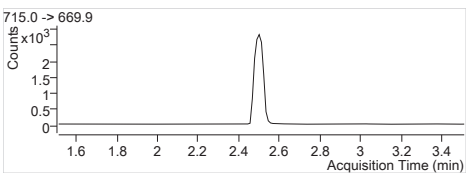

**MPFUnA** Internal Standard
RT (Exp. RT): 2.279 (2.302)
Concentration: 1 µg/L
Sample type: CC



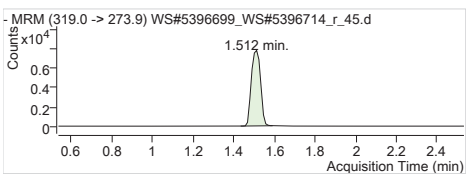



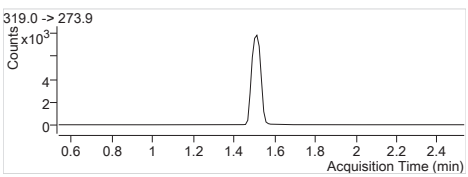

**MPFDoA** Internal Standard
RT (Exp. RT): 2.367 (2.379)
Concentration: 1 µg/L
Sample type: CC



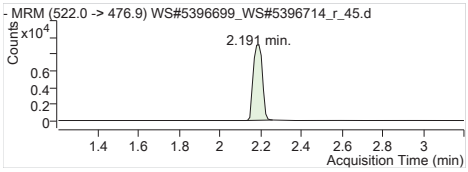



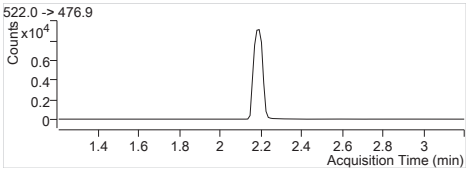

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.500 (2.512)
Concentration: 1 µg/L
Sample type: CC



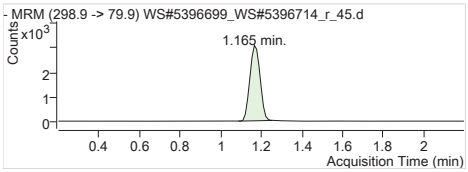



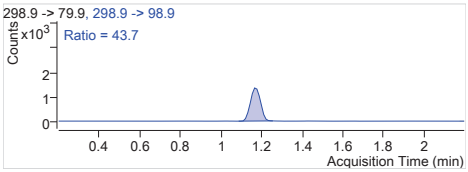

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.512 (1.534)
Concentration: 1 µg/L
Sample type: CC



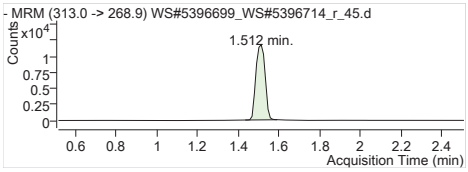



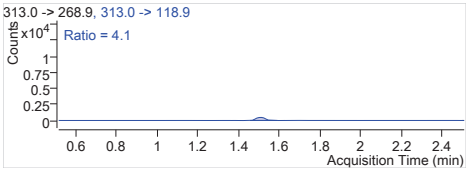

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.191 (2.202)
Concentration: 1 µg/L
Sample type: CC



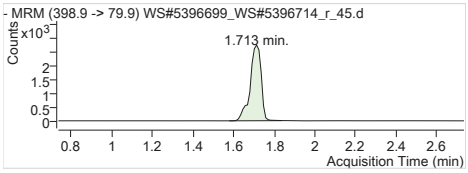



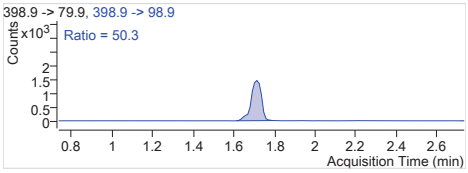

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.165 (1.199)
Calc. conc. 9.84 µg/L
Area ratio: 6.68734
Sample type: CC



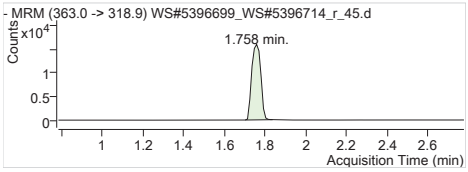



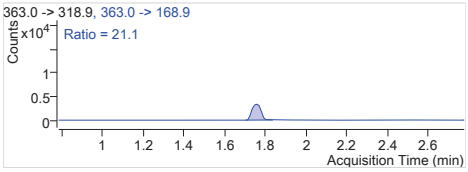

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.512 (1.512)
Calc. conc. 11.18 µg/L
Area ratio: 5.96970
Sample type: CC



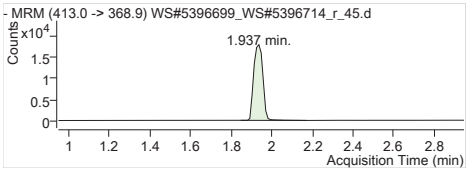



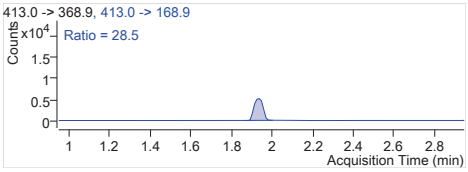

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.713 (1.735)
Calc. conc. 9.76 µg/L
Area ratio: 6.45949
Sample type: CC



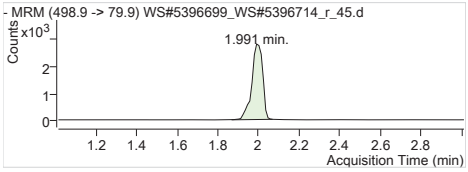



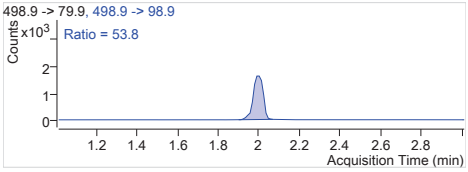

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.758 (1.781)
Calc. conc. 11.20 µg/L
Area ratio: 6.43590
Sample type: CC



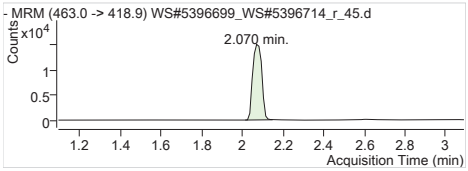



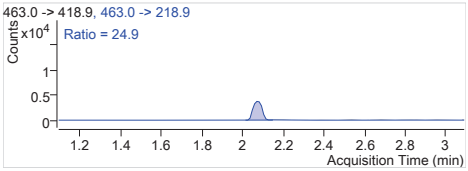

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.937 (1.948)
Calc. conc. 11.57 µg/L
Area ratio: 7.10086
Sample type: CC



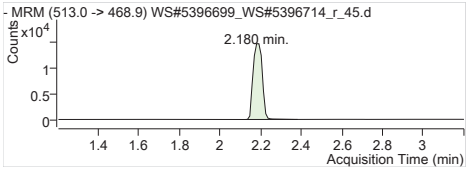



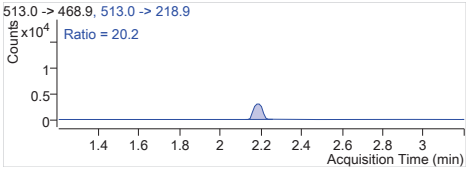

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.991 (2.013)
Calc. conc. 11.29 µg/L
Area ratio: 6.06342
Sample type: CC



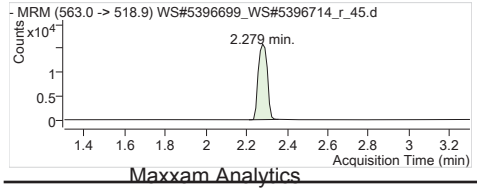



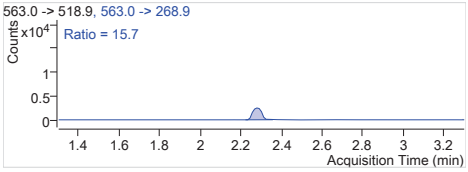

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.070 (2.092)
Calc. conc. 11.84 µg/L
Area ratio: 6.53949
Sample type: CC



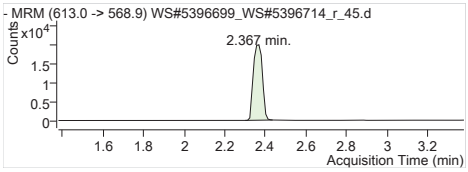



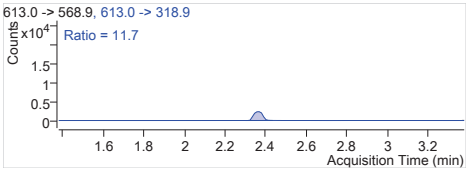

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.180 (2.203)
Calc. conc. 12.16 µg/L
Area ratio: 8.84889
Sample type: CC



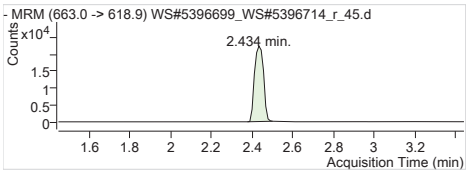



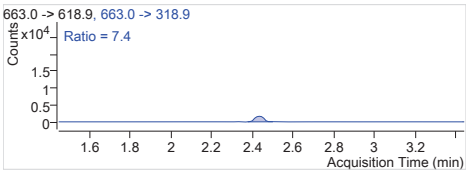

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.279 (2.302)
Calc. conc. 11.84 µg/L
Area ratio: 7.00129
Sample type: CC



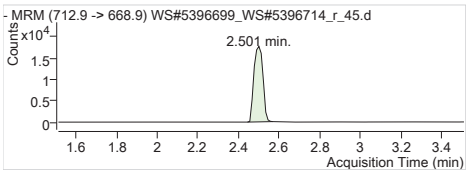



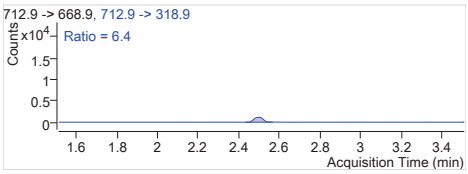

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.367 (2.379)
Calc. conc. 12.57 µg/L
Area ratio: 7.17311
Sample type: CC



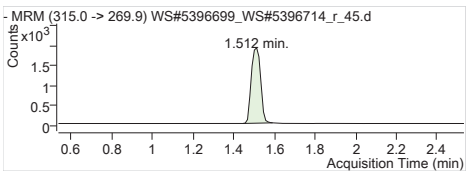



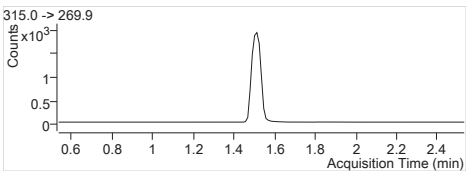

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.434 (2.445)
Calc. conc. 12.03 µg/L
Area ratio: 7.99708
Sample type: CC



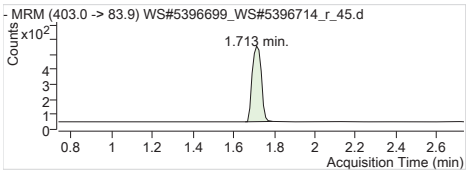



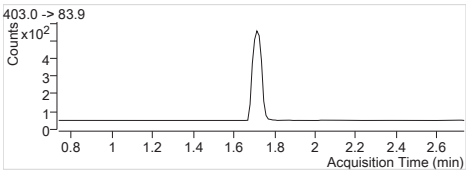

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.501 (2.512)
Calc. conc. 12.00 µg/L
Area ratio: 6.34317
Sample type: CC



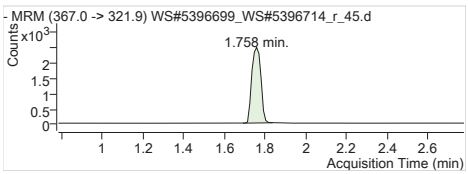



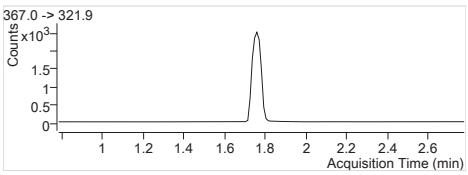

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.512 (1.535)
Calc. conc. 104.88 µg/L
Area ratio: 0.24703
Sample type: CC



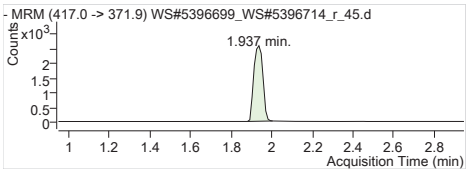



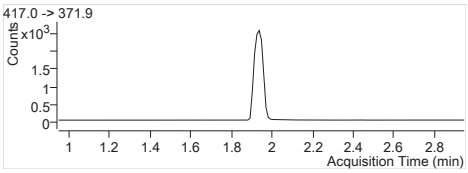

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.713 (1.735)
Calc. conc. 117.76 µg/L
Area ratio: 0.06465
Sample type: CC



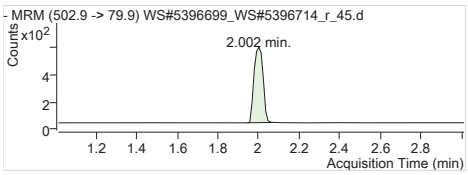



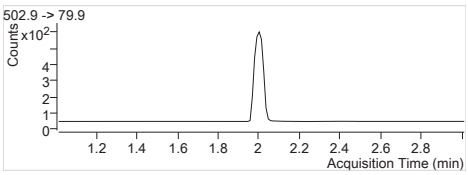

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.758 (1.781)
Calc. conc. 111.54 µg/L
Area ratio: 0.31345
Sample type: CC



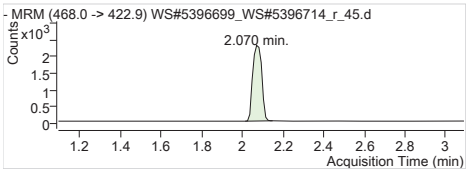



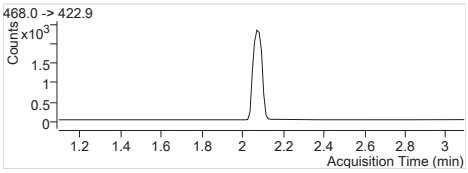

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.937 (1.948)
Calc. conc. 121.06 µg/L
Area ratio: 0.32294
Sample type: CC



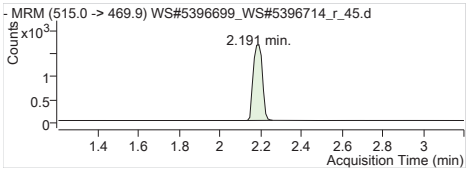



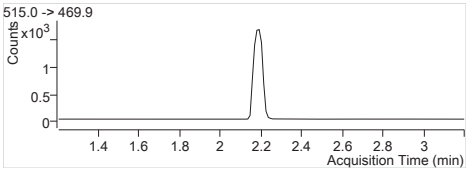

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 2.002 (2.013)
Calc. conc. 113.02 µg/L
Area ratio: 0.06969
Sample type: CC



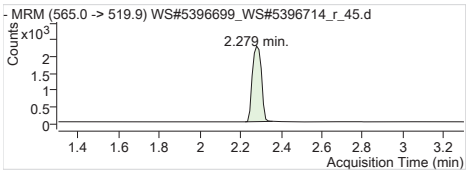



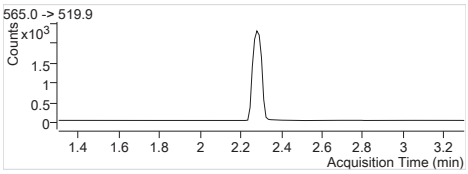

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.070 (2.092)
Calc. conc. 116.81 µg/L
Area ratio: 0.29074
Sample type: CC



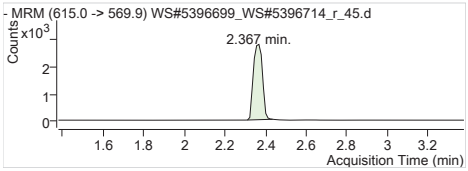



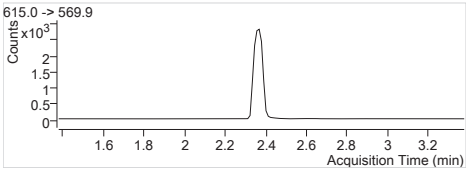

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.191 (2.202)
Calc. conc. 100.65 µg/L
Area ratio: 0.18276
Sample type: CC



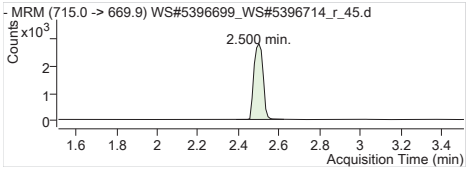



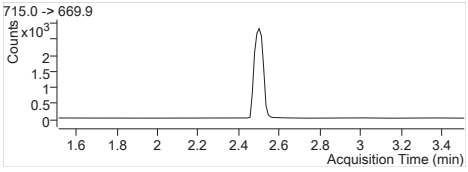

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.279 (2.302)
Calc. conc. 104.61 µg/L
Area ratio: 0.24595
Sample type: CC



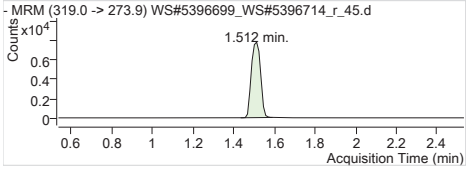



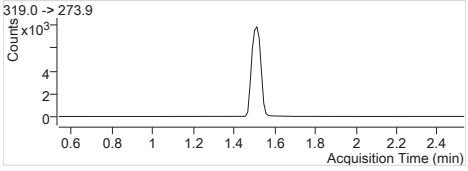

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.367 (2.379)
Calc. conc. 99.46 µg/L
Area ratio: 0.30438
Sample type: CC



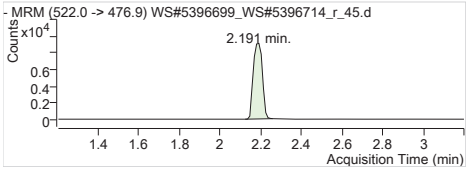



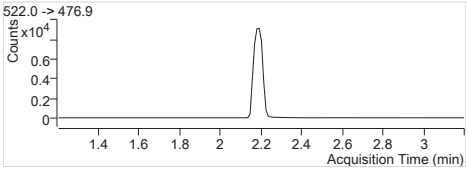

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.500 (2.512)
Calc. conc. 112.91 µg/L
Area ratio: 0.30544
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.512 (1.534)
Calc. conc. 99.66 µg/L
Area ratio: 0
Sample type: CC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.191 (2.202)
Calc. conc. 116.62 µg/L
Area ratio: 0
Sample type: CC

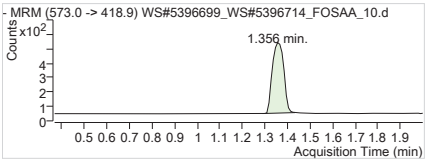
# Quantitation Results

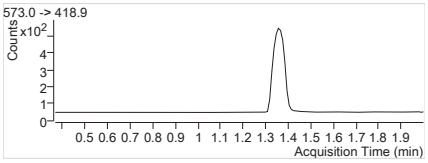
Agilent Technologies

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A2 |
| **Acq. Date** | 2018/02/15 10:58:29 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

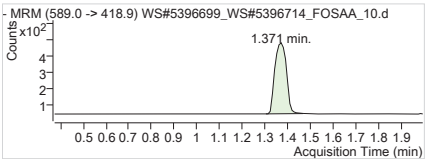
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1728 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1534 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 28624 | 1.11 | 1 µg/L | | |

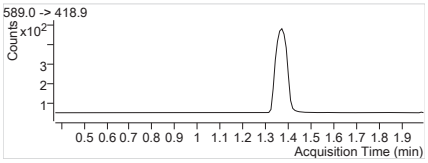
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 631 | 1.36 | 0.83 | 0.98 µg/L | 117.79 |
| EtFOSAA 1 | 620 | 1.37 | 0.83 | 0.98 µg/L | 118.33 |
| D3-MeFOSAA | 1771 | 1.36 | 100.00 | 112.39 µg/L | 112.39 |
| D5-EtFOSAA | 1546 | 1.37 | 100.00 | 112.67 µg/L | 112.67 |
| 13C9-PFDA | 28210 | 1.11 | 100.00 | 106.23 µg/L | 106.23 |



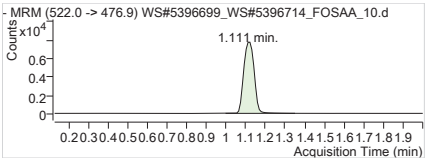



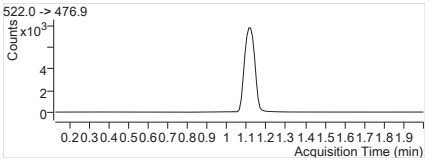

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: CC



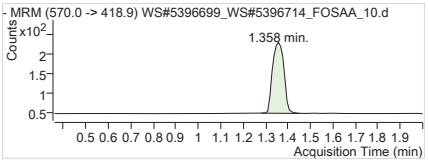



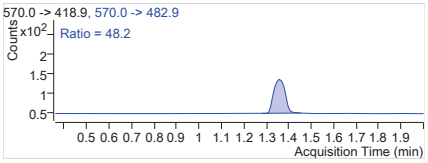

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: CC



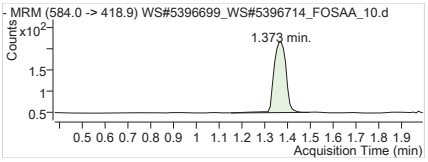



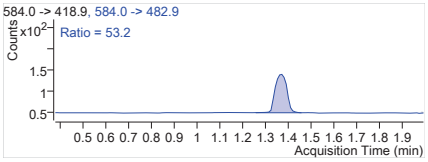

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.111 (1.121)
Concentration: 1 µg/L
Sample type: CC



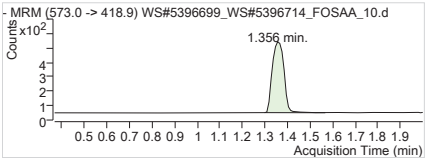



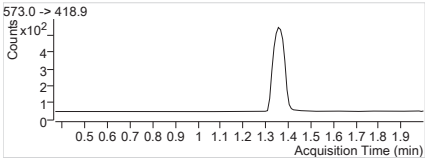

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.358 (1.358)
Calc. conc. 0.98 µg/L
Area ratio: 0.36516
Sample type: CC



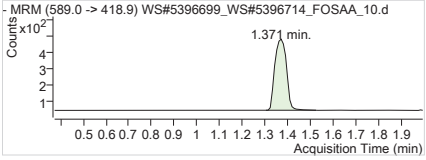



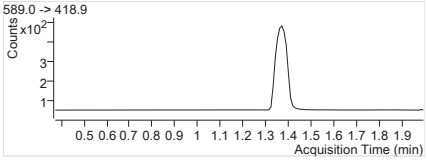

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.373 (1.373)
Calc. conc. 0.98 µg/L
Area ratio: 0.40417
Sample type: CC



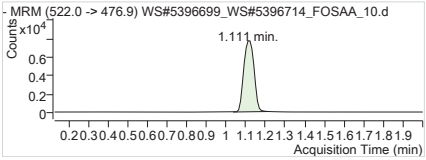



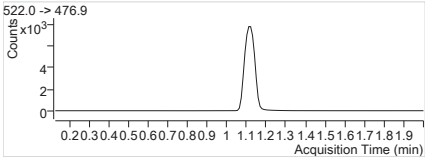

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 112.39 µg/L
Area ratio: 0.06187
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 112.67 µg/L |
| Area ratio: | 0.05401 |
| Sample type: | CC |



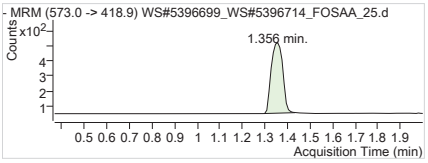

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.111 (1.121) |
| Calc. conc. | 106.23 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

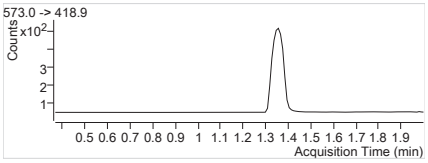
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_25.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/15 11:34:40 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

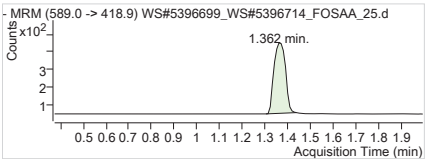
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1658 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1409 | 1.36 | 1 µg/L | | |
| 13C9-PFDA IS | 26628 | 1.10 | 1 µg/L | | |

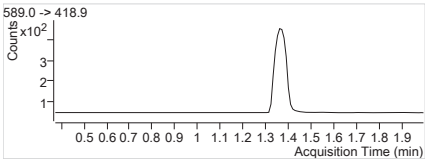
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 9942 | 1.36 | 12.50 | 12.06 µg/L | 96.49 |
| EtFOSAA 1 | 10337 | 1.36 | 12.50 | 12.59 µg/L | 100.73 |
| D3-MeFOSAA | 1693 | 1.36 | 100.00 | 115.49 µg/L | 115.49 |
| D5-EtFOSAA | 1442 | 1.36 | 100.00 | 112.96 µg/L | 112.96 |
| 13C9-PFDA | 26064 | 1.10 | 100.00 | 98.15 µg/L | 98.15 |



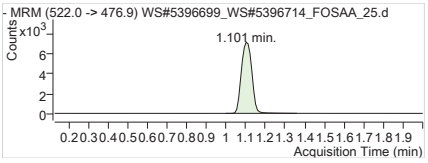



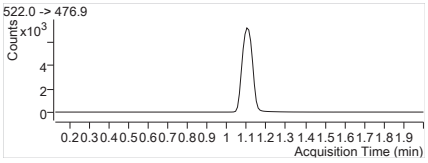

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: CC



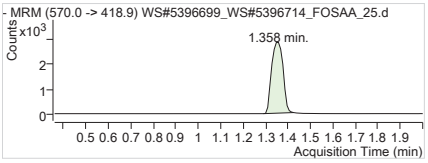



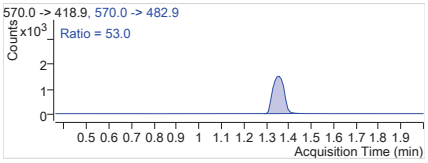

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.362 (1.371)
Concentration: 1 µg/L
Sample type: CC



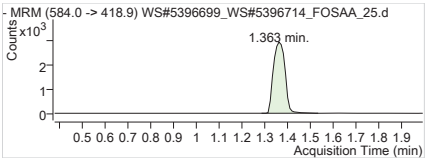



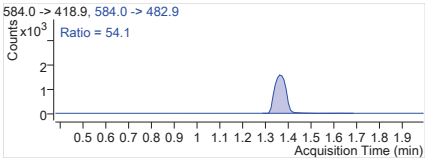

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.101 (1.121)
Concentration: 1 µg/L
Sample type: CC



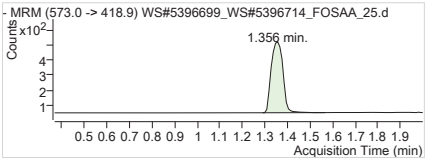



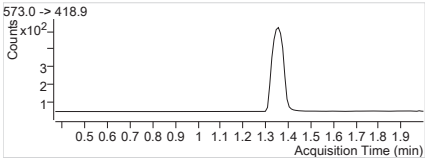

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.358 (1.358)
Calc. conc. 12.06 µg/L
Area ratio: 5.99638
Sample type: CC



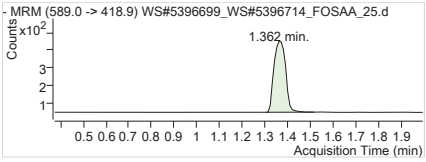



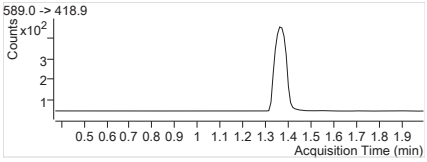

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.363 (1.373)
Calc. conc. 12.59 µg/L
Area ratio: 7.33641
Sample type: CC



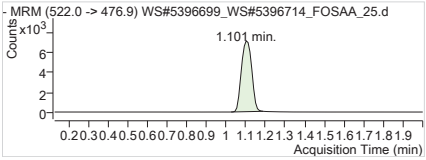



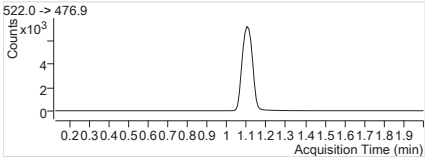

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 115.49 µg/L
Area ratio: 0.06358
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.362 (1.371) |
| Calc. conc. | 112.96 µg/L |
| Area ratio: | 0.05415 |
| Sample type: | CC |



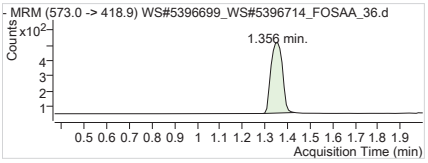

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.101 (1.121) |
| Calc. conc. | 98.15 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

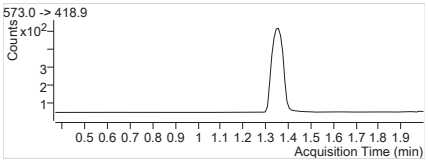
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_36.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/15 12:01:09 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

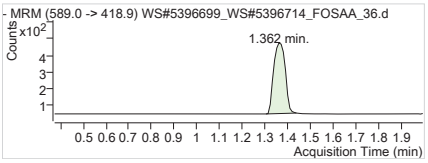
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1653 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1491 | 1.36 | 1 µg/L | | |
| 13C9-PFDA IS | 26549 | 1.10 | 1 µg/L | | |

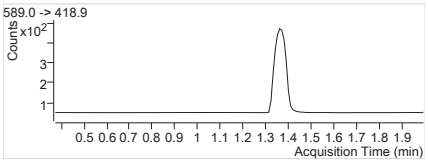
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 10075 | 1.35 | 12.50 | 12.25 µg/L | 98.04 |
| EtFOSAA 1 | 10287 | 1.36 | 12.50 | 11.86 µg/L | 94.87 |
| D3-MeFOSAA | 1680 | 1.36 | 100.00 | 114.95 µg/L | 114.95 |
| D5-EtFOSAA | 1516 | 1.36 | 100.00 | 119.11 µg/L | 119.11 |
| 13C9-PFDA | 26014 | 1.10 | 100.00 | 97.96 µg/L | 97.96 |



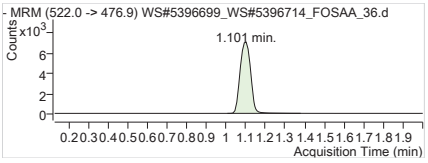



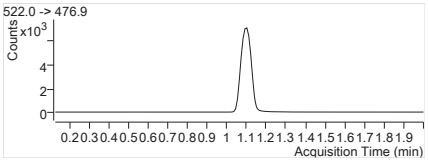

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: CC



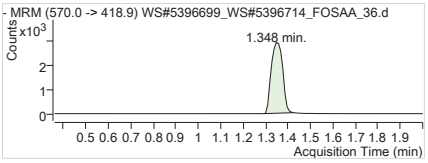



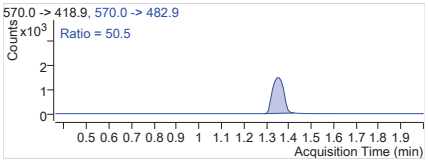

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.362 (1.371)
Concentration: 1 µg/L
Sample type: CC



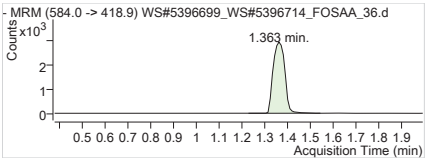



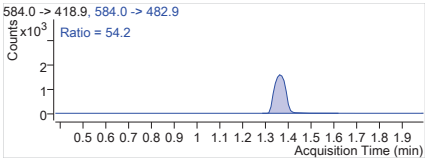

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.101 (1.121)
Concentration: 1 µg/L
Sample type: CC



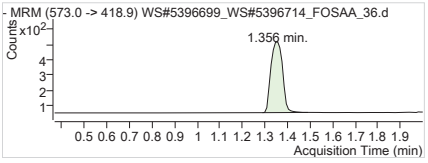



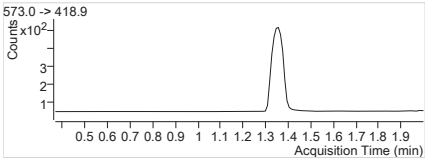

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.348 (1.358)
Calc. conc. 12.25 µg/L
Area ratio: 6.09498
Sample type: CC



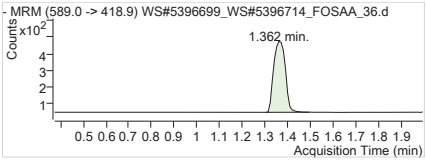



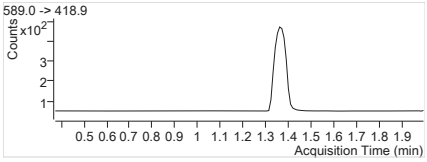

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.363 (1.373)
Calc. conc. 11.86 µg/L
Area ratio: 6.89940
Sample type: CC



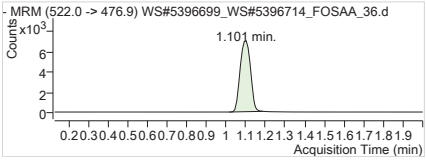



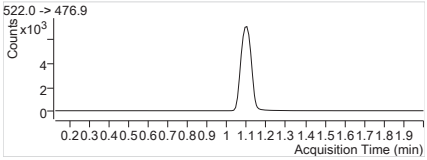

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 114.95 µg/L
Area ratio: 0.06328
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.362 (1.371) |
| Calc. conc. | 119.11 µg/L |
| Area ratio: | 0.05710 |
| Sample type: | CC |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.101 (1.121) |
| Calc. conc. | 97.96 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

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Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

OLD-002-51A-0118,"ES37","IN","FZA783","MAXXAM","13C2PFDA","13C2-Perfluorodecanoic acid","86","%","","-99","NA","","SUR","86","","-99","NA","YES","-99","","1","1","-99","TEST"
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OLD-002-51A-0118,"ES37","RA0","FZA783","MAXXAM","N-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","112","%","","-99","NA","","SUR","112","","-99","NA","YES","-99","","1","1","-99","TEST"
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OLD-002-51A-0118,"ES37","IN","FZA783","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
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OLD-002-51A-0118,"ES37","IN","FZA783","MAXXAM","307-24-4","Perfluorohexanoic acid","0.011","ug/L","J","0.0035","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","IN","FZA783","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","IN","FZA783","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
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OLD-002-51A-0118,"ES37","RA0","FZA783","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
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OLD-002-51A-0118,"ES37","IN","FZA784","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","119","%","","-99","NA","","SUR","119","","-99","NA","YES","-99","","1","1","-99","TEST"
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OLD-002-51A-0118,"ES37","RA0","FZA784","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","RA0","FZA784","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0038","ug/L","U","0.0038","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","IN","FZA784","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
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OLD-002-51A-0118,"ES37","RA0","FZA785","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","97","%","","-99","NA","","SUR","97","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","96","%","","-99","NA","","SUR","96","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","99","%","","-99","NA","","SUR","99","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","99","%","","-99","NA","","SUR","99","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","98","%","","-99","NA","","SUR","98","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","101","%","","-99","NA","","SUR","101","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","97","%","","-99","NA","","SUR","97","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","RA0","FZA785","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","108","%","","-99","NA","","SUR","108","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","RA0","FZA785","MAXXAM","DS-ETFOSAA","DS-ETFOSAA","104","%","","-99","NA","","SUR","104","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","RA0","FZA785","MAXXAM","2991-50-6","EtFOSAA","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","RA0","FZA785","MAXXAM","2355-31-9","MeFOSAA","0.0029","ug/L","U","0.0029","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0054","ug/L","U","0.0054","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0061","ug/L","U","0.0061","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","RA0","FZA785","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0050","ug/L","U","0.0050","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.013","ug/L","J","0.0056","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","307-24-4","Perfluorohexanoic acid","0.010","ug/L","J","0.0035","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","335-67-1","Perfluorooctanoic acid","0.012","ug/L","J","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0060","ug/L","U","0.0060","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","RA0","FZA785","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","RA0","FZA785","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0038","ug/L","U","0.0038","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","13C2PFDA","13C2-Perfluorodecanoic acid","93","%","","-99","NA","","SUR","93","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-03A-0118,"ES37","RA0","FZA786","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","93","%","","-99","NA","","SUR","93","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","96","%","","-99","NA","","SUR","96","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-03A-0118,"ES37","RA0","FZA786","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","91","%","","-99","NA","","SUR","91","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","92","%","","-99","NA","","SUR","92","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","101","%","","-99","NA","","SUR","101","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","112","%","","-99","NA","","SUR","112","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","100","%","","-99","NA","","SUR","100","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","103","%","","-99","NA","","SUR","103","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","103","%","","-99","NA","","SUR","103","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-03A-0118,"ES37","RA0","FZA786","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","116","%","","-99","NA","","SUR","116","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-03A-0118,"ES37","RA0","FZA786","MAXXAM","DS-ETFOSAA","DS-ETFOSAA","113","%","","-99","NA","","SUR","113","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-03A-0118,"ES37","RA0","FZA786","MAXXAM","2991-50-6","EtFOSAA","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-03A-0118,"ES37","RA0","FZA786","MAXXAM","2355-31-9","MeFOSAA","0.0029","ug/L","U","0.0029","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.012","ug/L","J","0.0054","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0061","ug/L","U","0.0061","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-03A-0118,"ES37","RA0","FZA786","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0050","ug/L","U","0.0050","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.027","ug/L","J","0.0056","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","307-24-4","Perfluorohexanoic acid","0.035","ug/L","J","0.0035","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","335-67-1","Perfluorooctanoic acid","0.14","ug/L","J","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.084","ug/L","","0.0060","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-03A-0118,"ES37","RA0","FZA786","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-03A-0118,"ES37","RA0","FZA786","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0038","ug/L","U","0.0038","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-03A-0118,"ES37","IN","FZA786","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","13C2PFDA","13C2-Perfluorodecanoic acid","98","%","","-99","NA","","SUR","98","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-GW-012218-1,"ES37","RA0","FZA788","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","89","%","","-99","NA","","SUR","89","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","109","%","","-99","NA","","SUR","109","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-GW-012218-1,"ES37","RA0","FZA788","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","99","%","","-99","NA","","SUR","99","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","96","%","","-99","NA","","SUR","96","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","116","%","","-99","NA","","SUR","116","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","110","%","","-99","NA","","SUR","110","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","110","%","","-99","NA","","SUR","110","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","112","%","","-99","NA","","SUR","112","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","111","%","","-99","NA","","SUR","111","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-GW-012218-1,"ES37","RA0","FZA788","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","106","%","","-99","NA","","SUR","106","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-GW-012218-1,"ES37","RA0","FZA788","MAXXAM","DS-ETFOSAA","DS-ETFOSAA","99","%","","-99","NA","","SUR","99","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-GW-012218-1,"ES37","RA0","FZA788","MAXXAM","2991-50-6","EtFOSAA","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012218-1,"ES37","RA0","FZA788","MAXXAM","2355-31-9","MeFOSAA","0.0029","ug/L","U","0.0029","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0054","ug/L","U","0.0054","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0061","ug/L","U","0.0061","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012218-1,"ES37","RA0","FZA788","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0050","ug/L","U","0.0050","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0056","ug/L","U","0.0056","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0035","ug/L","U","0.0035","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0060","ug/L","U","0.0060","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012218-1,"ES37","RA0","FZA788","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012218-1,"ES37","RA0","FZA788","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0038","ug/L","U","0.0038","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012218-1,"ES37","IN","FZA788","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-1,"ES37","IN","FZA789","MAXXAM","13C2PFDA","13C2-Perfluorodecanoic acid","94","%","","-99","NA","","SUR","94","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012218-1,"ES37","RA0","FZA789","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","94","%","","-99","NA","","SUR","94","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012218-1,"ES37","IN","FZA789","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","109","%","","-99","NA","","SUR","109","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012218-1,"ES37","RA0","FZA789","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","90","%","","-99","NA","","SUR","90","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012218-1,"ES37","IN","FZA789","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","91","%","","-99","NA","","SUR","91","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012218-1,"ES37","IN","FZA789","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","113","%","","-99","NA","","SUR","113","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012218-1,"ES37","IN","FZA789","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","114","%","","-99","NA","","SUR","114","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012218-1,"ES37","IN","FZA789","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","113","%","","-99","NA","","SUR","113","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012218-1,"ES37","IN","FZA789","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","106","%","","-99","NA","","SUR","106","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012218-1,"ES37","IN","FZA789","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","103","%","","-99","NA","","SUR","103","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012218-1,"ES37","RA0","FZA789","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","100","%","","-99","NA","","SUR","100","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012218-1,"ES37","RA0","FZA789","MAXXAM","DS-ETFOSAA","DS-ETFOSAA","97","%","","-99","NA","","SUR","97","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012218-1,"ES37","RA0","FZA789","MAXXAM","2991-50-6","EtFOSAA","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-1,"ES37","RA0","FZA789","MAXXAM","2355-31-9","MeFOSAA","0.0029","ug/L","U","0.0029","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-1,"ES37","IN","FZA789","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0054","ug/L","U","0.0054","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-1,"ES37","IN","FZA789","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0061","ug/L","U","0.0061","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-1,"ES37","RA0","FZA789","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0050","ug/L","U","0.0050","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-1,"ES37","IN","FZA789","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-1,"ES37","IN","FZA789","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0056","ug/L","U","0.0056","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-1,"ES37","IN","FZA789","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0035","ug/L","U","0.0035","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-1,"ES37","IN","FZA789","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-1,"ES37","IN","FZA789","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","0.020","PQL","YES","-

FB-OLD-012218-2,"ES37","IN","FZA790","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","102","%","","-99","NA","","SUR","102","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
FB-OLD-012218-2,"ES37","IN","FZA790","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","100","%","","-99","NA","","SUR","100","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
FB-OLD-012218-2,"ES37","IN","FZA790","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","103","%","","-99","NA","","SUR","103","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
FB-OLD-012218-2,"ES37","IN","FZA790","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","101","%","","-99","NA","","SUR","101","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
FB-OLD-012218-2,"ES37","RA0","FZA790","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","123","%","","-99","NA","","SUR","123","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
FB-OLD-012218-2,"ES37","RA0","FZA790","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","122","%","","-99","NA","","SUR","122","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
FB-OLD-012218-2,"ES37","RA0","FZA790","MAXXAM","2991-50-6","EtFOSAA","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-2,"ES37","RA0","FZA790","MAXXAM","2355-31-9","MeFOSAA","0.0029","ug/L","U","0.0029","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-2,"ES37","IN","FZA790","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0054","ug/L","U","0.0054","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-2,"ES37","IN","FZA790","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0061","ug/L","U","0.0061","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-2,"ES37","RA0","FZA790","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0050","ug/L","U","0.0050","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-2,"ES37","IN","FZA790","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-2,"ES37","IN","FZA790","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0056","ug/L","U","0.0056","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-2,"ES37","IN","FZA790","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0035","ug/L","U","0.0035","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-2,"ES37","IN","FZA790","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-2,"ES37","IN","FZA790","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-2,"ES37","IN","FZA790","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0060","ug/L","U","0.0060","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-2,"ES37","RA0","FZA790","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-2,"ES37","RA0","FZA790","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0038","ug/L","U","0.0038","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012218-2,"ES37","IN","FZA790","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-1,"ES37","RA0","FZA791","MAXXAM","13C2-Perfluorodecanoic acid","106","%","","-99","NA","","SUR","105","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-1,"ES37","RA0","FZA791","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","106","%","","-99","NA","","SUR","106","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-1,"ES37","IN","FZA791","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","104","%","","-99","NA","","SUR","104","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-1,"ES37","RA0","FZA791","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","95","%","","-99","NA","","SUR","95","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-1,"ES37","IN","FZA791","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","102","%","","-99","NA","","SUR","102","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-1,"ES37","IN","FZA791","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","107","","-99","NA","","SUR","107","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-1,"ES37","IN","FZA791","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","106","%","","-99","NA","","SUR","106","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-1,"ES37","IN","FZA791","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","109","%","","-99","NA","","SUR","109","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-1,"ES37","IN","FZA791","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","109","%","","-99","NA","","SUR","109","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-1,"ES37","IN","FZA791","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","95","%","","-99","NA","","SUR","95","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-1,"ES37","RA0","FZA791","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","117","%","","-99","NA","","SUR","117","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-1,"ES37","RA0","FZA791","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","117","%","","-99","NA","","SUR","117","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-1,"ES37","RA0","FZA791","MAXXAM","2991-50-6","EtFOSAA","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-1,"ES37","RA0","FZA791","MAXXAM","2355-31-9","MeFOSAA","0.0029","ug/L","U","0.0029","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-1,"ES37","IN","FZA791","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0054","ug/L","U","0.0054","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-1,"ES37","IN","FZA791","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0061","ug/L","U","0.0061","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-1,"ES37","RA0","FZA791","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0050","ug/L","U","0.0050","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-1,"ES37","IN","FZA791","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-1,"ES37","IN","FZA791","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0056","ug/L","U","0.0056","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-1,"ES37","IN","FZA791","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0035","ug/L","U","0.0035","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-1,"ES37","IN","FZA791","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-1,"ES37","IN","FZA791","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-1,"ES37","IN","FZA791","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0060","ug/L","U","0.0060","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-1,"ES37","RA0","FZA791","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-1,"ES37","RA0","FZA791","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0038","ug/L","U","0.0038","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-1,"ES37","IN","FZA791","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-1,"ES37","IN","FZA792","MAXXAM","13C2PFDA","13C2-Perfluorododecanoic acid","102","%","","-99","NA","","SUR","102","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-1,"ES37","RA0","FZA792","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","100","%","","-99","NA","","SUR","100","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-1,"ES37","IN","FZA792","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","90","%","","-99","NA","","SUR","90","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-1,"ES37","RA0","FZA792","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","84","%","","-99","NA","","SUR","84","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-1,"ES37","RA0","FZA792","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","95","%","","-99","NA","","SUR","95","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-1,"ES37","IN","FZA792","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","92","%","","-99","NA","","SUR","92","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-1,"ES37","IN","FZA792","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","104","%","","-99","NA","","SUR","104","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-1,"ES37","IN","FZA792","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","101","%","","-99","NA","","SUR","101","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-1,"ES37","IN","FZA792","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","93","%","","-99","NA","","SUR","93","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-1,"ES37","RA0","FZA792","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","96","%","","-99","NA","","SUR","96","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-1,"ES37","RA0","FZA792","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","76","%","","-99","NA","","SUR","76","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-1,"ES37","RA0","FZA792","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","72","%","","-99","NA","","SUR","72","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-1,"ES37","RA0","FZA792","MAXXAM","2991-50-6","EtFOSAA","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-1,"ES37","RA0","FZA792","MAXXAM","2355-31-9","MeFOSAA","0.0029","ug/L","U","0.0029","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-1,"ES37","IN","FZA792","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0054","ug/L","U","0.0054","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-1,"ES37","IN","FZA792","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0061","ug/L","U","0.0061","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-1,"ES37","RA0","FZA792","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0050","ug/L","U","0.0050","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-1,"ES37","IN","FZA792","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-1,"ES37","IN","FZA792","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0056","ug/L","U","0.0056","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-1,"ES37","IN","FZA792","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0035","ug/L","U","0.0035","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-1,"ES37","IN","FZA792","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-1,"ES37","IN","FZA792","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-1,"ES37","IN","FZA792","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0060","ug/L","U","0.0060","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-1,"ES37","RA0","FZA792","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-1,"ES37","RA0","FZA792","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0038","ug/L","U","0.0038","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-1,"ES37","RA0","FZA792","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","13C2PFDA","13C2-Perfluorododecanoic acid","78","%","","-99","NA","","SUR","78","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","72","%","","-99","NA","","SUR","72","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","90","%","","-99","NA","","SUR","90","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-3,"ES37","RA0","FZA801","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","69","%","","-99","NA","","SUR","69","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","70","%","","-99","NA","","SUR","70","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","91","%","","-99","NA","","SUR","91","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","73","%","","-99","NA","","SUR","73","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","85","%","","-99","NA","","SUR","85","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","84","%","","-99","NA","","SUR","84","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","85","%","","-99","NA","","SUR","85","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","75","%","","-99","NA","","SUR","75","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","70","%","","-99","NA","","SUR","70","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","2991-50-6","EtFOSAA","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","2355-31-9","MeFOSAA","0.0029","ug/L","U","0.0029","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0054","ug/L","U","0.0054","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0061","ug/L","U","0.0061","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0050","ug/L","U","0.0050","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0056","ug/L","U","0.0056","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0035","ug/L","U","0.0035","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-3,"ES37","IN","FZA801","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0060","ug/L","U","0.0060","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-3,"ES37","RA0","FZA801","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-3,"ES37","RA0","FZA801","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0038","ug/L","U","0.0038","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-DPT-012218-3,"ES37","RA0","FZA801","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","13C2PFDA","13C2-Perfluorododecanoic acid","91","%","","-99","NA","","SUR","91","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","91","%","","-99","NA","","SUR","91","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","73","%","","-99","NA","","SUR","73","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","77","%","","-99","NA","","SUR","77","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","97","%","","-99","NA","","SUR","97","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","80","%","","-99","NA","","SUR","80","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","67","%","","-99","NA","","SUR","67","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","66","%","","-99","NA","","SUR","66","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","74","%","","-99","NA","","SUR","74","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","79","%","","-99","NA","","SUR","79","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","91","%","","-99","NA","","SUR","91","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","88","%","","-99","NA","","SUR","88","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","2991-50-6","EtFOSAA","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","2355-31-9","MeFOSAA","0.0029","ug/L","U","0.0029","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0054","ug/L","U","0.0054","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0061","ug/L","U","0.0061","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0050","ug/L","U","0.0050","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0056","ug/L","U","0.0056","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0035","ug/L","U","0.0035","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0060","ug/L","U","0.0060","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0038","ug/L","U","0.0038","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012218-2,"ES37","RA0","FZA802","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","13C2PFDA","13C2-Perfluorododecanoic acid","73","%","","-99","NA","","SUR","73","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","69","%","","-99","NA","","SUR","69","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","76","%","","-99","NA","","SUR","76","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","62","%","","-99","NA","","SUR","62","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","77","%","","-99","NA","","SUR","77","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","71","%","","-99","NA","","SUR","71","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","73","%","","-99","NA","","SUR","73","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","80","%","","-99","NA","","SUR","80","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","75","%","","-99","NA","","SUR","75","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","76","%","","-99","NA","","SUR","76","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","69","%","","-99","NA","","SUR","69","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","64","%","","-99","NA","","SUR","64","","","-99","NA","YES","-99","","1","1","1","-99","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","2991-50-6","EtFOSAA","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","2355-31-9","MeFOSAA","0.0029","ug/L","U","0.0029","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0054","ug/L","U","0.0054","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0061","ug/L","U","0.0061","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0050","ug/L","U","0.0050","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0056","ug/L","U","0.0056","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0035","ug/L","U","0.0035","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0060","ug/L","U","0.0060","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0038","ug/L","U","0.0038","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-GW-012318-2,"ES37","IN","FZA803","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012318-4

FB-OLD-012318-4,"E537","IN","FZA804","MAXXAM","2991-50-6","EtFOSAA","0.0033","ug/L","U","0.0033","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012318-4,"E537","IN","FZA804","MAXXAM","2355-31-9","MeFOSAA","0.0029","ug/L","U","0.0029","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012318-4,"E537","IN","FZA804","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0054","ug/L","U","0.0054","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012318-4,"E537","IN","FZA804","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0061","ug/L","U","0.0061","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012318-4,"E537","IN","FZA804","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0050","ug/L","U","0.0050","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012318-4,"E537","IN","FZA804","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012318-4,"E537","IN","FZA804","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0056","ug/L","U","0.0056","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012318-4,"E537","IN","FZA804","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0035","ug/L","U","0.0035","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012318-4,"E537","IN","FZA804","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0033","ug/L","U","0.0033","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012318-4,"E537","IN","FZA804","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012318-4,"E537","IN","FZA804","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0060","ug/L","U","0.0060","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012318-4,"E537","IN","FZA804","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012318-4,"E537","IN","FZA804","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0038","ug/L","U","0.0038","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
FB-OLD-012318-4,"E537","IN","FZA804","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","13C2PFDA","13C2-Perfluorodecanoic acid","75","%","","-99","NA","","SUR","75","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","72","%","","-99","NA","","SUR","72","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","79","%","","-99","NA","","SUR","79","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","64","%","","-99","NA","","SUR","64","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","74","%","","-99","NA","","SUR","74","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","83","%","","-99","NA","","SUR","83","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","80","%","","-99","NA","","SUR","80","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","81","%","","-99","NA","","SUR","81","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","79","%","","-99","NA","","SUR","79","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","85","%","","-99","NA","","SUR","85","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","80","%","","-99","NA","","SUR","80","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","78","%","","-99","NA","","SUR","78","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","2991-50-6","EtFOSAA","0.0035","ug/L","U","0.0035","MDL","","NM","","","","0.021","PQL","YES","-99","","1","1","0.021","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","2355-31-9","MeFOSAA","0.0030","ug/L","U","0.0030","MDL","","NM","","","","0.021","PQL","YES","-99","","1","1","0.021","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0057","ug/L","U","0.0057","MDL","","NM","","","","0.021","PQL","YES","-99","","1","1","0.021","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0064","ug/L","U","0.0064","MDL","","NM","","","","0.021","PQL","YES","-99","","1","1","0.021","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0053","ug/L","U","0.0053","MDL","","NM","","","","0.021","PQL","YES","-99","","1","1","0.021","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0078","ug/L","U","0.0078","MDL","","NM","","","","0.021","PQL","YES","-99","","1","1","0.021","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0059","ug/L","U","0.0059","MDL","","NM","","","","0.021","PQL","YES","-99","","1","1","0.021","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0037","ug/L","U","0.0037","MDL","","NM","","","","0.021","PQL","YES","-99","","1","1","0.021","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0035","ug/L","U","0.0035","MDL","","NM","","","","0.021","PQL","YES","-99","","1","1","0.021","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","375-95-1","Perfluorononanoic acid","0.0091","ug/L","U","0.0091","MDL","","NM","","","","0.021","PQL","YES","-99","","1","1","0.021","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0063","ug/L","U","0.0063","MDL","","NM","","","","0.021","PQL","YES","-99","","1","1","0.021","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0028","ug/L","U","0.0028","MDL","","NM","","","","0.021","PQL","YES","-99","","1","1","0.021","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0040","ug/L","U","0.0040","MDL","","NM","","","","0.021","PQL","YES","-99","","1","1","0.021","TEST"
EB-OLD-012318-2,"E537","DL1","FZA805","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0026","ug/L","U","0.0026","MDL","","NM","","","","0.021","PQL","YES","-99","","1","1","0.021","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","13C2PFDA","13C2-Perfluorodecanoic acid","64","%","","-99","NA","","SUR","64","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","62","%","","-99","NA","","SUR","62","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","79","%","","-99","NA","","SUR","79","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","63","%","","-99","NA","","SUR","63","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","68","%","","-99","NA","","SUR","68","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","72","%","","-99","NA","","SUR","72","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","86","%","","-99","NA","","SUR","86","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","69","%","","-99","NA","","SUR","69","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","78","%","","-99","NA","","SUR","78","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","85","%","","-99","NA","","SUR","85","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","73","%","","-99","NA","","SUR","73","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","72","%","","-99","NA","","SUR","72","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","2991-50-6","EtFOSAA","0.0033","ug/L","U","0.0033","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","2355-31-9","MeFOSAA","0.0029","ug/L","U","0.0029","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0054","ug/L","U","0.0054","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0061","ug/L","U","0.0061","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0050","ug/L","U","0.0050","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0056","ug/L","U","0.0056","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0035","ug/L","U","0.0035","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0033","ug/L","U","0.0033","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0060","ug/L","U","0.0060","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0038","ug/L","U","0.0038","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-02-09A-0118,"E537","IN","FZA806","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","13C2PFDA","13C2-Perfluorodecanoic acid","87","%","","-99","NA","","SUR","87","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","88","%","","-99","NA","","SUR","88","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","93","%","","-99","NA","","SUR","93","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","79","%","","-99","NA","","SUR","79","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","93","%","","-99","NA","","SUR","93","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","99","%","","-99","NA","","SUR","99","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","92","%","","-99","NA","","SUR","92","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","92","%","","-99","NA","","SUR","92","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","92","%","","-99","NA","","SUR","92","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","90","%","","-99","NA","","SUR","90","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","79","%","","-99","NA","","SUR","79","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","78","%","","-99","NA","","SUR","78","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","2991-50-6","EtFOSAA","0.0036","ug/L","U","0.0036","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","2355-31-9","MeFOSAA","0.0032","ug/L","U","0.0032","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0059","ug/L","U","0.0059","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0067","ug/L","U","0.0067","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0055","ug/L","U","0.0055","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0081","ug/L","U","0.0081","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0062","ug/L","U","0.0062","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0039","ug/L","U","0.0039","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0036","ug/L","U","0.0036","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","375-95-1","Perfluorononanoic acid","0.0096","ug/L","U","0.0096","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0066","ug/L","U","0.0066","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0030","ug/L","U","0.0030","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0042","ug/L","U","0.0042","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
EB-WC-012418-3,"E537","DL1","FZA807","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0028","ug/L","U","0.0028","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","13C2PFDA","13C2-Perfluorodecanoic acid","90","%","","-99","NA","","SUR","90","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","78","%","","-99","NA","","SUR","78","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","96","%","","-99","NA","","SUR","96","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","71","%","","-99","NA","","SUR","71","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","81","%","","-99","NA","","SUR","81","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","96","%","","-99","NA","","SUR","96","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","90","%","","-99","NA","","SUR","90","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","90","%","","-99","NA","","SUR","90","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","94","%","","-99","NA","","SUR","94","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","93","%","","-99","NA","","SUR","93","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","76","%","","-99","NA","","SUR","76","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","75","%","","-99","NA","","SUR","75","","-99","NA","YES","-99","","1","1","-99","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","2991-50-6","EtFOSAA","0.0036","ug/L","U","0.0036","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","2355-31-9","MeFOSAA","0.0032","ug/L","U","0.0032","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0059","ug/L","U","0.0059","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0067","ug/L","U","0.0067","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0055","ug/L","U","0.0055","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0081","ug/L","U","0.0081","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0062","ug/L","U","0.0062","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0039","ug/L","U","0.0039","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0036","ug/L","U","0.0036","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","375-95-1","Perfluorononanoic acid","0.0096","ug/L","U","0.0096","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0066","ug/L","U","0.0066","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0030","ug/L","U","0.0030","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0042","ug/L","U","0.0042","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
FB-OLD-012418-5,"E537","DL1","FZA808","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0028","ug/L","U","0.0028","MDL","","NM","","","","0.022","PQL","YES","-99","","1","1","0.022","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","13C2PFDA","13C2-Perfluorodecanoic acid","101","%","","-99","NA","","SUR","101","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","91","%","","-99","NA","","SUR","91","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","101","%","","-99","NA","","SUR","101","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","83","%","","-99","NA","","SUR","83","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","94","%","","-99","NA","","SUR","94","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","100","%","","-99","NA","","SUR","100","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","105","%","","-99","NA","","SUR","105","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","96","%","","-99","NA","","SUR","96","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","97","%","","-99","NA","","SUR","97","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","97","%","","-99","NA","","SUR","97","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","87","%","","-99","NA","","SUR","87","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","83","%","","-99","NA","","SUR","83","","-99","NA","YES","-99","","1","1","-99","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","2991-50-6","EtFOSAA","0.0033","ug/L","U","0.0033","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","2355-31-9","MeFOSAA","0.0029","ug/L","U","0.0029","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0054","ug/L","U","0.0054","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0061","ug/L","U","0.0061","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0050","ug/L","U","0.0050","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0056","ug/L","U","0.0056","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0035","ug/L","U","0.0035","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0033","ug/L","U","0.0033","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0060","ug/L","U","0.0060","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0038","ug/L","U","0.0038","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
EB-OLD-012418-3,"E537","IN","FZA809","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-03A-0118MS,"E537","IN","5383466:Matrix Spike","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","83","ug/L","","0.0054","MDL","","PDSPK","83","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","0.020","TEST"
OLD-002-03A-0118MS,"E537","IN","5383466:Matrix Spike","MAXXAM","335-76-2","Perfluorodecanoic acid","102","ug/L","","0.0061","MDL","","PDSPK","102","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","0.020","TEST"
OLD-002-03A-0118MS,"E537","IN","5383466:Matrix Spike","MAXXAM","375-85-9","Perfluoroheptanoic acid","87","ug/L","","0.0074","MDL","","PDSPK","87","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","0.020","TEST"
OLD-002-03A-0118MS,"E537","IN","5383466:Matrix Spike","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","88","ug/L","","0.0056","MDL","","PDSPK","88","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","0.020","TEST"
OLD-002-03A-0118MS,"E537","IN","5383466:Matrix Spike","MAXXAM","307-24-4","Perfluorohexanoic acid","92","ug/L","","0.0035","MDL","","PDSPK","92","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","0.020","TEST"
OLD-002-03A-0118MS,"E537","IN","5383466:Matrix Spike","MAXXAM","335-67-1","Perfluorooctanoic acid","96","ug/L","","0.0033","MDL","","PDSPK","96","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","0.020","TEST"
OLD-002-03A-0118MS,"E537","IN","5383466:Matrix Spike","MAXXAM","375-95-1","Perflu

OLD-002-03A-0118MS,"ES37","IN","5396699:Matrix Spike","MAXXAM","2991-50-6","EtFOSAA","82","ug/L","","0.0033","MDL","","PDSPK","82","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MS,"ES37","IN","5396699:Matrix Spike","MAXXAM","2355-31-9","MeFOSAA","84","ug/L","","0.0029","MDL","","PDSPK","84","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MS,"ES37","IN","5396699:Matrix Spike","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","78","ug/L","","0.0054","MDL","","PDSPK","78","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MS,"ES37","IN","5396699:Matrix Spike","MAXXAM","335-76-2","Perfluorodecanoic acid","86","ug/L","","0.0061","MDL","","PDSPK","86","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MS,"ES37","IN","5396699:Matrix Spike","MAXXAM","307-55-1","Perfluorododecanoic acid","88","ug/L","","0.0050","MDL","","PDSPK","88","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MS,"ES37","IN","5396699:Matrix Spike","MAXXAM","375-85-9","Perfluoroheptanoic acid","79","ug/L","","0.0074","MDL","","PDSPK","79","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MS,"ES37","IN","5396699:Matrix Spike","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","77","ug/L","","0.0056","MDL","","PDSPK","77","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MS,"ES37","IN","5396699:Matrix Spike","MAXXAM","307-24-4","Perfluorohexanoic acid","81","ug/L","","0.0035","MDL","","PDSPK","81","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MS,"ES37","IN","5396699:Matrix Spike","MAXXAM","335-67-1","Perfluorooctanoic acid","78","ug/L","","0.0033","MDL","","PDSPK","78","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MS,"ES37","IN","5396699:Matrix Spike","MAXXAM","375-95-1","Perfluorononanoic acid","81","ug/L","","0.0087","MDL","","PDSPK","81","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MS,"ES37","IN","5396699:Matrix Spike","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","79","ug/L","","0.0060","MDL","","PDSPK","79","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MS,"ES37","IN","5396699:Matrix Spike","MAXXAM","376-06-7","Perfluorotetradecanoic acid","86","ug/L","","0.0027","MDL","","PDSPK","86","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MS,"ES37","IN","5396699:Matrix Spike","MAXXAM","72629-94-8","Perfluorotridecanoic acid","93","ug/L","","0.0038","MDL","","PDSPK","93","","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MS,"ES37","IN","5396699:Matrix Spike","MAXXAM","2058-94-8","Perfluoroundecanoic acid","89","ug/L","","0.0025","MDL","","PDSPK","89","1.3","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MSD,"ES37","IN","5396699:MSD","MAXXAM","2991-50-6","EtFOSAA","87","ug/L","","0.0033","MDL","","PDSPK","87","5.5","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MSD,"ES37","IN","5396699:MSD","MAXXAM","2355-31-9","MeFOSAA","86","ug/L","","0.0029","MDL","","PDSPK","86","3.2","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MSD,"ES37","IN","5396699:MSD","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","77","ug/L","","0.0054","MDL","","PDSPK","77","1.1","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MSD,"ES37","IN","5396699:MSD","MAXXAM","335-76-2","Perfluorodecanoic acid","91","ug/L","","0.0061","MDL","","PDSPK","91","5.5","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MSD,"ES37","IN","5396699:MSD","MAXXAM","307-55-1","Perfluorododecanoic acid","89","ug/L","","0.0050","MDL","","PDSPK","89","1.3","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MSD,"ES37","IN","5396699:MSD","MAXXAM","375-85-9","Perfluoroheptanoic acid","89","ug/L","","0.0074","MDL","","PDSPK","89","11","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MSD,"ES37","IN","5396699:MSD","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","80","ug/L","","0.0056","MDL","","PDSPK","80","4.7","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MSD,"ES37","IN","5396699:MSD","MAXXAM","307-24-4","Perfluorohexanoic acid","84","ug/L","","0.0035","MDL","","PDSPK","84","3.2","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MSD,"ES37","IN","5396699:MSD","MAXXAM","335-67-1","Perfluorooctanoic acid","80","ug/L","","0.0033","MDL","","PDSPK","80","2.8","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MSD,"ES37","IN","5396699:MSD","MAXXAM","375-95-1","Perfluorononanoic acid","90","ug/L","","0.0087","MDL","","PDSPK","90","11","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MSD,"ES37","IN","5396699:MSD","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","92","ug/L","","0.0060","MDL","","PDSPK","92","16","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MSD,"ES37","IN","5396699:MSD","MAXXAM","376-06-7","Perfluorotetradecanoic acid","95","ug/L","","0.0027","MDL","","PDSPK","95","7.7","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MSD,"ES37","IN","5396699:MSD","MAXXAM","72629-94-8","Perfluorotridecanoic acid","101","ug/L","","0.0038","MDL","","PDSPK","101","7.8","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
OLD-002-03A-0118MSD,"ES37","IN","5396699:MSD","MAXXAM","2058-94-8","Perfluoroundecanoic acid","93","ug/L","","0.0025","MDL","","PDSPK","93","14","0.020","PQL","YES","0.500000","OLD-002-03A-0118","1","1","1","0.020","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","13C2PFDA","13C2-Perfluorodecanoic acid","103","%","","99","NA","","SUR","103","","99","NA","YES","99","","1","1","1","99","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","90","%","","99","NA","","SUR","90","","99","NA","YES","99","","1","1","1","99","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","122","%","","99","NA","","SUR","122","","99","NA","YES","99","","1","1","1","99","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","92","%","","99","NA","","SUR","92","","99","NA","YES","99","","1","1","1","99","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","1763-23-1  13","13C4-Perfluorooctanesulfonate","88","%","","99","NA","","SUR","88","","99","NA","YES","99","","1","1","1","99","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","335-67-1  13C","13C4-Perfluorooctanoic acid","90","%","","99","NA","","SUR","90","","99","NA","YES","99","","1","1","1","99","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","97","%","","99","NA","","SUR","97","","99","NA","YES","99","","1","1","1","99","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","13C2PFHXS","18O2-Perfluorohexanesulfonate","89","%","","99","NA","","SUR","89","","99","NA","YES","99","","1","1","1","99","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","100","ug/L","","0.0054","MDL","","PDSPK","100","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","335-76-2","Perfluorodecanoic acid","83","ug/L","","0.0061","MDL","","PDSPK","83","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","375-85-9","Perfluoroheptanoic acid","94","ug/L","","0.0074","MDL","","PDSPK","94","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","97","ug/L","","0.0056","MDL","","PDSPK","97","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","307-24-4","Perfluorohexanoic acid","89","ug/L","","0.0035","MDL","","PDSPK","89","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","335-67-1","Perfluorooctanoic acid","97","ug/L","","0.0033","MDL","","PDSPK","97","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","375-95-1","Perfluorononanoic acid","93","ug/L","","0.0087","MDL","","PDSPK","93","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","101","ug/L","","0.0060","MDL","","PDSPK","101","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5383466:Spiked Blank,"ES37","IN","5383466:Spiked Blank","MAXXAM","2058-94-8","Perfluoroundecanoic acid","72","ug/L","","0.0025","MDL","","PDSPK","72","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","64","%","","99","NA","","SUR","64","","99","NA","YES","99","","1","1","1","99","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","59","%","","99","NA","","SUR","59","","99","NA","YES","99","","1","1","1","99","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","77","%","","99","NA","","SUR","77","","99","NA","YES","99","","1","1","1","99","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","63","%","","99","NA","","SUR","63","","99","NA","YES","99","","1","1","1","99","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","66","%","","99","NA","","SUR","66","","99","NA","YES","99","","1","1","1","99","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","76","%","","99","NA","","SUR","76","","99","NA","YES","99","","1","1","1","99","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","1763-23-1  13","13C4-Perfluorooctanesulfonate","71","%","","99","NA","","SUR","71","","99","NA","YES","99","","1","1","1","99","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","335-67-1  13C","13C4-Perfluorooctanoic acid","71","%","","99","NA","","SUR","71","","99","NA","YES","99","","1","1","1","99","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","72","%","","99","NA","","SUR","72","","99","NA","YES","99","","1","1","1","99","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","73","%","","99","NA","","SUR","73","","99","NA","YES","99","","1","1","1","99","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","68","%","","99","NA","","SUR","68","","99","NA","YES","99","","1","1","1","99","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","69","%","","99","NA","","SUR","69","","99","NA","YES","99","","1","1","1","99","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","2991-50-6","EtFOSAA","98","ug/L","","0.0033","MDL","","PDSPK","98","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","2355-31-9","MeFOSAA","98","ug/L","","0.0029","MDL","","PDSPK","98","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","117","ug/L","","0.0054","MDL","","PDSPK","117","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","335-76-2","Perfluorodecanoic acid","111","ug/L","","0.0061","MDL","","PDSPK","111","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","307-55-1","Perfluorododecanoic acid","113","ug/L","","0.0050","MDL","","PDSPK","113","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","375-85-9","Perfluoroheptanoic acid","98","ug/L","","0.0074","MDL","","PDSPK","98","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","110","ug/L","","0.0056","MDL","","PDSPK","110","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","307-24-4","Perfluorohexanoic acid","97","ug/L","","0.0035","MDL","","PDSPK","97","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","335-67-1","Perfluorooctanoic acid","105","ug/L","","0.0033","MDL","","PDSPK","105","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","375-95-1","Perfluorononanoic acid","106","ug/L","","0.0087","MDL","","PDSPK","106","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","103","ug/L","","0.0060","MDL","","PDSPK","103","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","376-06-7","Perfluorotetradecanoic acid","102","ug/L","","0.0027","MDL","","PDSPK","102","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","72629-94-8","Perfluorotridecanoic acid","104","ug/L","","0.0038","MDL","","PDSPK","104","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5386102:Spiked Blank,"ES37","IN","5386102:Spiked Blank","MAXXAM","2058-94-8","Perfluoroundecanoic acid","97","ug/L","","0.0025","MDL","","PDSPK","97","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","13C2PFDA","13C2-Perfluorodecanoic acid","86","%","","99","NA","","SUR","86","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","80","%","","99","NA","","SUR","80","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","87","%","","99","NA","","SUR","87","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","78","%","","99","NA","","SUR","78","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","92","%","","99","NA","","SUR","92","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","87","%","","99","NA","","SUR","87","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","1763-23-1  13","13C4-Perfluorooctanesulfonate","82","%","","99","NA","","SUR","82","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","335-67-1  13C","13C4-Perfluorooctanoic acid","84","%","","99","NA","","SUR","84","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","86","%","","99","NA","","SUR","86","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","13C2PFHXS","18O2-Perfluorohexanesulfonate","84","%","","99","NA","","SUR","84","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","81","%","","99","NA","","SUR","81","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","76","%","","99","NA","","SUR","76","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","2991-50-6","EtFOSAA","100","ug/L","","0.0033","MDL","","PDSPK","100","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","2355-31-9","MeFOSAA","92","ug/L","","0.0029","MDL","","PDSPK","92","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","101","ug/L","","0.0054","MDL","","PDSPK","101","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","335-76-2","Perfluorodecanoic acid","100","ug/L","","0.0061","MDL","","PDSPK","100","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","307-55-1","Perfluorododecanoic acid","98","ug/L","","0.0050","MDL","","PDSPK","98","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","375-85-9","Perfluoroheptanoic acid","94","ug/L","","0.0074","MDL","","PDSPK","94","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","98","ug/L","","0.0056","MDL","","PDSPK","98","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","307-24-4","Perfluorohexanoic acid","89","ug/L","","0.0035","MDL","","PDSPK","89","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","335-67-1","Perfluorooctanoic acid","101","ug/L","","0.0033","MDL","","PDSPK","101","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","375-95-1","Perfluorononanoic acid","97","ug/L","","0.0087","MDL","","PDSPK","97","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","96","ug/L","","0.0060","MDL","","PDSPK","96","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","376-06-7","Perfluorotetradecanoic acid","100","ug/L","","0.0027","MDL","","PDSPK","100","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","72629-94-8","Perfluorotridecanoic acid","103","ug/L","","0.0038","MDL","","PDSPK","103","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:Spiked Blank,"ES37","IN","5389177:Spiked Blank","MAXXAM","2058-94-8","Perfluoroundecanoic acid","98","ug/L","","0.0025","MDL","","PDSPK","98","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","13C2PFDA","13C2-Perfluorodecanoic acid","91","%","","99","NA","","SUR","91","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","80","%","","99","NA","","SUR","80","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","98","%","","99","NA","","SUR","98","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","76","%","","99","NA","","SUR","76","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","91","%","","99","NA","","SUR","91","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","94","%","","99","NA","","SUR","94","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","1763-23-1  13","13C4-Perfluorooctanesulfonate","89","%","","99","NA","","SUR","89","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","335-67-1  13C","13C4-Perfluorooctanoic acid","94","%","","99","NA","","SUR","94","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","90","%","","99","NA","","SUR","90","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","91","%","","99","NA","","SUR","91","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","82","%","","99","NA","","SUR","82","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","77","%","","99","NA","","SUR","77","","99","NA","YES","99","","1","1","1","99","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","2991-50-6","EtFOSAA","101","ug/L","","0.0033","MDL","","PDSPK","101","1.6","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","2355-31-9","MeFOSAA","91","ug/L","","0.0029","MDL","","PDSPK","91","1.6","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","102","ug/L","","0.0054","MDL","","PDSPK","102","0.84","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","335-76-2","Perfluorodecanoic acid","97","ug/L","","0.0061","MDL","","PDSPK","97","3.0","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","307-55-1","Perfluorododecanoic acid","96","ug/L","","0.0050","MDL","","PDSPK","96","2.0","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","375-85-9","Perfluoroheptanoic acid","95","ug/L","","0.0074","MDL","","PDSPK","95","0.67","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","96","ug/L","","0.0056","MDL","","PDSPK","96","2.1","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","307-24-4","Perfluorohexanoic acid","94","ug/L","","0.0035","MDL","","PDSPK","94","1.8","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","335-67-1","Perfluorooctanoic acid","98","ug/L","","0.0033","MDL","","PDSPK","98","2.7","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","375-95-1","Perfluorononanoic acid","102","ug/L","","0.0087","MDL","","PDSPK","102","5.8","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","93","ug/L","","0.0060","MDL","","PDSPK","93","2.8","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","376-06-7","Perfluorotetradecanoic acid","103","ug/L","","0.0027","MDL","","PDSPK","103","2.6","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","72629-94-8","Perfluorotridecanoic acid","102","ug/L","","0.0038","MDL","","PDSPK","102","0.74","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5389177:LCSD,"ES37","IN","5389177:LCSD","MAXXAM","2058-94-8","Perfluoroundecanoic acid","98","ug/L","","0.0025","MDL","","PDSPK","98","0.62","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","13C2PFDA","13C2-Perfluorodecanoic acid","108","%","","99","NA","","SUR","108","","99","NA","YES","99","","1","1","1","99","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","95","%","","99","NA","","SUR","95","","99","NA","YES","99","","1","1","1","99","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","110","%","","99","NA","","SUR","110","","99","NA","YES","99","","1","1","1","99","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","100","%","","99","NA","","SUR","100","","99","NA","YES","99","","1","1","1","99","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","105","%","","99","NA","","SUR","105","","99","NA","YES","99","","1","1","1","99","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","117","%","","99","NA","","SUR","117","","99","NA","YES","99","","1","1","1","99","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","1763-23-1  13","13C4-Perfluorooctanesulfonate","104","%","","99","NA","","SUR","104","","99","NA","YES","99","","1","1","1","99","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","335-67-1  13C","13C4-Perfluorooctanoic acid","105","%","","99","NA","","SUR","105","","99","NA","YES","99","","1","1","1","99","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","109","%","","99","NA","","SUR","109","","99","NA","YES","99","","1","1","1","99","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","104","%","","99","NA","","SUR","104","","99","NA","YES","99","","1","1","1","99","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","97","%","","99","NA","","SUR","97","","99","NA","YES","99","","1","1","1","99","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","92","%","","99","NA","","SUR","92","","99","NA","YES","99","","1","1","1","99","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","2991-50-6","EtFOSAA","81","ug/L","","0.0033","MDL","","PDSPK","81","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","2355-31-9","MeFOSAA","82","ug/L","","0.0029","MDL","","PDSPK","82","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","79","ug/L","","0.0054","MDL","","PDSPK","79","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","335-76-2","Perfluorodecanoic acid","86","ug/L","","0.0061","MDL","","PDSPK","86","","0.020","PQL","YES","99","","1","1","1","0.020","TEST"
5396699:Spiked Blank,"ES37","IN","5396699:Spiked Blank","MAXXAM","307-55-1","Perfluorododecanoic acid","89","ug/L","","0.0050","MD

5383466:Method Blank,"ES37","IN","5383466:Method Blank","MAXXAM","375-92-8","Perfluorooctanoic acid","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5383466:Method Blank,"ES37","IN","5383466:Method Blank","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5383466:Method Blank,"ES37","IN","5383466:Method Blank","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0060","ug/L","U","0.0060","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5383466:Method Blank,"ES37","IN","5383466:Method Blank","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","13C2FDA","13C2-Perfluorodecanoic acid","58","%","","-99","NA","","SUR","58","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","13C2FDOA","13C2-Perfluorododecanoic acid","58","%","","-99","NA","","SUR","58","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","13C2FHXA","13C2-Perfluorohexanoic acid","71","%","","-99","NA","","SUR","71","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","13C2FTDA","13C2-Perfluorotetradecanoic acid","54","%","","-99","NA","","SUR","54","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","13C2FUA","13C2-Perfluoroundecanoic acid","62","%","","-99","NA","","SUR","62","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","13C4FHPA","13C4-Perfluoroheptanoic acid","67","%","","-99","NA","","SUR","67","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","74","%","","-99","NA","","SUR","74","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","335-67-1 13","13C4-Perfluorooctanoic acid","65","%","","-99","NA","","SUR","65","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","63","%","","-99","NA","","SUR","63","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","72","%","","-99","NA","","SUR","72","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","61","%","","-99","NA","","SUR","61","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","59","%","","-99","NA","","SUR","59","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","2991-50-6","EtFOSAA","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","2355-31-9","MeFOSAA","0.0029","ug/L","U","0.0029","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0054","ug/L","U","0.0054","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0061","ug/L","U","0.0061","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0050","ug/L","U","0.0050","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0056","ug/L","U","0.0056","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0035","ug/L","U","0.0035","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0060","ug/L","U","0.0060","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0038","ug/L","U","0.0038","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5386102:Method Blank,"ES37","IN","5386102:Method Blank","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","13C2FDA","13C2-Perfluorodecanoic acid","79","%","","-99","NA","","SUR","79","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","13C2FDOA","13C2-Perfluorododecanoic acid","76","%","","-99","NA","","SUR","76","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","13C2FHXA","13C2-Perfluorohexanoic acid","92","%","","-99","NA","","SUR","92","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","13C2FTDA","13C2-Perfluorotetradecanoic acid","80","%","","-99","NA","","SUR","80","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","13C2FUA","13C2-Perfluoroundecanoic acid","78","%","","-99","NA","","SUR","78","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","13C4FHPA","13C4-Perfluoroheptanoic acid","93","%","","-99","NA","","SUR","93","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","86","%","","-99","NA","","SUR","86","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","96","%","","-99","NA","","SUR","96","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","87","%","","-99","NA","","SUR","87","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","93","%","","-99","NA","","SUR","93","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","76","%","","-99","NA","","SUR","76","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","72","%","","-99","NA","","SUR","72","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","2991-50-6","EtFOSAA","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","2355-31-9","MeFOSAA","0.0029","ug/L","U","0.0029","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0054","ug/L","U","0.0054","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0061","ug/L","U","0.0061","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0050","ug/L","U","0.0050","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0056","ug/L","U","0.0056","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0035","ug/L","U","0.0035","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0060","ug/L","U","0.0060","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0038","ug/L","U","0.0038","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5389177:Method Blank,"ES37","IN","5389177:Method Blank","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","13C2FDA","13C2-Perfluorodecanoic acid","94","%","","-99","NA","","SUR","94","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","13C2FDOA","13C2-Perfluorododecanoic acid","69","%","","-99","NA","","SUR","69","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","13C2FHXA","13C2-Perfluorohexanoic acid","86","%","","-99","NA","","SUR","86","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","13C2FTDA","13C2-Perfluorotetradecanoic acid","73","%","","-99","NA","","SUR","73","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","13C2FUA","13C2-Perfluoroundecanoic acid","78","%","","-99","NA","","SUR","78","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","13C4FHPA","13C4-Perfluoroheptanoic acid","105","%","","-99","NA","","SUR","105","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","78","%","","-99","NA","","SUR","78","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","114","%","","-99","NA","","SUR","114","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","103","%","","-99","NA","","SUR","103","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","54","%","","-99","NA","","SUR","54","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","60","%","","-99","NA","","SUR","60","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","D5-ETFOSAA","D5-ETFOSAA","58","%","","-99","NA","","SUR","58","","-99","NA","YES","-99","","1","1","1","-99","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","2991-50-6","EtFOSAA","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","2355-31-9","MeFOSAA","0.0029","ug/L","U","0.0029","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","375-73-5","Perfluorobutanesulfonic acid","0.0054","ug/L","U","0.0054","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","335-76-2","Perfluorodecanoic acid","0.0061","ug/L","U","0.0061","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","307-55-1","Perfluorododecanoic acid","0.0050","ug/L","U","0.0050","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","375-85-9","Perfluoroheptanoic acid","0.0074","ug/L","U","0.0074","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0056","ug/L","U","0.0056","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","307-24-4","Perfluorohexanoic acid","0.0035","ug/L","U","0.0035","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","335-67-1","Perfluorooctanoic acid","0.0033","ug/L","U","0.0033","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","375-95-1","Perfluorononanoic acid","0.0087","ug/L","U","0.0087","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","1763-23-1","Perfluorooctanesulfonic acid","0.0060","ug/L","U","0.0060","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","376-06-7","Perfluorotetradecanoic acid","0.0027","ug/L","U","0.0027","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","72629-94-8","Perfluorotridecanoic acid","0.0038","ug/L","U","0.0038","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
5396699:Method Blank,"ES37","IN","5396699:Method Blank","MAXXAM","2058-94-8","Perfluoroundecanoic acid","0.0025","ug/L","U","0.0025","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","1","0.020","TEST"
JM11 NTC Orlando,"JM11 NTC ORLANDO","OLD-002-51A-0118","01/22/2018 12:58","W","FZA783","NM","647124-01-01","3.201","ES37","ES37","IN","02/03/2018 11:08","02/06/2018 19:21","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5383466","5383466","1","02062018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","OLD-002-51A-0118D","01/22/2018 12:58","W","FZA784","NM","647124-01-01","3.201","ES37","ES37","IN","02/03/2018 11:08","02/06/2018 19:25","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5383466","5383466","1","02062018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","OLD-002-11A-0118","01/22/2018 14:10","W","FZA785","NM","647124-01-01","3.201","ES37","ES37","IN","02/03/2018 11:08","02/06/2018 19:30","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5383466","5383466","1","02062018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
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JM11 NTC Orlando,"JM11 NTC ORLANDO","EB-GW-012218-1","01/22/2018 13:45","W","FZA788","NM","647124-01-01","3.201","ES37","ES37","IN","02/03/2018 11:08","02/06/2018 19:40","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5383466","5383466","1","02062018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","FB-OLD-012218-1","01/22/2018 13:50","W","FZA789","NM","647124-01-01","3.201","ES37","ES37","IN","02/03/2018 11:08","02/06/2018 19:45","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5383466","5383466","1","02062018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","FB-OLD-012218-2","01/22/2018 14:20","W","FZA790","NM","647124-01-01","3.201","ES37","ES37","IN","02/03/2018 11:08","02/06/2018 19:50","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5383466","5383466","1","02062018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","EB-WC-012218-1","01/22/2018 14:30","W","FZA791","NM","647124-01-01","3.201","ES37","ES37","IN","02/03/2018 11:08","02/06/2018 19:55","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5383466","5383466","1","02062018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","EB-DPT-012218-1","01/22/2018 14:35","W","FZA792","NM","647124-01-01","3.201","ES37","ES37","IN","02/03/2018 11:08","02/06/2018 20:00","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5383466","5383466","1","02062018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","FB-OLD-012318-3","01/23/2018 10:20","W","FZA801","NM","647124-02-01","3.201","ES37","ES37","IN","02/06/2018 08:42","02/08/2018 10:10","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5386102","5386102","1","02082018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","EB-WC-012318-2","01/23/2018 10:30","W","FZA802","NM","647124-02-01","3.201","ES37","ES37","RA0","02/13/2018 09:32","02/15/2018 18:04","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5396699","5396699","1","02152018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","EB-GW-012318-2","01/23/2018 11:00","W","FZA803","NM","647124-02-01","3.201","ES37","ES37","IN","02/06/2018 08:42","02/08/2018 10:14","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5386102","5386102","1","02082018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","FB-OLD-012318-4","01/23/2018 11:05","W","FZA804","NM","647124-02-01","3.201","ES37","ES37","IN","02/06/2018 08:42","02/08/2018 10:17","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5386102","5386102","1","02082018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","EB-DPT-012318-2","01/23/2018 11:15","W","FZA805","NM","647124-02-01","3.201","ES37","ES37","DL1","02/06/2018 08:42","02/08/2018 10:19","MAXXAM","COA","NA","NA","1.05","NA","NA","00/00/0000 00:00","-99","5386102","5386102","1","02082018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","OLD-02-09A-0118","01/23/2018 11:39","W","FZA806","NM","647124-02-01","3.201","ES37","ES37","IN","02/06/2018 08:42","02/08/2018 10:22","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5386102","5386102","1","02082018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","EB-WC-012418-3","01/24/2018 09:55","W","FZA807","NM","647124-02-01","3.201","ES37","ES37","DL1","02/07/2018 14:49","02/09/2018 01:01","MAXXAM","COA","NA","NA","1.1","NA","NA","00/00/0000 00:00","-99","5389177","5389177","1","02092018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
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JM11 NTC Orlando,"JM11 NTC ORLANDO","EB-DPT-012418-3","01/24/2018 10:30","W","FZA809","NM","647124-02-01","3.201","ES37","ES37","IN","02/07/2018 14:49","02/09/2018 01:11","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5389177","5389177","1","02092018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","OLD-002-03A-0118MS","01/22/2018 15:01","WQ","5383466:Matrix Spike","MS","647124-01-01","3.201","ES37","ES37","IN","02/03/2018 23:59","02/06/2018 19:06","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5383466","5383466","1","02062018","B818419","01/25/2018 13:50","03/02/2018 09:41",
JM11 NTC Orlando,"JM11 NTC ORLANDO","OLD-002-03A-0118MSD","01/22/2018 15:01","WQ","5383466:MSD","MSD","647124-01-01","3.201","ES37","ES37","IN","02/03/2018 11:13","02/06/2018 19:11","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5383466","5383466","1","02062018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","OLD-002-03A-0118MS","01/22/2018 15:01","WQ","5396699:Matrix Spike","MS","647124-01-01","3.201","ES37","ES37","IN","02/13/2018 23:59","02/15/2018 17:10","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5396699","5396699","1","02152018","B818419","01/25/2018 13:50","03/02/2018 09:41",
JM11 NTC Orlando,"JM11 NTC ORLANDO","OLD-002-03A-0118MSD","01/22/2018 15:01","WQ","5396699:MSD","MSD","647124-01-01","3.201","ES37","ES37","IN","02/13/2018 09:40","02/15/2018 17:15","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5396699","5396699","1","02152018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","5383466:Spiked Blank","00/00/0000 00:00","WQ","5383466:Spiked Blank","LCS","647124-01-01","3.201","ES37","ES37","IN","02/03/2018 23:59","02/06/2018 19:01","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5383466","5383466","1","02062018","B818419","01/25/2018 13:50","03/02/2018 09:41",
JM11 NTC Orlando,"JM11 NTC ORLANDO","5386102:Spiked Blank","00/00/0000 00:00","WQ","5386102:Spiked Blank","LCS","647124-01-01","3.201","ES37","ES37","IN","02/06/2018 08:42","02/08/2018 10:00","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5386102","5386102","1","02082018","B818419","01/25/2018 13:50","03/02/2018 09:41",
JM11 NTC Orlando,"JM11 NTC ORLANDO","5389177:Spiked Blank","00/00/0000 00:00","WQ","5389177:Spiked Blank","LCS","647124-01-01","3.201","ES37","ES37","IN","02/07/2018 14:49","02/09/2018 00:51","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5389177","5389177","1","02092018","B818419","01/25/2018 13:50","03/02/2018 09:41",
JM11 NTC Orlando,"JM11 NTC ORLANDO","5389177-LCSD","00/00/0000 00:00","WQ","5389177:LCSD","LCSD","647124-01-01","3.201","ES37","ES37","IN","02/07/2018 14:49","02/09/2018 00:56","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5389177","5389177","1","02092018","B818419","01/25/2018 13:50","03/02/2018 09:41",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","5396699:Spiked Blank","00/00/0000 00:00","WQ","5396699:Spiked Blank","LCS","647124-01-01","3.201","ES37","ES37","IN","02/13/2018 23:59","02/15/2018 17:05","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5396699","5396699","1","02152018","B818419","01/25/2018 13:50","03/02/2018 09:41",
JM11 NTC Orlando,"JM11 NTC ORLANDO","5383466:Method Blank","00/00/0000 00:00","WQ","5383466:Method Blank","MB","647124-01-01","3.201","ES37","ES37","IN","02/03/2018 23:59","02/06/2018 18:56","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5383466","5383466","1","02062018","B818419","01/25/2018 13:50","03/02/2018 09:4
JM11 NTC Orlando,"JM11 NTC ORLANDO","5386102:Method Blank","00/00/0000 00:00","WQ","5386102:Method Blank","MB","647124-01-01","3.201","ES37","ES37","IN","02/06/2018 08:42","02/08/2018 09:58","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5386102","5386102","1","02082018","B818419","01/25/2018 13:50","03/02/2018 09:4
JM11 NTC Orlando,"JM11 NTC ORLANDO","5389177:Method Blank","00/00/0000 00:00","WQ","5389177:Method Blank","MB","647124-01-01","3.201","ES37","ES37","IN","02/07/2018 14:49","02/09/2018 00:46","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5389177","5389177","1","02092018","B818419","01/25/2018 13:50","03/02/2018 09:4
JM11 NTC Orlando,"JM11 NTC ORLANDO","5396699:Method Blank","00/00/0000 00:00","WQ","5396699:Method Blank","MB","647124-01-01","3.201","ES37","ES37","IN","02/13/2018 23:59","02/15/2018 17:00","MAXXAM","COA","NA","NA","1","NA","NA","00/00/0000 00:00","-99","5396699","5396699","1","02152018","B818419","01/25/2018 13:50","03/02/2018 09:4

TETRA TECH

# INTERNAL CORRESPONDENCE

**TO:** **R. KOTUN** **DATE:** **MAY 3, 2018**

**FROM:** **MICHELLE L. WOEBER** **COPIES:** **DV FILE**

**SUBJECT:** **ORGANIC DATA VALIDATION – POLYFLUOROALKYL SUBSTANCES (PFAS)**
**FORMER NAVAL TRAINING CENTER (NTC), ORLANDO**
**ORLANDO, FLORIDA**
**SAMPLE DELIVERY GROUP (SDG) B818419**

**SAMPLES:** 18/Aqueous/PFAS

| | | |
|---|---|---|
| EB-DPT-012218-1 | EB-DPT-012318-2 | EB-DPT-012418-3 |
| EB-GW-012218-1 | EB-GW-012318-2 | EB-WC-012218-1 |
| EB-WC-012318-2 | EB-WC-012418-3 | FB-OLD-012218-1 |
| FB-OLD-012218-2 | FB-OLD-012318-3 | FB-OLD-012318-4 |
| FB-OLD-012418-5 | OLD-OU2-03A-0118 | OLD-OU2-11A-0118 |
| OLD-OU2-51A-0118 | OLD-OU2-51A-0118D | OLD-02-09A-0118 |

**Overview**

The sample set for NTC Orlando, SDG B818419 consisted of five (5) aqueous environmental samples, eight (8) equipment blanks, and five (5) Field Reagent Blanks (FRBs). All eighteen (18) samples were analyzed for polyfluoroalkyl substances (PFAS). One field duplicate sample pair was included in this SDG: OLD-OU2-51A-0118/OLD-OU2-51A-0118D.

The samples were collected by Tetra Tech, Inc. on January 22-24, 2018 and analyzed by Maxxam Analytics. All analyses were conducted in accordance with EPA 537 Modified analytical and reporting protocols. The data contained in this SDG was validated with regard to the following parameters:

- Data completeness
- Hold times/Sample Preservation
* • Mass Calibration
* • LC/MS/MS System Tuning and Performance
* • Mass Spectral Acquisition Rate
* • Instrument Sensitivity Check
* • Ion Transition Check
* • Initial/Continuing Calibrations
* • Laboratory Method Blank Results
* • Field Reagent Blank Results
* • Extraction Internal Standard Recoveries
* • Injection Internal Standard Recoveries
- Laboratory Control Sample Recoveries
* • Matrix Spike/Matrix Spike Sample Duplicate Results
* • Field Duplicate Precision
* • Compound Identification
* • Compound Quantitation
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, and documentation supporting these findings is presented in Appendix C.

**PFAS**

Per the laboratory case narrative, the Laboratory Control Sample (LCS) %Rs for perfluorododecanoic acid (PFDoA), perfluorotridecanoic acid (PFTrDA), perfluorotetradecanoic acid (PFTeDA), methylperfluorooctanesulfonamidoacetic acid (MeFOSAA), and ethylperfluorooctanesulfonamidoacetic acid (EtFOSAA) were below the lower quality control limit in preparation batch #5383466 (samples EB-DPT-012218-1, EB-GW-012218-1, EB-WC-012218-1, FB-OLD-012218-1, FB-OLD-012218-2, OLD-OU2-03A-0118, OLD-OU2-11A-0118, OLD-OU2-51A-0118, and OLD-OU2-51A-0118D). The affected samples were re-extracted outside the 14-day holding time in batch #5396699 (2/13/2018) and reanalyzed with acceptable results. The laboratory only reported the results from the reanalyses for the aforementioned compounds. The non-detected results reported for these compounds in the affected samples were qualified as estimated, (UJ), due to the holding time exceedance.

In batch #5386102, sample EB-WC-012318-2 clogged during analysis and the full amount of sample was not analyzed. The sample was re-extracted/reanalyzed outside the 14-day holding time in batch #5396699 (2/13/2018). The non-detected results reported for the PFAS compounds in this sample were qualified as estimated, (UJ).

**Additional Comments**

The laboratory labeled samples OLD-OU2-03A-0118, OLD-OU2-11A-0118, OLD-OU2-51A-0118, and OLD-OU2-51A-0118D as OLD-002-03A-0118, OLD-002-11A-0118, OLD-002-51A-0118, and OLD-002-51A-0118D. The sample identifications were corrected in the database.

The MS/MSD analyses associated with preparation batch #5386102 had %Rs for some PFAS compounds outside the quality control limits. No action was taken because the parent sample was not a sample of interest in this SDG.

Some parameter dates were incorrect or not populated along with some preparation batch numbers in the Electronic Data Deliverable (EDD). No action was taken and this item was noted for completeness.

Detected results reported below the Limit of Quantitation (LOQ) but above the Method Detection Limit (MDL) were qualified as estimated, (J). Non-detected results were reported to the MDL in the database.

**Executive Summary**

**Laboratory Performance Issues:** Some samples were mislabeled. Extraction holding times were exceeded for samples because corrective action was taken to remedy blank spike quality control exceedances in the initial analyses. Only select parameters (five analytes) were affected by the holding time exceedances in the affected samples. One sample was re-extracted outside of holding time because the initial analysis was compromised and all parameters were affected.

**Other Factors Affecting Data Quality:** Detected results below the LOQ were estimated.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017), EPA Method 537 Modified, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (2017). The text of this report has been formulated to address only those areas affecting data quality.

Michelle L. Woeber

Tetra Tech, Inc.
Michelle L. Woeber
Chemist/Data Validator

Joseph A. Samchuck

Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A - Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

## Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

| | |
|---|---|
| **U** | The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method. |
| **J** | The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit). |
| **J+** | The result is an estimated quantity, but the result may be biased high. |
| **J-** | The result is an estimated quantity, but the result may be biased low. |
| **UJ** | The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise. |
| **R** | The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample. |
| **UR** | The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample. |

# APPENDIX A

## QUALIFIED ANALYTICAL RESULTS

**Qualifier Codes:**

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's r < 0.995
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

| **PROJ_NO: 08005-JM11** | NSAMPLE | EB-DPT-012218-1 | | | EB-DPT-012318-2 | | | EB-DPT-012418-3 | | | EB-GW-012218-1 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SDG: B818419** | LAB_ID | FZA792 | | | FZA805 | | | FZA809 | | | FZA788 | | |
| **FRACTION: PFAS** | SAMP_DATE | 1/22/2018 | | | 1/23/2018 | | | 1/24/2018 | | | 1/22/2018 | | |
| **MEDIA: WATER** | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| N-ETHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID | | 0.0033 | UJ | H | 0.0035 | U | | 0.0033 | U | | 0.0033 | UJ | H |
| N-METHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID | | 0.0029 | UJ | H | 0.003 | U | | 0.0029 | U | | 0.0029 | UJ | H |
| PENTADECAFLUOROOCTANOIC ACID | | 0.0033 | U | | 0.0035 | U | | 0.0033 | U | | 0.0033 | U | |
| PERFLUOROBUTANESULFONIC ACID | | 0.0054 | U | | 0.0057 | U | | 0.0054 | U | | 0.0054 | U | |
| PERFLUORODECANOIC ACID | | 0.0061 | U | | 0.0064 | U | | 0.0061 | U | | 0.0061 | U | |
| PERFLUORODODECANOIC ACID | | 0.005 | UJ | H | 0.0053 | U | | 0.005 | U | | 0.005 | UJ | H |
| PERFLUOROHEPTANOIC ACID | | 0.0074 | U | | 0.0078 | U | | 0.0074 | U | | 0.0074 | U | |
| PERFLUOROHEXANESULFONIC ACID | | 0.0056 | U | | 0.0059 | U | | 0.0056 | U | | 0.0056 | U | |
| PERFLUOROHEXANOIC ACID | | 0.0035 | U | | 0.0037 | U | | 0.0035 | U | | 0.0035 | U | |
| PERFLUORONONANOIC ACID | | 0.0087 | U | | 0.0091 | U | | 0.0087 | U | | 0.0087 | U | |
| PERFLUOROOCTANE SULFONIC ACID | | 0.006 | U | | 0.0063 | U | | 0.006 | U | | 0.006 | U | |
| PERFLUOROTETRADECANOIC ACID | | 0.0027 | UJ | H | 0.0028 | U | | 0.0027 | U | | 0.0027 | UJ | H |
| PERFLUOROTRIDECANOIC ACID | | 0.0038 | UJ | H | 0.004 | U | | 0.0038 | U | | 0.0038 | UJ | H |
| PERFLUOROUNDECANOIC ACID | | 0.0025 | U | | 0.0026 | U | | 0.0025 | U | | 0.0025 | U | |

| **PROJ_NO: 08005-JM11** | NSAMPLE | EB-GW-012318-2 | | | EB-WC-012218-1 | | | EB-WC-012318-2 | | | EB-WC-012418-3 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SDG: B818419** | LAB_ID | FZA803 | | | FZA791 | | | FZA802 | | | FZA807 | | |
| **FRACTION: PFAS** | SAMP_DATE | 1/23/2018 | | | 1/22/2018 | | | 1/23/2018 | | | 1/24/2018 | | |
| **MEDIA: WATER** | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| N-ETHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID | | 0.0033 | U | | 0.0033 | UJ | H | 0.0033 | UJ | H | 0.0036 | U | |
| N-METHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID | | 0.0029 | U | | 0.0029 | UJ | H | 0.0029 | UJ | H | 0.0032 | U | |
| PENTADECAFLUOROOCTANOIC ACID | | 0.0033 | U | | 0.0033 | U | | 0.0033 | UJ | H | 0.0036 | U | |
| PERFLUOROBUTANESULFONIC ACID | | 0.0054 | U | | 0.0054 | U | | 0.0054 | UJ | H | 0.0059 | U | |
| PERFLUORODECANOIC ACID | | 0.0061 | U | | 0.0061 | U | | 0.0061 | UJ | H | 0.0067 | U | |
| PERFLUORODODECANOIC ACID | | 0.005 | U | | 0.005 | UJ | H | 0.005 | UJ | H | 0.0055 | U | |
| PERFLUOROHEPTANOIC ACID | | 0.0074 | U | | 0.0074 | U | | 0.0074 | UJ | H | 0.0081 | U | |
| PERFLUOROHEXANESULFONIC ACID | | 0.0056 | U | | 0.0056 | U | | 0.0056 | UJ | H | 0.0062 | U | |
| PERFLUOROHEXANOIC ACID | | 0.0035 | U | | 0.0035 | U | | 0.0035 | UJ | H | 0.0039 | U | |
| PERFLUORONONANOIC ACID | | 0.0087 | U | | 0.0087 | U | | 0.0087 | UJ | H | 0.0096 | U | |
| PERFLUOROOCTANE SULFONIC ACID | | 0.006 | U | | 0.006 | U | | 0.006 | UJ | H | 0.0066 | U | |
| PERFLUOROTETRADECANOIC ACID | | 0.0027 | U | | 0.0027 | UJ | H | 0.0027 | UJ | H | 0.003 | U | |
| PERFLUOROTRIDECANOIC ACID | | 0.0038 | U | | 0.0038 | UJ | H | 0.0038 | UJ | H | 0.0042 | U | |
| PERFLUOROUNDECANOIC ACID | | 0.0025 | U | | 0.0025 | U | | 0.0025 | UJ | H | 0.0028 | U | |

| **PROJ_NO: 08005-JM11** | NSAMPLE | FB-OLD-012218-1 | | | FB-OLD-012218-2 | | | FB-OLD-012318-3 | | | FB-OLD-012318-4 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SDG: B818419** | LAB_ID | FZA789 | | | FZA790 | | | FZA801 | | | FZA804 | | |
| **FRACTION: PFAS** | SAMP_DATE | 1/22/2018 | | | 1/22/2018 | | | 1/23/2018 | | | 1/23/2018 | | |
| **MEDIA: WATER** | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| N-ETHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID | | 0.0033 | UJ | H | 0.0033 | UJ | H | 0.0033 | U | | 0.0033 | U | |
| N-METHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID | | 0.0029 | UJ | H | 0.0029 | UJ | H | 0.0029 | U | | 0.0029 | U | |
| PENTADECAFLUOROOCTANOIC ACID | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | | 0.0033 | U | |
| PERFLUOROBUTANESULFONIC ACID | | 0.0054 | U | | 0.0054 | U | | 0.0054 | U | | 0.0054 | U | |
| PERFLUORODECANOIC ACID | | 0.0061 | U | | 0.0061 | U | | 0.0061 | U | | 0.0061 | U | |
| PERFLUORODODECANOIC ACID | | 0.005 | UJ | H | 0.005 | UJ | H | 0.005 | U | | 0.005 | U | |
| PERFLUOROHEPTANOIC ACID | | 0.0074 | U | | 0.0074 | U | | 0.0074 | U | | 0.0074 | U | |
| PERFLUOROHEXANESULFONIC ACID | | 0.0056 | U | | 0.0056 | U | | 0.0056 | U | | 0.0056 | U | |
| PERFLUOROHEXANOIC ACID | | 0.0035 | U | | 0.0035 | U | | 0.0035 | U | | 0.0035 | U | |
| PERFLUORONONANOIC ACID | | 0.0087 | U | | 0.0087 | U | | 0.0087 | U | | 0.0087 | U | |
| PERFLUOROOCTANE SULFONIC ACID | | 0.006 | U | | 0.006 | U | | 0.006 | U | | 0.006 | U | |
| PERFLUOROTETRADECANOIC ACID | | 0.0027 | UJ | H | 0.0027 | UJ | H | 0.0027 | U | | 0.0027 | U | |
| PERFLUOROTRIDECANOIC ACID | | 0.0038 | UJ | H | 0.0038 | UJ | H | 0.0038 | U | | 0.0038 | U | |
| PERFLUOROUNDECANOIC ACID | | 0.0025 | U | | 0.0025 | U | | 0.0025 | U | | 0.0025 | U | |

| **PROJ_NO: 08005-JM11** | NSAMPLE | FB-OLD-012418-5 | | | OLD-02-09A-0118 | | | OLD-OU2-03A-0118 | | | OLD-OU2-11A-0118 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SDG: B818419** | LAB_ID | FZA808 | | | FZA806 | | | FZA786 | | | FZA785 | | |
| **FRACTION: PFAS** | SAMP_DATE | 1/24/2018 | | | 1/23/2018 | | | 1/22/2018 | | | 1/22/2018 | | |
| **MEDIA: WATER** | QC_TYPE | NM | | | NM | | | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | | | | | | | | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| N-ETHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID | | 0.0036 | U | | 0.0033 | U | | 0.0033 | UJ | H | 0.0033 | UJ | H |
| N-METHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID | | 0.0032 | U | | 0.0029 | U | | 0.0029 | UJ | H | 0.0029 | UJ | H |
| PENTADECAFLUOROOCTANOIC ACID | | 0.0036 | U | | 0.0033 | U | | 0.14 | | | 0.012 | J | P |
| PERFLUOROBUTANESULFONIC ACID | | 0.0059 | U | | 0.0054 | U | | 0.012 | J | P | 0.0054 | U | |
| PERFLUORODECANOIC ACID | | 0.0067 | U | | 0.0061 | U | | 0.0061 | U | | 0.0061 | U | |
| PERFLUORODODECANOIC ACID | | 0.0055 | U | | 0.005 | U | | 0.005 | UJ | H | 0.005 | UJ | H |
| PERFLUOROHEPTANOIC ACID | | 0.0081 | U | | 0.0074 | U | | 0.025 | | | 0.0074 | U | |
| PERFLUOROHEXANESULFONIC ACID | | 0.0062 | U | | 0.0056 | U | | 0.027 | | | 0.013 | J | P |
| PERFLUOROHEXANOIC ACID | | 0.0039 | U | | 0.0035 | U | | 0.035 | | | 0.01 | J | P |
| PERFLUORONONANOIC ACID | | 0.0096 | U | | 0.0087 | U | | 0.0087 | U | | 0.0087 | U | |
| PERFLUOROOCTANE SULFONIC ACID | | 0.0066 | U | | 0.006 | U | | 0.084 | | | 0.006 | U | |
| PERFLUOROTETRADECANOIC ACID | | 0.003 | U | | 0.0027 | U | | 0.0027 | UJ | H | 0.0027 | UJ | H |
| PERFLUOROTRIDECANOIC ACID | | 0.0042 | U | | 0.0038 | U | | 0.0038 | UJ | H | 0.0038 | UJ | H |
| PERFLUOROUNDECANOIC ACID | | 0.0028 | U | | 0.0025 | U | | 0.0025 | U | | 0.0025 | U | |

| **PROJ_NO: 08005-JM11** | NSAMPLE | OLD-OU2-51A-0118 | | | OLD-OU2-51A-0118D | | |
|---|---|---|---|---|---|---|---|
| **SDG: B818419** | LAB_ID | FZA783 | | | FZA784 | | |
| **FRACTION: PFAS** | SAMP_DATE | 1/22/2018 | | | 1/22/2018 | | |
| **MEDIA: WATER** | QC_TYPE | NM | | | NM | | |
| | UNITS | UG/L | | | UG/L | | |
| | PCT_SOLIDS | 0.0 | | | 0.0 | | |
| | DUP_OF | | | | OLD-OU2-51A-0118 | | |
| PARAMETER | | RESULT | VQL | QLCD | RESULT | VQL | QLCD |
| N-ETHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID | | 0.0033 | UJ | H | 0.0033 | UJ | H |
| N-METHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID | | 0.0029 | UJ | H | 0.0029 | UJ | H |
| PENTADECAFLUOROOCTANOIC ACID | | 0.0033 | U | | 0.0033 | U | |
| PERFLUOROBUTANESULFONIC ACID | | 0.0054 | U | | 0.0054 | U | |
| PERFLUORODECANOIC ACID | | 0.0061 | U | | 0.0061 | U | |
| PERFLUORODODECANOIC ACID | | 0.005 | UJ | H | 0.005 | UJ | H |
| PERFLUOROHEPTANOIC ACID | | 0.0074 | U | | 0.0074 | U | |
| PERFLUOROHEXANESULFONIC ACID | | 0.0089 | J | P | 0.0087 | J | P |
| PERFLUOROHEXANOIC ACID | | 0.011 | J | P | 0.0035 | U | |
| PERFLUORONONANOIC ACID | | 0.0087 | U | | 0.0087 | U | |
| PERFLUOROOCTANE SULFONIC ACID | | 0.006 | U | | 0.006 | U | |
| PERFLUOROTETRADECANOIC ACID | | 0.0027 | UJ | H | 0.0027 | UJ | H |
| PERFLUOROTRIDECANOIC ACID | | 0.0038 | UJ | H | 0.0038 | UJ | H |
| PERFLUOROUNDECANOIC ACID | | 0.0025 | U | | 0.0025 | U | |

# APPENDIX B

## RESULTS AS REPORTED BY THE LABORATORY

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## RESULTS OF ANALYSES OF WATER

JAS 050118

| Maxxam ID | | FZA783 | FZA784 | FZA785 | | | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2018/01/22 12:58 | 2018/01/22 12:58 | 2018/01/22 14:10 | | | | |
| COC Number | | 647124-01-01 | 647124-01-01 | 647124-01-01 | | | | |
| | UNITS | ~~OLD-002-51A-0118~~ | ~~OLD-002-51A-0118D~~ | ~~OLD-002-11A-0118~~ | DL | LOD | LOQ | QC Batch |
| **Miscellaneous Parameters** | | OLD-OU2-51A-0118 | OLD-OU2-51A-0118 | OLD-OU2-11A-0118 | | | | |
| EtFOSAA | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0033 | 0.010 | 0.020 | 5396699 |
| MeFOSAA | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0029 | 0.010 | 0.020 | 5396699 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0054 | 0.015 | 0.020 | 5383466 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0074 | 0.015 | 0.020 | 5383466 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 0.011 J | 0.010 U | 0.010 J | 0.0035 | 0.010 | 0.020 | 5383466 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 0.0089 J | 0.0087 J | 0.013 J | 0.0056 | 0.015 | 0.020 | 5383466 |
| Perfluorononanoic Acid (PFNA) | ug/L | 0.018 U | 0.018 U | 0.018 U | 0.0087 | 0.018 | 0.020 | 5383466 |
| Perfluorotetradecanoic Acid | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0027 | 0.010 | 0.020 | 5396699 |
| Perfluorotridecanoic Acid | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0038 | 0.010 | 0.020 | 5396699 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0025 | 0.010 | 0.020 | 5383466 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0061 | 0.015 | 0.020 | 5383466 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0050 | 0.010 | 0.020 | 5396699 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 0.010 U | 0.010 U | 0.012 J | 0.0033 | 0.010 | 0.020 | 5383466 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0060 | 0.015 | 0.020 | 5383466 |
| **Surrogate Recovery (%)** | | | | | | | | |
| 13C2-Perfluorodecanoic acid | % | 86 | 107 | 95 | | | | 5383466 |
| 13C2-Perfluorododecanoic acid | % | 106 | 91 | 94 | | | | 5396699 |
| 13C2-Perfluorohexanoic acid | % | 88 | 110 | 82 | | | | 5383466 |
| 13C2-perfluorotetradecanoic acid | % | 108 | 102 | 97 | | | | 5396699 |
| 13C2-Perfluoroundecanoic acid | % | 83 | 91 | 96 | | | | 5383466 |
| 13C4-Perfluoroheptanoic acid | % | 87 | 114 | 99 | | | | 5383466 |
| 13C4-Perfluorooctanesulfonate | % | 95 | 122 | 99 | | | | 5383466 |
| 13C4-Perfluorooctanoic acid | % | 90 | 111 | 98 | | | | 5383466 |
| 13C5-Perfluorononanoic acid | % | 91 | 119 | 101 | | | | 5383466 |
| 18O2-Perfluorohexanesulfonate | % | 88 | 114 | 97 | | | | 5383466 |
| D3-MeFOSAA | % | 112 | 104 | 108 | | | | 5396699 |
| D5-EtFOSAA | % | 112 | 103 | 104 | | | | 5396699 |

DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
QC Batch = Quality Control Batch
N/A = Not Applicable



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Maxxam Analytics

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

JAS 050118

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | FZA786 | FZA788 | FZA789 | | | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2018/01/22 15:01 | 2018/01/22 13:45 | 2018/01/22 13:50 | | | | |
| COC Number | | 647124-01-01 | 647124-01-01 | 647124-01-01 | | | | |
| | UNITS | ~~OLD-002-03A-0118~~ | EB-GW-012218-1 | FB-OLD-012218-1 | DL | LOD | LOQ | QC Batch |
| **Miscellaneous Parameters** | | OLD-OU2-03A-0118 | | | | | | |
| EtFOSAA | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0033 | 0.010 | 0.020 | 5396699 |
| MeFOSAA | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0029 | 0.010 | 0.020 | 5396699 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 0.012 J | 0.015 U | 0.015 U | 0.0054 | 0.015 | 0.020 | 5383466 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 0.025 | 0.015 U | 0.015 U | 0.0074 | 0.015 | 0.020 | 5383466 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 0.035 | 0.010 U | 0.010 U | 0.0035 | 0.010 | 0.020 | 5383466 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 0.027 | 0.015 U | 0.015 U | 0.0056 | 0.015 | 0.020 | 5383466 |
| Perfluorononanoic Acid (PFNA) | ug/L | 0.018 U | 0.018 U | 0.018 U | 0.0087 | 0.018 | 0.020 | 5383466 |
| Perfluorotetradecanoic Acid | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0027 | 0.010 | 0.020 | 5396699 |
| Perfluorotridecanoic Acid | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0038 | 0.010 | 0.020 | 5396699 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0025 | 0.010 | 0.020 | 5383466 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0061 | 0.015 | 0.020 | 5383466 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0050 | 0.010 | 0.020 | 5396699 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 0.14 | 0.010 U | 0.010 U | 0.0033 | 0.010 | 0.020 | 5383466 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 0.084 | 0.015 U | 0.015 U | 0.0060 | 0.015 | 0.020 | 5383466 |
| **Surrogate Recovery (%)** | | | | | | | | |
| 13C2-Perfluorodecanoic acid | % | 93 | 98 | 94 | | | | 5383466 |
| 13C2-Perfluorododecanoic acid | % | 93 | 89 | 94 | | | | 5396699 |
| 13C2-Perfluorohexanoic acid | % | 96 | 109 | 109 | | | | 5383466 |
| 13C2-perfluorotetradecanoic acid | % | 91 | 99 | 90 | | | | 5396699 |
| 13C2-Perfluoroundecanoic acid | % | 92 | 96 | 91 | | | | 5383466 |
| 13C4-Perfluoroheptanoic acid | % | 101 | 116 | 113 | | | | 5383466 |
| 13C4-Perfluorooctanesulfonate | % | 112 | 110 | 114 | | | | 5383466 |
| 13C4-Perfluorooctanoic acid | % | 100 | 110 | 113 | | | | 5383466 |
| 13C5-Perfluorononanoic acid | % | 103 | 112 | 106 | | | | 5383466 |
| 18O2-Perfluorohexanesulfonate | % | 103 | 111 | 103 | | | | 5383466 |
| D3-MeFOSAA | % | 116 | 106 | 100 | | | | 5396699 |
| D5-EtFOSAA | % | 113 | 99 | 97 | | | | 5396699 |

DL = Detection Limit
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LOQ = Limit of Quantitation
QC Batch = Quality Control Batch
N/A = Not Applicable



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Maxxam Analytics

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | FZA790 | FZA791 | FZA792 | | | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2018/01/22 14:20 | 2018/01/22 14:30 | 2018/01/22 14:35 | | | | |
| COC Number | | 647124-01-01 | 647124-01-01 | 647124-01-01 | | | | |
| | UNITS | FB-OLD-012218-2 | EB-WC-012218-1 | EB-DPT-012218-1 | DL | LOD | LOQ | QC Batch |
| **Miscellaneous Parameters** | | | | | | | | |
| EtFOSAA | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0033 | 0.010 | 0.020 | 5396699 |
| MeFOSAA | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0029 | 0.010 | 0.020 | 5396699 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0054 | 0.015 | 0.020 | 5383466 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0074 | 0.015 | 0.020 | 5383466 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0035 | 0.010 | 0.020 | 5383466 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0056 | 0.015 | 0.020 | 5383466 |
| Perfluorononanoic Acid (PFNA) | ug/L | 0.018 U | 0.018 U | 0.018 U | 0.0087 | 0.018 | 0.020 | 5383466 |
| Perfluorotetradecanoic Acid | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0027 | 0.010 | 0.020 | 5396699 |
| Perfluorotridecanoic Acid | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0038 | 0.010 | 0.020 | 5396699 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0025 | 0.010 | 0.020 | 5383466 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0061 | 0.015 | 0.020 | 5383466 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0050 | 0.010 | 0.020 | 5396699 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 0.010 U | 0.010 U | 0.010 U | 0.0033 | 0.010 | 0.020 | 5383466 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 0.015 U | 0.015 U | 0.015 U | 0.0060 | 0.015 | 0.020 | 5383466 |
| **Surrogate Recovery (%)** | | | | | | | | |
| 13C2-Perfluorodecanoic acid | % | 86 | 105 | 102 | | | | 5383466 |
| 13C2-Perfluorododecanoic acid | % | 111 | 106 | 100 | | | | 5396699 |
| 13C2-Perfluorohexanoic acid | % | 100 | 104 | 90 | | | | 5383466 |
| 13C2-perfluorotetradecanoic acid | % | 115 | 95 | 84 | | | | 5396699 |
| 13C2-Perfluoroundecanoic acid | % | 84 | 102 | 95 | | | | 5383466 |
| 13C4-Perfluoroheptanoic acid | % | 107 | 107 | 92 | | | | 5383466 |
| 13C4-Perfluorooctanesulfonate | % | 102 | 106 | 104 | | | | 5383466 |
| 13C4-Perfluorooctanoic acid | % | 100 | 109 | 101 | | | | 5383466 |
| 13C5-Perfluorononanoic acid | % | 103 | 109 | 93 | | | | 5383466 |
| 18O2-Perfluorohexanesulfonate | % | 101 | 95 | 96 | | | | 5383466 |
| D3-MeFOSAA | % | 123 | 117 | 76 | | | | 5396699 |
| D5-EtFOSAA | % | 122 | 117 | 72 | | | | 5396699 |

DL = Detection Limit
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N/A = Not Applicable



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Maxxam Analytics

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | FZA801 | | FZA802 | | | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2018/01/23 10:20 | | 2018/01/23 10:30 | | | | |
| COC Number | | 647124-02-01 | | 647124-02-01 | | | | |
| | UNITS | FB-OLD-012318-3 | QC Batch | EB-WC-012318-2 | DL | LOD | LOQ | QC Batch |
| **Miscellaneous Parameters** | | | | | | | | |
| EtFOSAA | ug/L | 0.010 U | 5386102 | 0.010 U | 0.0033 | 0.010 | 0.020 | 5396699 |
| MeFOSAA | ug/L | 0.010 U | 5386102 | 0.010 U | 0.0029 | 0.010 | 0.020 | 5396699 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 0.015 U | 5386102 | 0.015 U | 0.0054 | 0.015 | 0.020 | 5396699 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 0.015 U | 5386102 | 0.015 U | 0.0074 | 0.015 | 0.020 | 5396699 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 0.010 U | 5386102 | 0.010 U | 0.0035 | 0.010 | 0.020 | 5396699 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 0.015 U | 5386102 | 0.015 U | 0.0056 | 0.015 | 0.020 | 5396699 |
| Perfluorononanoic Acid (PFNA) | ug/L | 0.018 U | 5386102 | 0.018 U | 0.0087 | 0.018 | 0.020 | 5396699 |
| Perfluorotetradecanoic Acid | ug/L | 0.010 U | 5386102 | 0.010 U | 0.0027 | 0.010 | 0.020 | 5396699 |
| Perfluorotridecanoic Acid | ug/L | 0.010 U | 5386102 | 0.010 U | 0.0038 | 0.010 | 0.020 | 5396699 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 0.010 U | 5386102 | 0.010 U | 0.0025 | 0.010 | 0.020 | 5396699 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 0.015 U | 5386102 | 0.015 U | 0.0061 | 0.015 | 0.020 | 5396699 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 0.010 U | 5386102 | 0.010 U | 0.0050 | 0.010 | 0.020 | 5396699 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 0.010 U | 5386102 | 0.010 U | 0.0033 | 0.010 | 0.020 | 5396699 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 0.015 U | 5386102 | 0.015 U | 0.0060 | 0.015 | 0.020 | 5396699 |
| **Surrogate Recovery (%)** | | | | | | | | |
| 13C2-Perfluorodecanoic acid | % | 78 | 5386102 | 91 | | | | 5396699 |
| 13C2-Perfluorododecanoic acid | % | 72 | 5386102 | 91 | | | | 5396699 |
| 13C2-Perfluorohexanoic acid | % | 90 | 5386102 | 73 | | | | 5396699 |
| 13C2-perfluorotetradecanoic acid | % | 69 | 5386102 | 77 | | | | 5396699 |
| 13C2-Perfluoroundecanoic acid | % | 70 | 5386102 | 97 | | | | 5396699 |
| 13C4-Perfluoroheptanoic acid | % | 91 | 5386102 | 80 | | | | 5396699 |
| 13C4-Perfluorooctanesulfonate | % | 73 | 5386102 | 67 | | | | 5396699 |
| 13C4-Perfluorooctanoic acid | % | 85 | 5386102 | 56 | | | | 5396699 |
| 13C5-Perfluorononanoic acid | % | 84 | 5386102 | 74 | | | | 5396699 |
| 18O2-Perfluorohexanesulfonate | % | 85 | 5386102 | 79 | | | | 5396699 |
| D3-MeFOSAA | % | 75 | 5386102 | 91 | | | | 5396699 |
| D5-EtFOSAA | % | 70 | 5386102 | 88 | | | | 5396699 |

DL = Detection Limit
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QC Batch = Quality Control Batch
N/A = Not Applicable



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Maxxam Analytics

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | FZA803 | FZA804 | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Date | | 2018/01/23 11:00 | 2018/01/23 11:05 | | | | |
| COC Number | | 647124-02-01 | 647124-02-01 | | | | |
| | UNITS | EB-GW-012318-2 | FB-OLD-012318-4 | DL | LOD | LOQ | QC Batch |
| **Miscellaneous Parameters** | | | | | | | |
| EtFOSAA | ug/L | 0.010 U | 0.010 U | 0.0033 | 0.010 | 0.020 | 5386102 |
| MeFOSAA | ug/L | 0.010 U | 0.010 U | 0.0029 | 0.010 | 0.020 | 5386102 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 0.015 U | 0.015 U | 0.0054 | 0.015 | 0.020 | 5386102 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 0.015 U | 0.015 U | 0.0074 | 0.015 | 0.020 | 5386102 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 0.010 U | 0.010 U | 0.0035 | 0.010 | 0.020 | 5386102 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 0.015 U | 0.015 U | 0.0056 | 0.015 | 0.020 | 5386102 |
| Perfluorononanoic Acid (PFNA) | ug/L | 0.018 U | 0.018 U | 0.0087 | 0.018 | 0.020 | 5386102 |
| Perfluorotetradecanoic Acid | ug/L | 0.010 U | 0.010 U | 0.0027 | 0.010 | 0.020 | 5386102 |
| Perfluorotridecanoic Acid | ug/L | 0.010 U | 0.010 U | 0.0038 | 0.010 | 0.020 | 5386102 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 0.010 U | 0.010 U | 0.0025 | 0.010 | 0.020 | 5386102 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 0.015 U | 0.015 U | 0.0061 | 0.015 | 0.020 | 5386102 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 0.010 U | 0.010 U | 0.0050 | 0.010 | 0.020 | 5386102 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 0.010 U | 0.010 U | 0.0033 | 0.010 | 0.020 | 5386102 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 0.015 U | 0.015 U | 0.0060 | 0.015 | 0.020 | 5386102 |
| **Surrogate Recovery (%)** | | | | | | | |
| 13C2-Perfluorodecanoic acid | % | 73 | 72 | | | | 5386102 |
| 13C2-Perfluorododecanoic acid | % | 69 | 68 | | | | 5386102 |
| 13C2-Perfluorohexanoic acid | % | 76 | 75 | | | | 5386102 |
| 13C2-perfluorotetradecanoic acid | % | 62 | 65 | | | | 5386102 |
| 13C2-Perfluoroundecanoic acid | % | 77 | 67 | | | | 5386102 |
| 13C4-Perfluoroheptanoic acid | % | 71 | 72 | | | | 5386102 |
| 13C4-Perfluorooctanesulfonate | % | 73 | 74 | | | | 5386102 |
| 13C4-Perfluorooctanoic acid | % | 80 | 70 | | | | 5386102 |
| 13C5-Perfluorononanoic acid | % | 75 | 71 | | | | 5386102 |
| 18O2-Perfluorohexanesulfonate | % | 76 | 81 | | | | 5386102 |
| D3-MeFOSAA | % | 69 | 63 | | | | 5386102 |
| D5-EtFOSAA | % | 64 | 63 | | | | 5386102 |

DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
QC Batch = Quality Control Batch
N/A = Not Applicable



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Maxxam Analytics

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | FZA805 | | | | FZA806 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2018/01/23 11:15 | | | | 2018/01/23 11:39 | | | | |
| COC Number | | 647124-02-01 | | | | 647124-02-01 | | | | |
| | UNITS | EB-DPT-012318-2 | DL | LOD | LOQ | OLD-02-09A-0118 | DL | LOD | LOQ | QC Batch |
| **Miscellaneous Parameters** | | | | | | | | | | |
| EtFOSAA | ug/L | 0.011 U | 0.0035 | 0.011 | 0.021 | 0.010 U | 0.0033 | 0.010 | 0.020 | 5386102 |
| MeFOSAA | ug/L | 0.011 U | 0.0030 | 0.011 | 0.021 | 0.010 U | 0.0029 | 0.010 | 0.020 | 5386102 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 0.016 U | 0.0057 | 0.016 | 0.021 | 0.015 U | 0.0054 | 0.015 | 0.020 | 5386102 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 0.016 U | 0.0078 | 0.016 | 0.021 | 0.015 U | 0.0074 | 0.015 | 0.020 | 5386102 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 0.011 U | 0.0037 | 0.011 | 0.021 | 0.010 U | 0.0035 | 0.010 | 0.020 | 5386102 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 0.016 U | 0.0059 | 0.016 | 0.021 | 0.015 U | 0.0056 | 0.015 | 0.020 | 5386102 |
| Perfluorononanoic Acid (PFNA) | ug/L | 0.019 U | 0.0091 | 0.019 | 0.021 | 0.018 U | 0.0087 | 0.018 | 0.020 | 5386102 |
| Perfluorotetradecanoic Acid | ug/L | 0.011 U | 0.0028 | 0.011 | 0.021 | 0.010 U | 0.0027 | 0.010 | 0.020 | 5386102 |
| Perfluorotridecanoic Acid | ug/L | 0.011 U | 0.0040 | 0.011 | 0.021 | 0.010 U | 0.0038 | 0.010 | 0.020 | 5386102 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 0.011 U | 0.0026 | 0.011 | 0.021 | 0.010 U | 0.0025 | 0.010 | 0.020 | 5386102 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 0.016 U | 0.0064 | 0.016 | 0.021 | 0.015 U | 0.0061 | 0.015 | 0.020 | 5386102 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 0.011 U | 0.0053 | 0.011 | 0.021 | 0.010 U | 0.0050 | 0.010 | 0.020 | 5386102 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 0.011 U | 0.0035 | 0.011 | 0.021 | 0.010 U | 0.0033 | 0.010 | 0.020 | 5386102 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 0.016 U | 0.0063 | 0.016 | 0.021 | 0.015 U | 0.0060 | 0.015 | 0.020 | 5386102 |
| **Surrogate Recovery (%)** | | | | | | | | | | |
| 13C2-Perfluorodecanoic acid | % | 75 | | | | 64 | | | | 5386102 |
| 13C2-Perfluorododecanoic acid | % | 72 | | | | 62 | | | | 5386102 |
| 13C2-Perfluorohexanoic acid | % | 79 | | | | 79 | | | | 5386102 |
| 13C2-perfluorotetradecanoic acid | % | 64 | | | | 63 | | | | 5386102 |
| 13C2-Perfluoroundecanoic acid | % | 74 | | | | 68 | | | | 5386102 |
| 13C4-Perfluoroheptanoic acid | % | 83 | | | | 72 | | | | 5386102 |
| 13C4-Perfluorooctanesulfonate | % | 80 | | | | 86 | | | | 5386102 |
| 13C4-Perfluorooctanoic acid | % | 81 | | | | 69 | | | | 5386102 |
| 13C5-Perfluorononanoic acid | % | 79 | | | | 78 | | | | 5386102 |
| 18O2-Perfluorohexanesulfonate | % | 85 | | | | 85 | | | | 5386102 |
| D3-MeFOSAA | % | 80 | | | | 73 | | | | 5386102 |
| D5-EtFOSAA | % | 78 | | | | 72 | | | | 5386102 |

DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | FZA807 | FZA808 | | | | |
|---|---|---|---|---|---|---|---|
| Sampling Date | | 2018/01/24 09:55 | 2018/01/24 10:00 | | | | |
| COC Number | | 647124-02-01 | 647124-02-01 | | | | |
| | UNITS | EB-WC-012418-3 | FB-OLD-012418-5 | DL | LOD | LOQ | QC Batch |
| **Miscellaneous Parameters** | | | | | | | |
| EtFOSAA | ug/L | 0.011 U | 0.011 U | 0.0036 | 0.011 | 0.022 | 5389177 |
| MeFOSAA | ug/L | 0.011 U | 0.011 U | 0.0032 | 0.011 | 0.022 | 5389177 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 0.017 U | 0.017 U | 0.0059 | 0.017 | 0.022 | 5389177 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 0.017 U | 0.017 U | 0.0081 | 0.017 | 0.022 | 5389177 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 0.011 U | 0.011 U | 0.0039 | 0.011 | 0.022 | 5389177 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 0.017 U | 0.017 U | 0.0062 | 0.017 | 0.022 | 5389177 |
| Perfluorononanoic Acid (PFNA) | ug/L | 0.020 U | 0.020 U | 0.0096 | 0.020 | 0.022 | 5389177 |
| Perfluorotetradecanoic Acid | ug/L | 0.011 U | 0.011 U | 0.0030 | 0.011 | 0.022 | 5389177 |
| Perfluorotridecanoic Acid | ug/L | 0.011 U | 0.011 U | 0.0042 | 0.011 | 0.022 | 5389177 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 0.011 U | 0.011 U | 0.0028 | 0.011 | 0.022 | 5389177 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 0.017 U | 0.017 U | 0.0067 | 0.017 | 0.022 | 5389177 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 0.011 U | 0.011 U | 0.0055 | 0.011 | 0.022 | 5389177 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 0.011 U | 0.011 U | 0.0036 | 0.011 | 0.022 | 5389177 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 0.017 U | 0.017 U | 0.0066 | 0.017 | 0.022 | 5389177 |
| **Surrogate Recovery (%)** | | | | | | | |
| 13C2-Perfluorodecanoic acid | % | 87 | 90 | | | | 5389177 |
| 13C2-Perfluorododecanoic acid | % | 88 | 78 | | | | 5389177 |
| 13C2-Perfluorohexanoic acid | % | 93 | 96 | | | | 5389177 |
| 13C2-perfluorotetradecanoic acid | % | 79 | 71 | | | | 5389177 |
| 13C2-Perfluoroundecanoic acid | % | 93 | 81 | | | | 5389177 |
| 13C4-Perfluoroheptanoic acid | % | 99 | 96 | | | | 5389177 |
| 13C4-Perfluorooctanesulfonate | % | 92 | 90 | | | | 5389177 |
| 13C4-Perfluorooctanoic acid | % | 92 | 90 | | | | 5389177 |
| 13C5-Perfluorononanoic acid | % | 92 | 94 | | | | 5389177 |
| 18O2-Perfluorohexanesulfonate | % | 90 | 93 | | | | 5389177 |
| D3-MeFOSAA | % | 79 | 76 | | | | 5389177 |
| D5-EtFOSAA | % | 78 | 75 | | | | 5389177 |

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Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | FZA809 | | | | |
|---|---|---|---|---|---|---|
| Sampling Date | | 2018/01/24 10:30 | | | | |
| COC Number | | 647124-02-01 | | | | |
| | UNITS | EB-DPT-012418-3 | DL | LOD | LOQ | QC Batch |
| **Miscellaneous Parameters** | | | | | | |
| EtFOSAA | ug/L | 0.010 U | 0.0033 | 0.010 | 0.020 | 5389177 |
| MeFOSAA | ug/L | 0.010 U | 0.0029 | 0.010 | 0.020 | 5389177 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 0.015 U | 0.0054 | 0.015 | 0.020 | 5389177 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 0.015 U | 0.0074 | 0.015 | 0.020 | 5389177 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 0.010 U | 0.0035 | 0.010 | 0.020 | 5389177 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 0.015 U | 0.0056 | 0.015 | 0.020 | 5389177 |
| Perfluorononanoic Acid (PFNA) | ug/L | 0.018 U | 0.0087 | 0.018 | 0.020 | 5389177 |
| Perfluorotetradecanoic Acid | ug/L | 0.010 U | 0.0027 | 0.010 | 0.020 | 5389177 |
| Perfluorotridecanoic Acid | ug/L | 0.010 U | 0.0038 | 0.010 | 0.020 | 5389177 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 0.010 U | 0.0025 | 0.010 | 0.020 | 5389177 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 0.015 U | 0.0061 | 0.015 | 0.020 | 5389177 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 0.010 U | 0.0050 | 0.010 | 0.020 | 5389177 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 0.010 U | 0.0033 | 0.010 | 0.020 | 5389177 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 0.015 U | 0.0060 | 0.015 | 0.020 | 5389177 |
| **Surrogate Recovery (%)** | | | | | | |
| 13C2-Perfluorodecanoic acid | % | 101 | | | | 5389177 |
| 13C2-Perfluorododecanoic acid | % | 91 | | | | 5389177 |
| 13C2-Perfluorohexanoic acid | % | 101 | | | | 5389177 |
| 13C2-perfluorotetradecanoic acid | % | 83 | | | | 5389177 |
| 13C2-Perfluoroundecanoic acid | % | 94 | | | | 5389177 |
| 13C4-Perfluoroheptanoic acid | % | 100 | | | | 5389177 |
| 13C4-Perfluorooctanesulfonate | % | 105 | | | | 5389177 |
| 13C4-Perfluorooctanoic acid | % | 96 | | | | 5389177 |
| 13C5-Perfluorononanoic acid | % | 97 | | | | 5389177 |
| 18O2-Perfluorohexanesulfonate | % | 97 | | | | 5389177 |
| D3-MeFOSAA | % | 87 | | | | 5389177 |
| D5-EtFOSAA | % | 83 | | | | 5389177 |

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LOQ = Limit of Quantitation
QC Batch = Quality Control Batch
N/A = Not Applicable



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**APPENDIX C**

**SUPPORT DOCUMENTATION**

| ANALYTE | ORIGINAL | DUPLICATE | RL | RPD | RPD > 30% | ORIGINAL SAMPLE CONC >2xRL | DUPLICATE SAMPLE CONC >2xRL | DIFFERENCE >2xRL |
|---|---|---|---|---|---|---|---|---|
| PERFLUOROHEXANESULFONIC ACID | 0.0089 | 0.0087 | 0.02 | 2.27 | FALSE | FALSE | FALSE | FALSE |
| PERFLUOROHEXANOIC ACID | 0.011 | 0.0035 | 0.02 | 103.45 | TRUE | FALSE | FALSE | FALSE |

**SDG B818419**

**OLD-OU2-51A-0118/OLD-OU2-51A-0118D**

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5740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel:(905) 817-5700 Toll-free:800-563-6266 Fax:(905) 817-5777 www.maxxam.ca

# CHAIN OF CUSTODY RECORD

Page 1 of 2

| INVOICE TO: | | REPORT TO: | | PROJECT INFORMATION: | | Laboratory Use Only: | |
|---|---|---|---|---|---|---|---|
| Company Name: | #31688 Earth Toxics Inc | Company Name: | Tetra Tech | Quotation #: | B80382 | Maxxam Job #: | Bottle Order #: 647124 |
| Attention: | Accounts Payable | Attention: | Ron Rokin | P.O. #: | | | |
| Address: | PO Box 3382 | Address: | 661 Andersen Drive Pittsburgh, PA 15220 | Project: | JM11 NTC Orlando | COC #: C#647124-01-01 | Project Manager: Stephanie Pollen |
| | Logan UT 84321 | | | Project Name: | | | |
| Tel: | (781) 455-0653 x | Tel: | 412-921-8291 | Site #: | | | |
| Fax: | | Fax: | 412-921-4040 | Sampled By: | Gregerson/c, Anderson | | |
| Email: | rcarr@earthtoxics.com | Email: | Ron.Rokin@tetratech.com | | | | |

**MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY**

| Regulation 153 (2011) | Other Regulations | Special Instructions |
|---|---|---|
| ☐ Table 1 ☐ Res/Park ☐ Medium/Fine | ☐ CCME ☐ Sanitary Sewer Bylaw | |
| ☐ Table 2 ☐ Ind/Comm ☐ Coarse | ☐ Reg 558 ☐ Storm Sewer Bylaw | |
| ☐ Table 3 ☐ Agri/Other ☐ For RSC | ☐ MISA Municipality | |
| ☐ Table ___ | ☐ PWQO | |
| | ☐ Other | |

*Include Criteria on Certificate of Analysis (Y/N)?* ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC):

Field Filtered (please circle): Metals / Hg / Cr VI

PFOS

25-Jan-18 13:50
Stephanie Pollen
B818419
TSP ENV-832

Please provide advance notice for rush projects

TAT: (if not specified): ng days for most tests. for certain tests such as BOD and Dioxins/Furans are > 5 Manager for details.

(if applies to entire submission) Time Required: ___ Time: ___ (call lab for #)

Comments

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | | PFOS | | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | OLD-OU2-51A-0118 | 01/22/18 | 1258 | GW | | X | | | | | | | | 2 | |
| 2 | | OLD-OU2-51A-01180 | 01/22/18 | 12:58 | GW | | X | | | | | | | | 2 | |
| 3 | | OLD-OU2-11A-0118 | 01/22/18 | 1410 | GW | | X | | | | | | | | 2 | |
| 4 | | OLD-OU2-03A-0118 | 01/22/18 | 1501 | GW | | X | | | | | | | | 2 | |
| 5 | | OLD-OU2-03A-0118-MS/MSD | 01/22/18 | 1501 | GW | | X. | | | | | | | | 4 | |
| 6 | | EB-GW-012218-1 | 01/22/18 | 1345 | GW | | X | | | | | | | | 2 | |
| 7 | | FB-OLD-012218-1 | 01/22/18 | 1350 | GW | | X | | | | | | | | 2 | |
| 8 | | FB-OLD-012218-2 | 01/22/18 | 1420 | W | | X | | | | | | | | 2 | |
| 9 | | EB-WC-012218-1 | 01/22/18 | 1430 | W | | X | | | | | | | | 2 | |
| 10 | | EB-DPT-012218-1 | 01/22/18 | 1435 | W | | X | | | | | | | | 2 | |

| * RELINQUISHED BY: (Signature/Print) | Date: (YY/MM/DD) | Time | RECEIVED BY: (Signature/Print) | Date: (YY/MM/DD) | Time | # jars used and not submitted |
|---|---|---|---|---|---|---|
| Scott Akers | 01/24/18 | 1600 | SAMPLE SIGNATURE Tetra | 2018/01/25 | 13:50 | |

Laboratory Use Only

| Time Sensitive | Temperature (°C) on Recei | Custody Seal Present | Yes | No |
|---|---|---|---|---|
| | 3.5 / 3.1 / 3.1 | Intact | ✓ | |

White: Maxxa Yellow: Client

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO MAXXAM'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.MAXXAM.CA/TERMS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT HTTP://MAXXAM.CA/WP-CONTENT/UPLOADS/ONTARIO-COC.PDF.

SAMPLES MUST BE KEPT COOL ( < 10° C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

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# CHAIN OF CUSTODY RECORD

Page 2 of 2

| INVOICE TO: | | REPORT TO: | | PROJECT INFORMATION: | | Laboratory Use Only: | |
|---|---|---|---|---|---|---|---|
| Company Name: | #31688 Earth Toxics Inc | Company Name: | Tetra Tech | Quotation #: | B80382 | Maxxam Job #: | Bottle Order #: 647124 |
| Attention: | Accounts Payable | Attention: | Ron Kotun | P.O. #: | | | |
| Address: | PO Box 3382 Logan UT 84321 | Address: | 661 Anderson Dr. ste Pittsburgh, PA 15220 | Project: | JM11 NTC Orlando | COC #: C#647124-02-01 | Project Manager: Stephanie Pollen |
| Tel: | (781) 455-0653 x | Fax: | 412-921-4040 | Project Name: | | | |
| Email: | rcarr@earthtoxics.com | Email: | Ron.Kotun@tetratech.com | Site #: | | | |
| | | | | Sampled By: | Grzegorek, Andrew | | |

**MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY**

| Regulation 153 (2011) | Other Regulations | Special Instructions |
|---|---|---|
| ☐ Table 1 ☐ Res/Park ☐ Medium/Fine<br>☐ Table 2 ☐ Ind/Comm ☐ Coarse<br>☐ Table 3 ☐ Agri/Other ☐ For RSC<br>☐ Table ___ | ☐ CCME ☐ Sanitary Sewer Bylaw<br>☐ Reg 558 ☐ Storm Sewer Bylaw<br>☐ MISA Municipality ___<br>☐ PWQO<br>☐ Other ___ | |

*Include Criteria on Certificate of Analysis (Y/N)?* ___

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

**Regular (Standard) TAT:**
*(will be applied if Rush TAT is not specified)*
*Standard TAT = 5-7 Working days for most tests.*
*Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.*

**Job Specific Rush TAT (if applies to entire submission)**
Date Required: ___ Time Required: ___
Rush Confirmation Number: ___ *(call lab for #)*

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Field Filtered (please circle): Metals / Hg / Cr VI | ANALYSIS REQUESTED (PLEASE BE SPECIFIC): PFOS | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | FB-OLD-012318-3 | 01/23/18 | 1020 | W | | X | 2 | |
| 2 | | EB-WC-012318-2 | 01/23/18 | 1030 | W | | X | 2 | |
| 3 | | EB-GW-012318-2 | 01/23/18 | 1100 | W | | X | 2 | |
| 4 | | FB-OLD-012318-4 | 01/23/18 | 1105 | W | | X | 2 | |
| 5 | | EB-DPT-012318-2 | 01/23/18 | 1115 | W | | X | 2 | |
| 6 | | OLD-02-09A-0118 | 01/23/18 | 1139 | GW | | X | 2 | |
| 7 | | EB-WC-012418-3 | 1/24/18 | 955 | W | | X | 2 | |
| 8 | | FB-OLD-012418-5 | 1/24/18 | 1000 | W | | X | 2 | |
| 9 | | EB-DPT-012418-3 | 1/24/18 | 1030 | W | | X | 2 | |
| 10 | | | | | | | | | |

| RELINQUISHED BY: (Signature/Print) | Date: (YY/MM/DD) | Time | RECEIVED BY: (Signature/Print) | Date: (YY/MM/DD) | Time | # jars used and not submitted |
|---|---|---|---|---|---|---|
| Scott Andrew | 01/24/18 | 1600 | [illegible] STUART KEE | 2018/01/25 | 13:50 | |

Laboratory Use Only
Time Sensitive
Temperature (°C) on Receipt: 3.5 | 3.1 | 3.1
Custody Seal Present: Yes ✓ No
Custody Seal Intact: Yes ✓ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO MAXXAM'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.MAXXAM.CA/TERMS.

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** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT HTTP://MAXXAM.CA/WP-CONTENT/UPLOADS/ONTARIO-COC.PDF.

SAMPLES MUST BE KEPT COOL ( < 10° C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxa Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

**Maxxam Job: B818419**

Sample Analysis

Samples were initially analyzed on QC batches 5383466 (2018/02/06), 5386102 (2018/02/08) and 5389177 (2018/02/08-09).

The recoveries observed for Perfluorododecanoic acid (PFDoA), Perfluorotridecanoic acid (PFTrDA), Perfluorotetradecanoic acid (PFTeDA), Methylperfluorooctanesulfonamidoacetic acid (MeFOSAA) and Ethylperfluorooctanesulfonamidoacetic acid (EtFOSAA) were below acceptance criteria for the Spike (LCS) on QC batch 5383466 (2018/02/06). Samples were re-extracted and re-analyzed for these analytes on QC batch 5396699 (2018/02/15-16), past the method defined hole time. Because of their chemical structures, per- and polyfluorinated alkyl substances (PFAS) are chemically and biologically stable in the environment and resist typical environmental degradation processes. This would suggest the hold time exceedance would not have a significant impact on the data quality.

Revised Report

During assembly of the Level IV data package, it was observed that incorrect analytes had been reported for the re-analysis on QC batch 5396699 (2018/02/15-16). A revised report was issued with the correct re-analyzed compounds, Perfluorododecanoic acid (PFDoA), Perfluorotridecanoic acid (PFTrDA), Perfluorotetradecanoic acid (PFTeDA), Methylperfluorooctanesulfonamidoacetic acid (MeFOSAA) and Ethylperfluorooctanesulfonamidoacetic acid (EtFOSAA).

In addition, it was observed that incorrect extraction dates had been initially entered for samples on QC batch 5386102 (2018/02/08). The correct date (2018/02/06) was entered into the LIMS system for re-issue of the report.

Data Qualifiers

**U** – Analyte was not detected and is reported as less than the LOD or as defined by the customer. The LOD has been adjusted for any dilution or concentration of the sample.

**J** – The reported result is an estimated value (e.g., matrix interference was observed, or the analyte was detected at a concentration outside the calibration range).

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**PROJECT NARRATIVE**

**Maxxam Analytics**
**Client Project #: JM11 NTC Orlando**

**Client: Earth Toxics Inc**
**Client Project: JM11 NTC Orlando**

**I. SAMPLE RECEIPT/ANALYSIS**

a) Sample Listing

| Maxxam ID | Client Sample ID | Date Sampled | Date Received | Date Prepped | Date Run | Initial Calibration |
|---|---|---|---|---|---|---|
| **PFOS and PFOA in water by SPE/LCMS** | | | | | | |
| FZA783 | OLD-002-51A-0118 | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA784 | OLD-002-51A-0118D | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA785 | OLD-002-11A-0118 | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA786 | OLD-002-03A-0118 | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA788 | EB-GW-012218-1 | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA789 | FB-OLD-012218-1 | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA790 | FB-OLD-012218-2 | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA791 | EB-WC-012218-1 | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA792 | EB-DPT-012218-1 | 2018/01/22 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/06 & 2018/02/15-16 |
| FZA801 | FB-OLD-012318-3 | 2018/01/23 | 2018/01/25 | 2018/02/06 | 2018/02/08 | 2018/02/08 |
| FZA802 | EB-WC-012318-2 | 2018/01/23 | 2018/01/25 | 2018/02/13 | 2018/02/15 | 2018/02/08 |
| FZA803 | EB-GW-012318-2 | 2018/01/23 | 2018/01/25 | 2018/02/06 | 2018/02/08 | 2018/02/08 |
| FZA804 | FB-OLD-012318-4 | 2018/01/23 | 2018/01/25 | 2018/02/06 | 2018/02/08 | 2018/02/08 |
| FZA805 | EB-DPT-012318-2 | 2018/01/23 | 2018/01/25 | 2018/02/06 | 2018/02/08 | 2018/02/08 |
| FZA806 | OLD-02-09A-0118 | 2018/01/23 | 2018/01/25 | 2018/02/06 | 2018/02/08 | 2018/02/08 |
| FZA807 | EB-WC-012418-3 | 2018/01/24 | 2018/01/25 | 2018/02/07 | 2018/02/09 | 2018/02/08-09 |
| FZA808 | FB-OLD-012418-5 | 2018/01/24 | 2018/01/25 | 2018/02/07 | 2018/02/09 | 2018/02/08-09 |
| FZA809 | EB-DPT-012418-3 | 2018/01/24 | 2018/01/25 | 2018/02/07 | 2018/02/09 | 2018/02/08-09 |

Run Date is defined as the date of injection of the last calibration standard (12 hours or less) prior to the samples analyzed within that run sequence. Therefore the time of calibration injection that defines the run date is always within 12 hours of the time of sample injection.

b) Shipping Problems: none encountered

c) Documentation Problems: none encountered

**II. SAMPLE PREP:**

No problems encountered

**III. SAMPLE ANALYSIS:**

See also comments within the appropriate Certificate of Analysis

a) Hold Times: Due to rework requirements, the following samples were re-analyzed for PFTrDA, PFTeDA, and PFDoA past hold time: FZA783, FZA784, FZA785, FZA786, FZA788, FZA789, FZA790, FZA791, and FZA792.

b) Instrument Calibration: all within control limits

c) Quality Control: All applicable QC meets control criteria, except where otherwise noted.

d) All analytes requiring manual intergration(s) are noted on the sample chromatograms

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for other than the conditions detailed above.

In addition, I certify, that to the best of my knowledge and belief, the data as reported are true and accurate. Release of the data contained in this data package has been authorized by the cognizant laboratory official or his/her designee, as verified by this signature.

Steph Fallen

Project Manager- Site Assessment and Remediation/ Ultra Trace

2018/03/06

Date

# Glossary of Terms

- ***Detection Limit (DL)*** this can also be called ***Method Detection Limit (MDL***): The lowest concentration or amount of the target analyte that can be identified, measured, and reported with confidence that the analyte concentration is not a false positive value. (Clarification): The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence. At the DL, the false positive rate (Type I error) is 1%.

- ***Limit of Detection (LOD*)**: An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. (Clarification): The smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

- ***Limits of Quantitation (LOQ)*** this can also be called ***Reporting Detection Limit (RDL)***: The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. (Clarification): The lowest concentration that produces a quantitative result within specified limits of precision and bias. For DoD projects, the LOQ shall be set at or above the concentration of the lowest initial calibration standard.

- ***Acceptance Criteria*** are values used by the laboratory to determine that a process is in control.

- ***Accuracy*** is the degree of agreement of a measured value with the true or expected value.

- ***Calibration Standards*** are a set of solutions containing the analytes of interest at a specified concentration.

- ***Calibration Verification Standard*** consists of a calibration standard solution of intermediate concentration (mid-point initial calibration level) used to access whether the initial calibration is still valid

- ***Certified Reference Material*** is a stable homogenous material that is certified by repetitive analysis from a supplier who is certified to generate said materials.

- ***Internal Standard*** a deuterated or $^{13}C$-labelled analyte that is added to a sample extract prior to instrumental analysis to compensate for injection variability.

- ***Isomer*** is a member of a group of compounds that differ from each other only in the locations of a specific number of common substituent atoms or groups of atoms on the parent compound.

- ***Method Blank*** is a laboratory control sample using reagents that are known to be free of contamination.

- ***Precision*** is the degree of agreement between the data generated from repetitive measurements under specific conditions.

- ***Quality Assurance*** is a system of activities whose purpose is to provide the producer or user of a product with the assurance that the product meets a defined standard of quality.

- ***Quality Control*** is the overall system of activities whose purpose is to control the quality of a product so that it meets the needs of the end user.

- ***RSD*** is the relative standard deviation.

- ***Blank Spike*** is a laboratory control sample that has been fortified with native analytes of interest.

- ***Window Defining Mixture*** is a solution containing only the earliest and latest eluting congeners within each homologous group of target analytes on a specified GC column.

- ***RPD*** or Relative Percent Difference. A measure used to compare duplicate sample analysis.

- ***EMPC/NDR –*** Peak detected does not meet ratio criteria and has resulted in a higher detection limit.

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

| | |
|---|---|
| Package 1 | 3.2°C |

Revised Report (2018/03/01): Correction to report results for FZA783, FZA784, FZA785, FZA786, FZA788, FZA789, FZA790, FZA791, FZA792 (PFuNA, PFDoA, PFTrDA) from the correct analytical batch. Extraction date corrected for batch 5386102.

Sample FZA783, PFOS and PFOA in water by SPE/LCMS: Test repeated.
Sample FZA784, PFOS and PFOA in water by SPE/LCMS: Test repeated.
Sample FZA785, PFOS and PFOA in water by SPE/LCMS: Test repeated.
Sample FZA786, PFOS and PFOA in water by SPE/LCMS: Test repeated.
Sample FZA788, PFOS and PFOA in water by SPE/LCMS: Test repeated.
Sample FZA789, PFOS and PFOA in water by SPE/LCMS: Test repeated.
Sample FZA790, PFOS and PFOA in water by SPE/LCMS: Test repeated.
Sample FZA791, PFOS and PFOA in water by SPE/LCMS: Test repeated.
Sample FZA792, PFOS and PFOA in water by SPE/LCMS: Test repeated.

**Results relate only to the items tested.**



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## INJECTION INTERNAL STANDARD PEAK AREAS

| Sample Name | Analyte | 13C6-PFHxA | 13C9-PFDA |
|---|---|---|---|
| | Mass labeled IS | STD 4 | STD 4 |
| | IS Area | 28147 | 35314 |
| | | IS Peak Area | IS Peak Area |
| STD 1 | | 25741 | 34399 |
| STD 2 | | 27981 | 35531 |
| STD 3 | | 29424 | 36955 |
| STD 4 | | 28147 | 35314 |
| STD 5 | | 29859 | 36873 |
| STD 6 | | 29422 | 35570 |
| IB | | 29106 | 37296 |
| ICV | | 28001 | 33648 |
| ISC | | 26497 | 34805 |
| 5383466:BLANK | | 29859 | 39886 |
| 5383466:SPIKE | | 29307 | 37003 |
| 5383466:MTRX SPK | | 27642 | 37506 |
| 5383466:MTRX SPK:D1 | | 25480 | 33966 |
| IB | | 26939 | 38248 |
| 5383466:FZA783-01 | | 25882 | 34758 |
| 5383466:FZA784-01 | | 24676 | 33994 |
| 5383466:FZA785-01 | | 27247 | 34955 |
| 5383466:FZA786-01 | | 26008 | 35273 |
| 5383466:FZA788-01 | | 25728 | 33925 |
| 5383466:FZA789-01 | | 26172 | 36609 |
| 5383466:FZA790-01 | | 28289 | 37505 |
| 5383466:FZA791-01 | | 28121 | 36445 |
| 5383466:FZA792-01 | | 28688 | 38079 |
| CCV | | 26693 | 36124 |
| 5383466:FZH336-01 | | 27884 | 37923 |
| 5383466:FZH338-01 | | 26448 | 34863 |
| 5383466:FZH339-01 | | 25164 | 30767 |
| 5383466:FZH340-01 | | 28111 | 36130 |
| 5383466:FZH341-01 | | 27813 | 36173 |
| 5383466:FZH342-01 | | 27752 | 36036 |
| 5383466:FZH343-01 | | 27164 | 36234 |
| CCV | | 27441 | 35024 |

## INJECTION INTERNAL STANDARD PEAK AREAS

| Sample Name | Analyte | 13C9-PFDA |
|---|---|---|
| | Mass labeled IS | STD 4 |
| | IS Area | 28326 |
| | | IS Peak Area |
| STD 1 | | 26183 |
| STD 2 | | 28851 |
| STD 3 | | 29289 |
| STD 4 | | 28326 |
| STD 5 | | 28590 |
| STD 6 | | 27901 |
| IB | | 28656 |
| ICV | | 27331 |
| ISC | | 25738 |
| 5383466:BLANK | | 30305 |
| 5383466:SPIKE | | 29691 |
| 5383466:MTRX SPK | | 29366 |
| 5383466:MTRX SPK:D1 | | 27872 |
| IB | | 28486 |
| 5383466:FZA783-01 | | 28289 |
| 5383466:FZA784-01 | | 26622 |
| 5383466:FZA785-01 | | 27990 |
| 5383466:FZA786-01 | | 27719 |
| 5383466:FZA788-01 | | 27328 |
| 5383466:FZA789-01 | | 28684 |
| 5383466:FZA790-01 | | 29109 |
| 5383466:FZA791-01 | | 29148 |
| 5383466:FZA792-01 | | 29407 |
| CCV | | 28134 |
| 5383466:FZH336-01 | | 29109 |
| 5383466:FZH338-01 | | 27615 |
| 5383466:FZH339-01 | | 25195 |
| 5383466:FZH340-01 | | 27688 |
| 5383466:FZH341-01 | | 29013 |
| 5383466:FZH342-01 | | 28807 |
| 5383466:FZH343-01 | | 28498 |
| CCV | | 28351 |
| CCV | | 28872 |
| 5383466:SPIKE:R | | 30309 |
| CCV | | 29023 |

## INJECTION INTERNAL STANDARD PEAK AREAS

| Sample Name | Analyte | 13C6-PFHxA | 13C6-PFHxA | 13C9-PFDA | 13C9-PFDA |
|---|---|---|---|---|---|
| | Mass labeled IS | STD 4 | ISC/CCV | STD 4 | ISC/CCV |
| | IS Area | 32806 | 34491 | 41938 | 43455 |
| | | IS Peak Area | IS Peak Area | IS Peak Area | IS Peak Area |
| STD 1 | | 31547 | | 40575 | |
| STD 2 | | 31482 | | 42308 | |
| STD 3 | | 31926 | | 40767 | |
| STD 4 | | 32806 | | 41938 | |
| STD 5 | | 31504 | | 39393 | |
| STD 6 | | 31071 | | 38348 | |
| IB | | 29753 | | 39820 | |
| ICV | | 32370 | | 43532 | |
| ISC | | 32150 | | 41525 | |
| 5386102:BLANK | | 32505 | | 40494 | |
| 5386102:SPIKE | | 32560 | | 42455 | |
| 5386102:MTRX SPK | | 29803 | | 37721 | |
| 5386102:MTRX SPK:D1 | | 29149 | | 36576 | |
| IB | | 32514 | | 42276 | |
| 5386102:FZA801-01 | | 31765 | | 42246 | |
| 5386102:FZA802-01 | | 41475 | | 49869 | |
| 5386102:FZA803-01 | | 35436 | | 45046 | |
| 5386102:FZA804-01 | | 32197 | | 40725 | |
| 5386102:FZA805-01 | | 31057 | | 40745 | |
| 5386102:FZA806-01 | | 29544 | | 38435 | |
| 5386102:FZH328-01 | | 30996 | | 38972 | |
| 5386102:FZH329-01 | | 28126 | | 38227 | |
| 5386102:FZH330-01 | | 32627 | | 40871 | |
| 5386102:FZH335-01 | | 30264 | | 38485 | |
| CCV | | 33413 | | 42329 | |
| 5386102:FZH344-01 | | 30203 | | 38903 | |
| 5386102:FZH345-01 | | 31004 | | 38786 | |
| 5386102:FZH346-01 | | 30546 | | 40067 | |
| 5386102:FZH347-01 | | 30143 | | 39310 | |
| 5386102:FZH348-01 | | 29953 | | 38951 | |
| 5386102:FZJ934-01 | | 30902 | | 40936 | |
| CCV | | 32937 | | 44706 | |
| **ISC** | | | 34491 | | 43455 |
| IB | | | 33420 | | 42585 |
| 5386102:FZJ934-01 | | | 32849 | | 45154 |
| CCV | | | 35453 | | 44102 |

## INJECTION INTERNAL STANDARD PEAK AREAS

| Sample Name | Analyte | 13C9-PFDA |
|---|---|---|
| | Mass labeled IS | STD 4 |
| | IS Area | 34558 |
| | | IS Peak Area |
| STD 1 | | 33632 |
| STD 2 | | 34091 |
| STD 3 | | 33520 |
| STD 4 | | 34558 |
| STD 5 | | 32642 |
| STD 6 | | 32000 |
| IB | | 32617 |
| ICV | | 35298 |
| ISC | | 34350 |
| 5386102:BLANK | | 33885 |
| 5386102:SPIKE | | 33412 |
| 5386102:MTRX SPK | | 31685 |
| 5386102:MTRX SPK:D1 | | 31716 |
| IB | | 32431 |
| 5386102:FZA801-01 | | 32722 |
| 5386102:FZA802-01 | | 45409 |
| 5386102:FZA803-01 | | 37497 |
| 5386102:FZA804-01 | | 33884 |
| 5386102:FZA805-01 | | 32429 |
| 5386102:FZA806-01 | | 29837 |
| 5386102:FZH328-01 | | 31315 |
| 5386102:FZH329-01 | | 30665 |
| 5386102:FZH330-01 | | 31697 |
| 5386102:FZH335-01 | | 30947 |
| CCV | | 35131 |
| 5386102:FZH344-01 | | 31668 |
| 5386102:FZH345-01 | | 33239 |
| 5386102:FZH346-01 | | 32946 |
| 5386102:FZH347-01 | | 32447 |
| 5386102:FZH348-01 | | 31093 |
| 5386102:FZJ934-01 | | 34319 |
| CCV | | 35154 |

## INJECTION INTERNAL STANDARD PEAK AREAS

| Sample Name | Analyte | 13C6-PFHxA | 13C9-PFDA |
|---|---|---|---|
| | Mass labeled IS | STD 4 | STD 4 |
| | IS Area | 21649 | 28437 |
| | | IS Peak Area | IS Peak Area |
| STD 1 | | 21986 | 30410 |
| STD 2 | | 20032 | 26332 |
| STD 3 | | 22277 | 30779 |
| STD 4 | | 21649 | 28437 |
| STD 5 | | 20825 | 26760 |
| STD 6 | | 21682 | 28751 |
| IB | | 22297 | 29387 |
| ICV | | 22492 | 30514 |
| ISC | | 24034 | 32777 |
| 5389177:BLANK | | 22966 | 30416 |
| 5389177:SPIKE | | 23803 | 30268 |
| 5389177:SPIKE:D1 | | 22196 | 28195 |
| 5389177:FZA807-01 | | 22530 | 29719 |
| 5389177:FZA808-01 | | 22142 | 29462 |
| 5389177:FZA809-01 | | 21360 | 26718 |
| 5389177:FZH324-01:100x | | 22416 | 30180 |
| 5389177:FZH324-01:10x | | 21770 | 29401 |
| IB | | 22580 | 27966 |
| 5389177:FZH325-01:100x | | 22961 | 30341 |
| 5389177:FZH325-01:10x | | 22336 | 29662 |
| IB | | 22526 | 29513 |
| 5389177:FZJ938-01 | | 20849 | 28242 |
| 5389177:FZJ941-01:10x | | 23138 | 29182 |
| 5389177:FZJ941-01 | | 22287 | 28837 |
| IB | | 23136 | 29942 |
| CCV | | 22921 | 30245 |
| 5389177:FZJ953-01:50x | | 22621 | 30273 |
| 5389177:FZJ953-01:10x | | 22180 | 30261 |
| IB | | 22158 | 29196 |
| 5389177:FZJ954-01:25x | | 22380 | 29980 |
| 5389177:FZJ954-01:5x | | 22050 | 29672 |
| IB | | 23315 | 30723 |
| CCV | | 23371 | 30394 |

## INJECTION INTERNAL STANDARD PEAK AREAS

| Sample Name | Analyte | 13C9-PFDA |
|---|---|---|
| | Mass labeled IS | STD 4 |
| | IS Area | 22636 |
| | | IS Peak Area |
| STD 1 | | 24326 |
| STD 2 | | 21526 |
| STD 3 | | 23563 |
| STD 4 | | 22636 |
| STD 5 | | 21784 |
| STD 6 | | 20928 |
| IB | | 22354 |
| ICV | | 21894 |
| ISC | | 24330 |
| 5389177:BLANK | | 22583 |
| 5389177:SPIKE | | 22763 |
| 5389177:SPIKE:D1 | | 21014 |
| 5389177:FZA807-01 | | 22315 |
| 5389177:FZA808-01 | | 22445 |
| 5389177:FZA809-01 | | 20946 |
| 5389177:FZH324-01:100x | | 21763 |
| 5389177:FZH324-01:10x | | 21395 |
| IB | | 22275 |
| 5389177:FZH325-01:100x | | 22516 |
| 5389177:FZH325-01:10x | | 22348 |
| IB | | 21982 |
| 5389177:FZJ938-01 | | 21039 |
| 5389177:FZJ941-01:10x | | 22106 |
| 5389177:FZJ941-01 | | 21225 |
| IB | | 22490 |
| CCV | | 22437 |
| 5389177:FZJ953-01:50x | | 22335 |
| 5389177:FZJ953-01:10x | | 22112 |
| IB | | 22057 |
| 5389177:FZJ954-01:25x | | 22837 |
| 5389177:FZJ954-01:5x | | 22412 |
| IB | | 22271 |
| CCV | | 22407 |

## INJECTION INTERNAL STANDARD PEAK AREAS

| Sample Name | Analyte | 13C6-PFHxA | 13C6-PFHxA | 13C9-PFDA | 13C9-PFDA |
|---|---|---|---|---|---|
| | Mass labeled IS | STD 4 | ISC/CCV | STD 4 | ISC/CCV |
| | IS Area | 22891 | 28040 | 22554 | 32416 |
| | | IS Peak Area | IS Peak Area | IS Peak Area | IS Peak Area |
| STD 1 | | 25716 | | 25927 | |
| STD 2 | | 25017 | | 24969 | |
| STD 3 | | 25568 | | 25417 | |
| STD 4 | | 22891 | | 22554 | |
| STD 5 | | 23972 | | 22966 | |
| STD 6 | | 23959 | | 24246 | |
| IB | | 25225 | | 26065 | |
| ICV | | 25213 | | 25421 | |
| ISC | | 25284 | | 26238 | |
| 5396699:BLANK | | 23672 | | 24303 | |
| 5396699:SPIKE | | 24933 | | 24971 | |
| 5396699:MTRX SPK | | 21172 | | 23199 | |
| 5396699:MTRX SPK:D1 | | 21284 | | 23790 | |
| 5396699:FZA783-01 | | 19505 | | 20364 | |
| 5396699:FZA784-01 | | 20959 | | 21739 | |
| 5396699:FZA785-01 | | 24872 | | 24437 | |
| 5396699:FZA786-01 | | 20657 | | 23166 | |
| 5396699:FZA788-01 | | 24625 | | 26438 | |
| 5396699:FZA789-01 | | 25529 | | 26327 | |
| 5396699:FZA790-01 | | 23783 | | 23035 | |
| 5396699:FZA791-01 | | 25766 | | 26734 | |
| 5396699:FZA792-01 | | 26857 | | 27684 | |
| 5396699:FZA802-01 | | 24222 | | 25076 | |
| CCV | | 23327 | | 24750 | |
| 5396699:FZH332-01 | | 24693 | | 26857 | |
| 5396699:FZH334-01:10x | | 22182 | | 23286 | |
| 5396699:FZH336-01 | | 24643 | | 26577 | |
| 5396699:FZH338-01 | | 21697 | | 22356 | |
| 5396699:FZH339-01 | | 21949 | | 22519 | |
| 5396699:FZH340-01 | | 23038 | | 23244 | |
| 5396699:FZH341-01 | | 25204 | | 27193 | |
| 5396699:FZH342-01 | | 22023 | | 23878 | |
| 5396699:FZH343-01 | | 23186 | | 24293 | |
| 5396699:FZJ934-01 | | 26090 | | 26756 | |
| CCV | | 23287 | | 24591 | |
| CCV | | 22514 | | 24736 | |
| **ISC** | | | 28040 | | 32416 |
| 5396699:FZA802-01:R | | | 25069 | | 28934 |
| CCV | | | 24438 | | 28392 |

## INJECTION INTERNAL STANDARD PEAK AREAS

| Sample Name | Analyte | 13C9-PFDA |
|---|---|---|
| | Mass labeled IS | STD 4 |
| | IS Area | 25796 |
| | | IS Peak Area |
| STD 1 | | 27678 |
| STD 2 | | 27671 |
| STD 3 | | 27255 |
| STD 4 | | 25796 |
| STD 5 | | 26388 |
| STD 6 | | 27400 |
| IB | | 27800 |
| ICV | | 28101 |
| ISC | | 28624 |
| 5396699:BLANK | | 27095 |
| 5396699:SPIKE | | 28179 |
| 5396699:MTRX SPK | | 26043 |
| 5396699:MTRX SPK:D1 | | 26287 |
| 5396699:FZA783-01 | | 23363 |
| 5396699:FZA784-01 | | 23860 |
| 5396699:FZA785-01 | | 27890 |
| 5396699:FZA786-01 | | 25662 |
| 5396699:FZA788-01 | | 27993 |
| 5396699:FZA789-01 | | 28087 |
| 5396699:FZA790-01 | | 26220 |
| 5396699:FZA791-01 | | 29188 |
| 5396699:FZA792-01 | | 30529 |
| 5396699:FZA802-01 | | 27559 |
| CCV | | 26628 |
| 5396699:FZH332-01 | | 29100 |
| 5396699:FZH334-01:10x | | 25375 |
| 5396699:FZH336-01 | | 28742 |
| 5396699:FZH338-01 | | 25425 |
| 5396699:FZH339-01 | | 25622 |
| 5396699:FZH340-01 | | 25495 |
| 5396699:FZH341-01 | | 28358 |
| 5396699:FZH342-01 | | 26611 |
| 5396699:FZH343-01 | | 26091 |
| 5396699:FZJ934-01 | | 28945 |
| CCV | | 26549 |

Maxxam Job #: B818419
Report Date: 2018/03/01

Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: AG

## QUALITY ASSURANCE REPORT

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 5383466 | M_G | Matrix Spike(FZA786) | 13C2-Perfluorodecanoic acid | 2018/02/06 | | 85 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/06 | | 92 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/06 | | 87 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/06 | | 102 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/06 | | 101 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/06 | | 97 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/06 | | 100 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/06 | | 104 | % | 50 - 150 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/06 | | 83 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/06 | | 87 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/06 | | 92 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/06 | | 88 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/06 | | 93 | % | 72 - 131 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/06 | | 96 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/06 | | 102 | % | 71 - 133 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/06 | | 96 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/06 | | 95 | % | 72 - 131 |
| 5383466 | M_G | Matrix Spike DUP(FZA786) | 13C2-Perfluorodecanoic acid | 2018/02/06 | | 104 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/06 | | 97 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/06 | | 97 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/06 | | 103 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/06 | | 99 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/06 | | 105 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/06 | | 101 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/06 | | 102 | % | 50 - 150 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/06 | | 96 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/06 | | 94 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/06 | | 93 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/06 | | 96 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/06 | | 97 | % | 72 - 131 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/06 | | 102 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/06 | | 95 | % | 71 - 133 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/06 | | 94 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/06 | | 109 | % | 72 - 131 |
| 5383466 | M_G | MS/MSD RPD | Perfluorobutane Sulfonate (PFBS) | 2018/02/06 | 14 | | % | 30 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/06 | 8.1 | | % | 30 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/06 | 0.89 | | % | 30 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/06 | 8.8 | | % | 30 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/06 | 3.5 | | % | 30 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/06 | 5.8 | | % | 30 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/06 | 7.3 | | % | 30 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/06 | 2.1 | | % | 30 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/06 | 13 | | % | 30 |
| 5383466 | M_G | Spiked Blank | 13C2-Perfluorodecanoic acid | 2018/02/06 | | 103 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/06 | | 90 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/06 | | 122 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/06 | | 92 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/06 | | 88 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/06 | | 90 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/06 | | 97 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/06 | | 89 | % | 50 - 150 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/06 | | 100 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/06 | | 94 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/06 | | 89 | % | 74 - 129 |


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## QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/06 | | 97 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/06 | | 93 | % | 72 - 131 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/06 | | 72 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/06 | | 83 | % | 71 - 133 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/06 | | 97 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/06 | | 101 | % | 72 - 131 |
| 5383466 | M_G | Method Blank | 13C2-Perfluorodecanoic acid | 2018/02/06 | | 85 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/06 | | 106 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/06 | | 55 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/06 | | 109 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/06 | | 104 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/06 | | 107 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/06 | | 104 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/06 | | 104 | % | 50 - 150 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/06 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/06 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/06 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/06 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/06 | 0.018 U, LOD=0.018 | | ug/L | |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/06 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/06 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/06 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/06 | 0.015 U, LOD=0.015 | | ug/L | |
| 5386102 | M_G | Matrix Spike | 13C2-Perfluorodecanoic acid | 2018/02/08 | | 80 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/08 | | 70 | % | 50 - 150 |
| NOT SAMPLE IN SDG | | | 13C2-Perfluorohexanoic acid | 2018/02/08 | | 84 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/08 | | 43 (1) | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/08 | | 74 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/08 | | 82 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/08 | | 86 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/08 | | 85 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/08 | | 86 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/08 | | 85 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/08 | | 78 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/08 | | 82 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/08 | | 95 | % | 73 - 128 |
| | | | MeFOSAA | 2018/02/08 | | 102 | % | 77 - 127 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/08 | | 112 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/08 | | 98 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/08 | | 96 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/08 | | 104 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/08 | | 95 | % | 72 - 131 |
| | | | Perfluorotetradecanoic Acid | 2018/02/08 | | 155 (2) | % | 70 - 134 |
| | | | Perfluorotridecanoic Acid | 2018/02/08 | | 158 (2) | % | 67 - 143 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/08 | | 98 | % | 71 - 133 |


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## QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/08 | | 98 | % | 71 - 133 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/08 | | 106 | % | 71 - 131 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/08 | | 92 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/08 | | 91 | % | 72 - 131 |
| 5386102 | M_G | Matrix Spike DUP | 13C2-Perfluorodecanoic acid | 2018/02/08 | | 77 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/08 | | 75 | % | 50 - 150 |
| NOT SAMPLE IN SDG | | | 13C2-Perfluorohexanoic acid | 2018/02/08 | | 84 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/08 | | 66 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/08 | | 75 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/08 | | 84 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/08 | | 91 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/08 | | 81 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/08 | | 75 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/08 | | 103 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/08 | | 76 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/08 | | 75 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/08 | | 104 | % | 73 - 128 |
| | | | MeFOSAA | 2018/02/08 | | 100 | % | 77 - 127 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/08 | | 101 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/08 | | 98 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/08 | | 99 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/08 | | 91 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/08 | | 104 | % | 72 - 131 |
| | | | Perfluorotetradecanoic Acid | 2018/02/08 | | 105 | % | 70 - 134 |
| | | | Perfluorotridecanoic Acid | 2018/02/08 | | 112 | % | 67 - 143 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/08 | | 101 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/08 | | 100 | % | 71 - 133 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/08 | | 93 | % | 71 - 131 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/08 | | 96 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/08 | | 87 | % | 72 - 131 |
| 5386102 | M_G | MS/MSD RPD | EtFOSAA | 2018/02/08 | 9.1 | | % | 30 |
| | | | MeFOSAA | 2018/02/08 | 1.8 | | % | 30 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/08 | 11 | | % | 30 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/08 | 0.038 | | % | 30 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/08 | 3.0 | | % | 30 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/08 | 13 | | % | 30 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/08 | 9.4 | | % | 30 |
| | | | Perfluorotetradecanoic Acid | 2018/02/08 | 38 (3) | | % | 30 |
| | | | Perfluorotridecanoic Acid | 2018/02/08 | 34 (3) | | % | 30 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/08 | 3.2 | | % | 30 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/08 | 2.3 | | % | 30 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/08 | 13 | | % | 30 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/08 | 4.0 | | % | 30 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/08 | 4.7 | | % | 30 |
| 5386102 | M_G | Spiked Blank | 13C2-Perfluorodecanoic acid | 2018/02/08 | | 64 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/08 | | 59 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/08 | | 77 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/08 | | 63 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/08 | | 66 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/08 | | 76 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/08 | | 71 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/08 | | 71 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/08 | | 72 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/08 | | 73 | % | 50 - 150 |


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## QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| | | | D3-MeFOSAA | 2018/02/08 | | 68 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/08 | | 69 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/08 | | 98 | % | 73 - 128 |
| | | | MeFOSAA | 2018/02/08 | | 98 | % | 77 - 127 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/08 | | 117 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/08 | | 98 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/08 | | 97 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/08 | | 110 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/08 | | 106 | % | 72 - 131 |
| | | | Perfluorotetradecanoic Acid | 2018/02/08 | | 102 | % | 70 - 134 |
| | | | Perfluorotridecanoic Acid | 2018/02/08 | | 104 | % | 67 - 143 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/08 | | 97 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/08 | | 111 | % | 71 - 133 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/08 | | 113 | % | 71 - 131 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/08 | | 105 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/08 | | 103 | % | 72 - 131 |
| 5386102 | M_G | Method Blank | 13C2-Perfluorodecanoic acid | 2018/02/08 | | 58 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/08 | | 58 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/08 | | 71 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/08 | | 54 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/08 | | 62 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/08 | | 67 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/08 | | 74 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/08 | | 65 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/08 | | 63 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/08 | | 72 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/08 | | 61 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/08 | | 59 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/08 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | MeFOSAA | 2018/02/08 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/08 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/08 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/08 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/08 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/08 | 0.018 U, LOD=0.018 | | ug/L | |
| | | | Perfluorotetradecanoic Acid | 2018/02/08 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorotridecanoic Acid | 2018/02/08 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/08 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/08 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/08 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/08 | 0.010 U, LOD=0.010 | | ug/L | |


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## QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/08 | 0.015 U, LOD=0.015 | | ug/L | |
| 5389177 | M_G | Spiked Blank | 13C2-Perfluorodecanoic acid | 2018/02/09 | | 86 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/09 | | 80 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/09 | | 87 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/09 | | 78 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/09 | | 92 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/09 | | 87 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/09 | | 82 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/09 | | 84 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/09 | | 86 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/09 | | 84 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/09 | | 81 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/09 | | 76 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/09 | | 100 | % | 73 - 128 |
| | | | MeFOSAA | 2018/02/09 | | 92 | % | 77 - 127 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/09 | | 101 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/09 | | 94 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/09 | | 95 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/09 | | 98 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/09 | | 97 | % | 72 - 131 |
| | | | Perfluorotetradecanoic Acid | 2018/02/09 | | 100 | % | 70 - 134 |
| | | | Perfluorotridecanoic Acid | 2018/02/09 | | 103 | % | 67 - 143 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/09 | | 98 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/09 | | 100 | % | 71 - 133 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/09 | | 98 | % | 71 - 131 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/09 | | 101 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/09 | | 96 | % | 72 - 131 |
| 5389177 | M_G | Spiked Blank DUP | 13C2-Perfluorodecanoic acid | 2018/02/09 | | 91 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/09 | | 80 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/09 | | 98 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/09 | | 76 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/09 | | 91 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/09 | | 94 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/09 | | 89 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/09 | | 94 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/09 | | 90 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/09 | | 91 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/09 | | 82 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/09 | | 77 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/09 | | 101 | % | 73 - 128 |
| | | | MeFOSAA | 2018/02/09 | | 91 | % | 77 - 127 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/09 | | 102 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/09 | | 95 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/09 | | 94 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/09 | | 96 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/09 | | 102 | % | 72 - 131 |
| | | | Perfluorotetradecanoic Acid | 2018/02/09 | | 103 | % | 70 - 134 |
| | | | Perfluorotridecanoic Acid | 2018/02/09 | | 102 | % | 67 - 143 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/09 | | 98 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/09 | | 97 | % | 71 - 133 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/09 | | 96 | % | 71 - 131 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/09 | | 98 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/09 | | 93 | % | 72 - 131 |


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## QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 5389177 | M_G | RPD | EtFOSAA | 2018/02/09 | 1.6 | | % | 30 |
| | | | MeFOSAA | 2018/02/09 | 1.6 | | % | 30 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/09 | 0.84 | | % | 30 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/09 | 0.67 | | % | 30 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/09 | 1.8 | | % | 30 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/09 | 2.1 | | % | 30 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/09 | 5.8 | | % | 30 |
| | | | Perfluorotetradecanoic Acid | 2018/02/09 | 2.6 | | % | 30 |
| | | | Perfluorotridecanoic Acid | 2018/02/09 | 0.74 | | % | 30 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/09 | 0.62 | | % | 30 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/09 | 3.0 | | % | 30 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/09 | 2.0 | | % | 30 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/09 | 2.7 | | % | 30 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/09 | 2.8 | | % | 30 |
| 5389177 | M_G | Method Blank | 13C2-Perfluorodecanoic acid | 2018/02/09 | | 79 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/09 | | 76 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/09 | | 92 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/09 | | 80 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/09 | | 78 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/09 | | 93 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/09 | | 86 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/09 | | 96 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/09 | | 87 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/09 | | 93 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/09 | | 76 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/09 | | 72 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/09 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | MeFOSAA | 2018/02/09 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/09 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/09 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/09 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/09 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/09 | 0.018 U, LOD=0.018 | | ug/L | |
| | | | Perfluorotetradecanoic Acid | 2018/02/09 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorotridecanoic Acid | 2018/02/09 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/09 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/09 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/09 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/09 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/09 | 0.015 U, LOD=0.015 | | ug/L | |


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## QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 5396699 | AD9 | Matrix Spike(FZA786) | 13C2-Perfluorodecanoic acid | 2018/02/15 | | 118 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/15 | | 109 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/15 | | 120 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/15 | | 103 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/15 | | 120 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/15 | | 129 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/15 | | 130 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/15 | | 132 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/15 | | 128 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/15 | | 128 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/15 | | 119 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/15 | | 118 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/15 | | 82 | % | 73 - 128 |
| | | | MeFOSAA | 2018/02/15 | | 84 | % | 77 - 127 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/15 | | 78 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/15 | | 79 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/15 | | 81 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/15 | | 77 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/15 | | 81 | % | 72 - 131 |
| | | | Perfluorotetradecanoic Acid | 2018/02/15 | | 86 | % | 70 - 134 |
| | | | Perfluorotridecanoic Acid | 2018/02/15 | | 93 | % | 67 - 143 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/15 | | 81 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/15 | | 86 | % | 71 - 133 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/15 | | 88 | % | 71 - 131 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/15 | | 78 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/15 | | 79 | % | 72 - 131 |
| 5396699 | AD9 | Matrix Spike DUP(FZA786) | 13C2-Perfluorodecanoic acid | 2018/02/15 | | 103 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/15 | | 101 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/15 | | 113 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/15 | | 90 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/15 | | 103 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/15 | | 112 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/15 | | 114 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/15 | | 126 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/15 | | 115 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/15 | | 126 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/15 | | 115 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/15 | | 111 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/15 | | 87 | % | 73 - 128 |
| | | | MeFOSAA | 2018/02/15 | | 86 | % | 77 - 127 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/15 | | 77 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/15 | | 89 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/15 | | 84 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/15 | | 80 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/15 | | 90 | % | 72 - 131 |
| | | | Perfluorotetradecanoic Acid | 2018/02/15 | | 95 | % | 70 - 134 |
| | | | Perfluorotridecanoic Acid | 2018/02/15 | | 101 | % | 67 - 143 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/15 | | 93 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/15 | | 91 | % | 71 - 133 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/15 | | 89 | % | 71 - 131 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/15 | | 80 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/15 | | 92 | % | 72 - 131 |
| 5396699 | AD9 | MS/MSD RPD | EtFOSAA | 2018/02/15 | 5.5 | | % | 30 |
| | | | MeFOSAA | 2018/02/15 | 3.2 | | % | 30 |


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## QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/15 | 1.1 | | % | 30 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/15 | 11 | | % | 30 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/15 | 3.2 | | % | 30 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/15 | 4.7 | | % | 30 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/15 | 11 | | % | 30 |
| | | | Perfluorotetradecanoic Acid | 2018/02/15 | 9.7 | | % | 30 |
| | | | Perfluorotridecanoic Acid | 2018/02/15 | 7.8 | | % | 30 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/15 | 14 | | % | 30 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/15 | 5.5 | | % | 30 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/15 | 1.3 | | % | 30 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/15 | 2.8 | | % | 30 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/15 | 16 | | % | 30 |
| 5396699 | AD9 | Spiked Blank | 13C2-Perfluorodecanoic acid | 2018/02/15 | | 108 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/15 | | 95 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/15 | | 110 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/15 | | 100 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/15 | | 105 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/15 | | 117 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/15 | | 104 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/15 | | 105 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/15 | | 109 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/15 | | 104 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/15 | | 97 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/15 | | 92 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/15 | | 81 | % | 73 - 128 |
| | | | MeFOSAA | 2018/02/15 | | 82 | % | 77 - 127 |
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/15 | | 79 | % | 65 - 135 |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/15 | | 78 | % | 73 - 129 |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/15 | | 82 | % | 74 - 129 |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/15 | | 84 | % | 67 - 132 |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/15 | | 84 | % | 72 - 131 |
| | | | Perfluorotetradecanoic Acid | 2018/02/15 | | 75 | % | 70 - 134 |
| | | | Perfluorotridecanoic Acid | 2018/02/15 | | 86 | % | 67 - 143 |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/15 | | 88 | % | 71 - 133 |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/15 | | 86 | % | 71 - 133 |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/15 | | 89 | % | 71 - 131 |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/15 | | 92 | % | 71 - 130 |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/15 | | 88 | % | 72 - 131 |
| 5396699 | AD9 | Method Blank | 13C2-Perfluorodecanoic acid | 2018/02/15 | | 94 | % | 50 - 150 |
| | | | 13C2-Perfluorododecanoic acid | 2018/02/15 | | 69 | % | 50 - 150 |
| | | | 13C2-Perfluorohexanoic acid | 2018/02/15 | | 86 | % | 50 - 150 |
| | | | 13C2-perfluorotetradecanoic acid | 2018/02/15 | | 73 | % | 50 - 150 |
| | | | 13C2-Perfluoroundecanoic acid | 2018/02/15 | | 78 | % | 50 - 150 |
| | | | 13C4-Perfluoroheptanoic acid | 2018/02/15 | | 105 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanesulfonate | 2018/02/15 | | 78 | % | 50 - 150 |
| | | | 13C4-Perfluorooctanoic acid | 2018/02/15 | | 114 | % | 50 - 150 |
| | | | 13C5-Perfluorononanoic acid | 2018/02/15 | | 103 | % | 50 - 150 |
| | | | 18O2-Perfluorohexanesulfonate | 2018/02/15 | | 54 | % | 50 - 150 |
| | | | D3-MeFOSAA | 2018/02/15 | | 60 | % | 50 - 150 |
| | | | D5-EtFOSAA | 2018/02/15 | | 58 | % | 50 - 150 |
| | | | EtFOSAA | 2018/02/15 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | MeFOSAA | 2018/02/15 | 0.010 U, LOD=0.010 | | ug/L | |


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## QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC Batch | Init | QC Type | Parameter | Date Analyzed | Value | % Recovery | UNITS | QC Limits |
|---|---|---|---|---|---|---|---|---|
| | | | Perfluorobutane Sulfonate (PFBS) | 2018/02/15 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluoroheptanoic Acid (PFHpA) | 2018/02/15 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorohexanoic Acid (PFHxA) | 2018/02/15 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorohexane Sulfonate (PFHxS) | 2018/02/15 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorononanoic Acid (PFNA) | 2018/02/15 | 0.018 U, LOD=0.018 | | ug/L | |
| | | | Perfluorotetradecanoic Acid | 2018/02/15 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorotridecanoic Acid | 2018/02/15 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluoroundecanoic Acid (PFUnA) | 2018/02/15 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorodecanoic Acid (PFDA) | 2018/02/15 | 0.015 U, LOD=0.015 | | ug/L | |
| | | | Perfluorododecanoic Acid (PFDoA) | 2018/02/15 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluoro-n-Octanoic Acid (PFOA) | 2018/02/15 | 0.010 U, LOD=0.010 | | ug/L | |
| | | | Perfluorooctane Sulfonate (PFOS) | 2018/02/15 | 0.015 U, LOD=0.015 | | ug/L | |

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

(1) Extracted internal standard analyte recovery was below the defined lower control limit (LCL). Laboratory spiked water resulted in satisfactory recovery of the extracted internal standard analyte. When considered together, these QC data suggest that matrix interferences may be biasing the data low. Because quantitation is performed using isotope dilution techniques, any losses of the native compound that may occur during any of the sample preparation, extraction, cleanup or determinative steps will be mirrored by a similar loss of the labeled standard, and as such can be accounted for and corrected. Therefore, the quantification of these target compounds is not affected by the low extracted internal standard analyte recovery.

(2) Recovery of the matrix spike was above the upper control limit. Laboratory spiked water resulted in satisfactory recovery of the compound of interest. When considered together, these QC data suggest that matrix interferences may be biasing the data high. For results that were not detected (ND), this potential bias has no impact.

(3) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.


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# TUNE CHECK

**Instrument:** Agilent 6470 LC/MS/MS

**Instrument Serial Number:** SG1611G001

**Maxxam Instrument Identification:** LCMS04

**Mass Calibration Performed:** July 7, 2017

**Tune Check Performed:** July 10 & 11, 2017


Mass Assignment Reference Table ____ Page 2

Analyte Precursor Ion Verification ____ Page 4

Analyte Product Ion Verification ____ Page 31

Extracted and Injection Internal Standard Precursor Ion Verification ____ Page 59

Extracted and Injection Internal Standard Product Ion Verification ____ Page 83


Reviewed by:

Adam Robinson, Supervisor – Liquid Chromatography

July 12/2017
Date

# Mass Assignments – Analytes, Extracted Internal Standards and Injection Internal Standards

| Compound | Abbreviation | Precursor Ion (m/z) | Precursor Ion Formula | Quant Ion (m/z) | Quantitation Ion Formula | Confirmation Ion (m/z) | Confirmation Ion Formula |
|---|---|---|---|---|---|---|---|
| **Native Analytes** | | | | | | | |
| Perfluorobutanoic acid | PFBA | 212.9 | $[CF_3(CF_2)_2CO_2]^-$ | 169.0 | $[CF_3(CF_2)_2]^-$ | [1] N/A | N/A |
| Perfluorobutanesulfonate | PFBS | 298.9 | $[CF_3(CF_2)_3SO_3]^-$ | 79.9 | $[SO_3]^-$ | 98.9 | $[FSO_3]^-$ |
| Perfluoropentanoic acid | PFPeA | 262.9 | $[CF_3(CF_2)_3CO_2]^-$ | 218.9 | $[CF_3(CF_2)_3]^-$ | [1] N/A | N/A |
| Perfluorohexanoic acid | PFHxA | 313.0 | $[CF_3(CF_2)_4CO_2]^-$ | 269.0 | $[CF_3(CF_2)_4]^-$ | 119.0 | $[CF_3(CF_2)]^-$ |
| Perfluorohexanesulfonate | PFHxS | 398.9 | $[CF_3(CF_2)_5SO_3]^-$ | 79.9 | $[SO_3]^-$ | 98.9 | $[FSO_3]^-$ |
| Perfluoroheptanoic acid | PFHpA | 363.0 | $[CF_3(CF_2)_5CO_2]^-$ | 319.0 | $[CF_3(CF_2)_5]^-$ | 169.2 | $[CF_3(CF_2)_2]^-$ |
| Perfluoroheptanesulfonate | PFHpS | 448.9 | $[CF_3(CF_2)_6SO_3]^-$ | 79.9 | $[SO_3]^-$ | 99.0 | $[FSO_3]^-$ |
| Perfluorooctanoic acid | PFOA | 413.1 | $[CF_3(CF_2)_6CO_2]^-$ | 369.0 | $[CF_3(CF_2)_6]^-$ | 169.0 | $[CF_3(CF_2)_2]^-$ |
| Perfluorooctanesulfonate | PFOS | 498.8 | $[CF_3(CF_2)_7SO_3]^-$ | 79.9 | $[SO_3]^-$ | 98.9 | $[FSO_3]^-$ |
| Perfluorononanoic acid | PFNA | 462.9 | $[CF_3(CF_2)_7CO_2]^-$ | 419.0 | $[CF_3(CF_2)_7]^-$ | 219.1 | $[CF_3(CF_2)_3]^-$ |
| Perfluorodecanoic acid | PFDA | 513.0 | $[CF_3(CF_2)_8CO_2]^-$ | 469.1 | $[CF_3(CF_2)_8]^-$ | 218.9 | $[CF_3(CF_2)_3]^-$ |
| Perfluorodecanesulfonate | PFDS | 598.9 | $[CF_3(CF_2)_9SO_3]$- | 79.9 | $[SO_3]^-$ | 98.8 | $[FSO_3]^-$ |
| Perfluoroundecanoic acid | PFUnA | 562.9 | $[CF_3(CF_2)_9CO_2]^-$ | 519.0 | $[CF_3(CF_2)_9]^-$ | 269.2 | $[CF_3(CF_2)_4]^-$ |
| Perfluorododecanoic acid | PFDoA | 612.9 | $[CF_3(CF_2)_{10}CO_2]^-$ | 569.0 | $[CF_3(CF_2)_{10}]^-$ | 319.0 | $[CF_3(CF_2)_5]^-$ |
| Perfluorotridecanoic acid | PFTrDA | 663.0 | $[CF_3(CF_2)_{11}CO_2]^-$ | 619.0 | $[CF_3(CF_2)_{11}]^-$ | 318.9 | $[CF_3(CF_2)_5]^-$ |
| Perfluorotetradecanoic acid | PFTeDA | 713.0 | $[CF_3(CF_2)_{12}CO_2]^-$ | 669.0 | $[CF_3(CF_2)_{12}]^-$ | 319.2 | $[CF_3(CF_2)_5]^-$ |
| Perfluorooctane sulfonamide | PFOSA | 497.9 | $[CF_3(CF_2)_7SO_2NH]^-$ | 78.0 | $[SO_2N]^-$ | 478.0 | $[(CF_2)_8SO_2N]^-$ |
| N-methylperfluorooctane sulfonamide | MeFOSA | 511.9 | $[CF_3(CF_2)_7SO_2N(CH_3)]^-$ | 169.0 | $[CF_3(CF_2)_2]^-$ | 219.0 | $[CF_3(CF_2)_3]^-$ |
| N-ethylperfluorooctane sulfonamide | EtFOSA | 526.0 | $[CF_3(CF_2)_7SO_2N(C_2H_5)]^-$ | 169.0 | $[CF_3(CF_2)_2]^-$ | 219.0 | $[CF_3(CF_2)_3]^-$ |
| N-methylperfluorooctane sulfonamidoethanol | MeFOSE | 616.0 | $[CF_3(CF_2)_7SO_2N(CH_3)C_2H_4OH{\cdot}CH_3CO_2]^-$ | 59.0 | $[CH_3CO_2]^-$ | [1] N/A | N/A |
| N-ethylperfluorooctane sulfonamidoethanol | EtFOSE | 630.0 | $[CF_3(CF_2)_7SO_2N(C_2H_5)C_2H_4OH{\cdot}CH_3CO_2]^-$ | 59.0 | $[CH_3CO_2]^-$ | [1] N/A | N/A |
| N-methylperfluorooctanesufonamidoacetic acid | MeFOSAA | 570.1 | $[CF_3(CF_2)_7SO_2N(CH_3)CH_2CO_2]^-$ | 419.1 | $[CF_3(CF_2)_7]^-$ | 483.0 | $[CF_3(CF_2)_7SO_2]^-$ |
| N-ethylperfluorooctanesufonamidoacetic acid | EtFOSAA | 584.1 | $[CF_3(CF_2)_7SO_2N(CH_2CH_3)CH_2CO_2]^-$ | 419.1 | $[CF_3(CF_2)_7]^-$ | 483.0 | $[CF_3(CF_2)_7SO_2]^-$ |
| 6:2 Fluorotelomersulfonate | 6:2FTS | 427.0 | $[CF_3(CF_2)_5CH_2CH_2SO_3]^-$ | 407.0 | $[CF_3(CF_2)_4CFCHCH_2SO_3]^-$ | 80.9 | $[SO_2OH]^-$ |
| 8:2 Fluorotelomersulfonate | 8:2FTS | 526.9 | $[CF_3(CF_2)_7CH_2CH_2SO_3]^-$ | 507.0 | $[CF_3(CF_2)_6CFCHCH_2SO_3]^-$ | 80.9 | $[SO_2OH]^-$ |
| **Mass-labeled Extracted Internal Standards** | | | | | | | |
| $^{13}C_4$-Perfluorobutanoic acid | MPFBA | 216.9 | $[^{13}CF_3(^{13}CF_2)_2{}^{13}CO_2]^-$ | 172.0 | $[^{13}CF_3(^{13}CF_2)_2]^-$ | N/A | N/A |

| Compound | Abbreviation | Precursor Ion (m/z) | Precursor Ion Formula | Quant Ion (m/z) | Quantitation Ion Formula | Confirmation Ion (m/z) | Confirmation Ion Formula |
|---|---|---|---|---|---|---|---|
| $^{13}C_5$-Perfluoropentanoic acid | MPFPeA | 267.9 | $[^{13}CF_3(^{13}CF_2)_3{}^{13}CO_2]^-$ | 223.0 | $[^{13}CF_3(^{13}CF_2)_3]^-$ | N/A | N/A |
| $^{13}C_2$-Perfluorohexanoic acid | MPFHxA | 314.9 | $[CF_3(CF_2)_3(^{13}CF_2){}^{13}CO_2]^-$ | 270.0 | $[CF_3(CF_2)_3{}^{13}CF_2]^-$ | N/A | N/A |
| $^{18}O_2$-Perfluorohexanesulfonate | MPFHxS | 402.9 | $[CF_3(CF_2)_5S(^{18}O)_2O]^-$ | 84.0 | $[S(^{18}O)_2O]^-$ | N/A | N/A |
| $^{13}C_4$-Perfluoroheptanoic acid | MPFHpA | 366.9 | $[CF_3CF_2(^{13}CF_2)_3{}^{13}CO_2]^-$ | 322.0 | $[CF_3CF_2(^{13}CF_2)_4]^-$ | N/A | N/A |
| $^{13}C_4$-Perfluorooctanoic acid | MPFOA | 416.9 | $[CF_3(CF_2)_3(^{13}CF_2)_3{}^{13}CO_2]^-$ | 372.0 | $[CF_3(CF_2)_3(^{13}CF_2)_3]^-$ | N/A | N/A |
| $^{13}C_4$-Perfluorooctanesulfonate | MPFOS | 502.9 | $[CF_3(CF_2)_3(^{13}CF_2)_4SO_3]^-$ | 79.9 | $[SO_3]^-$ | N/A | N/A |
| $^{13}C_5$-Perfluorononanoic acid | MPFNA | 467.9 | $[CF_3(CF_2)_3(^{13}CF_2)_4{}^{13}CO_2]^-$ | 423.0 | $[CF_3(CF_2)_3(^{13}CF_2)_4]^-$ | N/A | N/A |
| $^{13}C_2$-Perfluorodecanoic acid | MPFDA | 514.9 | $[CF_3(CF_2)_7(^{13}CF_2){}^{13}CO_2]^-$ | 470.0 | $[CF_3(CF_2)_7{}^{13}CF_2]^-$ | N/A | N/A |
| $^{13}C_2$-Perfluoroundecanoic acid | MPFUnA | 564.9 | $[CF_3(CF_2)_8(^{13}CF_2){}^{13}CO_2]^-$ | 520.0 | $[CF_3(CF_2)_8{}^{13}CF_2]^-$ | N/A | N/A |
| $^{13}C_2$-Perfluorododecanoic acid | MPFDoA | 614.9 | $[CF_3(CF_2)_9(^{13}CF_2){}^{13}CO_2]^-$ | 570.0 | $[CF_3(CF_2)_9{}^{13}CF_2]^-$ | N/A | N/A |
| $^{13}C_2$-Perfluorotetradecanoic acid | MPFTeDA | 714.9 | $[CF_3(CF_2)_{12}(^{13}CF_2){}^{13}CO_2]^-$ | 669.9 | $[CF_3(CF_2)_{12}]^-$ | N/A | N/A |
| $^{13}C_8$-Perfluorooctane sulfonamide | MPFOSA | 505.8 | $[^{13}CF_3(^{13}CF_2)_7SO_2NH]^-$ | 77.9 | $[SO_2N]^-$ | N/A | N/A |
| N-methyl-$d_3$-perfluorooctanesulfonamide | $D_3$-MeFOSA | 514.9 | $[CF_3(CF_2)_7SO_2N(CD_3)]^-$ | 168.9 | $[CF_3(CF_2)_2]^-$ | N/A | N/A |
| N-ethyl-$d_5$-perfluorooctanesulfonamide | $D_5$-EtFOSA | 531.0 | $[CF_3(CF_2)_7SO_2N(C_2D_5)]^-$ | 168.9 | $[CF_3(CF_2)_2]^-$ | N/A | N/A |
| N-methyl-$d_3$-perfluorooctanesulfonamidoethanol-$d_4$ | $D_7$-MeFOSE | 623.1 | $[CF_3(CF_2)_7SO_2N(CD_3)CD_2CD_2OH \cdot CH_3CO_2]^-$ | 59.0 | $[CH_3CO_2]^-$ | N/A | N/A |
| N-ethyl-$d_5$-perfluorooctanesulfonamidoethanol-$d_4$ | $D_9$-EtFOSE | 639.1 | $[CF_3(CF_2)_7SO_2N(CD_2CD_3)CD_2CD_2OH \cdot CH_3CO_2]^-$ | 59.0 | $[CH_3CO_2]^-$ | N/A | N/A |
| N-methyl-$d_3$-perfluorooctanesulfonamidoacetic acid | $D_3$-MeFOSAA | 573.1 | $[CF_3(CF_2)_7SO_2N(CD_3)CH_2CO_2]^-$ | 419.1 | $[CF_3(CF_2)_7]^-$ | N/A | N/A |
| N-ethyl-$d_5$-perfluorooctanesulfonamidoacetic acid | $D_5$-EtFOSAA | 589.2 | $[CF_3(CF_2)_7SO_2N(CD_2CD_3)CH_2CO_2]^-$ | 419.0 | $[CF_3(CF_2)_7]^-$ | N/A | N/A |
| $^{13}C_2$-Fluorotelomersulfonate (6:2) | M2-6:2FTS | 429.0 | $[CF_3(CF_2)_5(^{13}CH_2)_2SO_3]^-$ | 80.9 | $[SO_2OH]^-$ | N/A | N/A |
| $^{13}C_2$-Fluorotelomersulfonate (8:2) | M2-8:2FTS | 528.9 | $[CF_3(CF_2)_7(^{13}CH_2)_2SO_3]^-$ | 80.9 | $[SO_2OH]^-$ | N/A | N/A |
| **Injection Internal Standards** | | | | | | | |
| $^{13}C_6$-Perfluorohexanoic acid | $^{13}C_6$-PFHxA | 318.9 | $[^{13}CF_3(^{13}CF_2)_4{}^{13}CO_2]^-$ | 274.0 | $[^{13}CF_3(^{13}CF_2)_4]^-$ | N/A | N/A |
| $^{13}C_9$-Perfluorodecanoic acid | $^{13}C_9$-PFDA | 521.9 | $[CF_3(^{13}CF_2)_8{}^{13}CO_2]^-$ | 477.1 | $[CF_3(^{13}CF_2)_8]^-$ | N/A | N/A |

## DoD Projects - Internal Data Validation Checklist

Run date: 2018/02/06

Worksheet # (s): 5323466

Analysis: PFOS PFOA-W

| | Primary review by the analyst - 1st 100 % analysis review | 1st 100% review yes | no | n/a | *2nd 100% review |
|---|---|---|---|---|---|
| 1 | Sample analyses meet hold time criteria | ✓ | | | |
| 2 | Analysis set-up meets method criteria | ✓ | | | |
| 3 | Tuning and correct calibration used - criteria meets method criteria | ✓ | | | |
| 4 | SQC/Control Charts updated, analysis in statistical/method control | ✓ | | | |
| 5 | Internal area counts checked (if applicable) | ✓ | | | |
| 6 | LCS, SRM are within acceptance criteria | ✓ | | | |
| 7 | Surrogate Recovery(s) is within acceptance criteria | ✓ | ✓ | | |
| 8 | Method Blank meets acceptance criteria | ✓ | | | |
| 9 | Matrix Spike recovery(s) meets acceptance criteria | ✓ | | | |
| 10 | Duplicate precision meets acceptance criteria | ✓ | | | |
| 11 | QC is documented on the run logs | ✓ | | | |
| 12 | Runs checked for carryover | ✓ | | | |
| 13 | Prep log / worksheet(s) are present, signed / dated by a prep / instrument analysts | ✓ | | | |
| 14 | Initial weights, splits, impringer volumes (where applicable) are documented | ✓ | | | |
| 15 | Standards and reagents traceable to Certificates of Analysis | ✓ | | | |
| 16 | Samples above calibration range diluted and reanalyzed | | | ✓ | |
| 17 | Dilution factors (where justified) have been checked for correctness and entered | ✓ | | | |
| 18 | Analytical observations/anomalies documented in LIMS | | | ✓ | |
| 19 | Random calculation checked and in correct units | ✓ | | | |
| 20 | If corrective actions were applied they are documented, initialed & dated | | | ✓ | |
| 21 | Manual integration – before & after data with a reason included, initialed & dated | | | ✓ | |
| 22 | Transferred data is validated in LIMS for correctness | ✓ | | | |
| 23 | Data package assembled (where required) | ✓ | | | |

Reviewed by: [illegible] Date: 2018/02/07

Comments:

| | Secondary Supervisor/Qualified Data Review Staff - 2nd 100% verification review | yes | no | n/a |
|---|---|---|---|---|
| 1 | Repeats documented and referenced | ✓ | | |
| 2 | Method and sample deviations noted, anomalies described (if applicable) | | | ✓ |
| 3 | Data and QC validated in LIMS | ✓ | | |
| 4 | Random calculation checked | ✓ | | |
| 5 | Benchsheet (s) signed and dated | ✓ | | |
| 6 | Data Package (if required) checked for completeness | ✓ | | |

Reviewed by: AD Date: 2018/02/08

Comments: All samples sent for rework for PFDoA, PFTrDA, PFTeDA due to spike failed to meet acceptance criteria. AD 2018/02/08

***Note: 2nd 100% verification review documented by secondary qualified data review***
***Primary and Secondary Internal Data Review Check must be performed by a different person***

# Worksheet Data Validation Checklist - Extractable Organics

Worksheet # | Testcode: PEOSALCM-W

| Sample Preparation | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Samples extracted within hold time | ✓ | | |
| 2 | Client sample ID verified against Lab ID (waters & oils) | | | ✓ |
| 3 | Parameter list and Client comments reviewed, (Spiking solutions matched to parameter list) | ✓ | | |
| 4 | Height of sediment or if sample was decanted, recorded on worksheet | ✓ | | |
| 5 | Method required QC processed with samples, maximum batch size = 20 client samples. | ✓ | | |
| 6 | Sample, duplicate, matrix spike appear similar, initial sample as well as final extract | ✓ | | |
| 7 | Sample weight or initial volume and extract final volume, aliquot factor clearly recorded. | ✓ | | |
| 8 | If performed any additional dilution clearly recorded | | | ✓ |
| 9 | Matrix spike / Duplicate performed on IOL samples if present | | | ✓ |
| 10 | Spiking solutions valid (haven't expired), ID and volume used clearly identified on worksheet | ✓ | | |
| 11 | Spiking process witnessed and signed off | ✓ | | |
| 12 | Extraction type recorded (N3A2B = neutral, 3 x acidic, 2 x basic) | | | ✓ |
| 13 | Sample prep deviations documented within CompliantPro as a Policy Deviation | | | ✓ |
| 14 | Job Remarks reviewed on 2nd page of worksheet. | ✓ | | |
| 15 | Worksheet and reagent tracking record completed and authorized. | ✓ | | |

Reviewed by: [illegible] | Date: 2018/02/07

Comments:

| Worksheet Approval | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Verified the position of the vials in autosampler against sequence list; signed off sequence list | | | |
| 2 | Calibration and CCV standards valid ( haven't expired) | | | |
| 3 | Initial calibration curve and DFTPP tune (if applicable) acceptable | | | |
| 4 | Continuing and Final CCV and DFTPP tune (if applicable) acceptable | | | |
| 5 | System performance check acceptable (if applicable) | | | |
| 6 | Internal standard responses acceptable | | | |
| 7 | Method blank meets acceptance criteria | | | |
| 8 | Lab Control Samples recoveries meets acceptance criteria | | | |
| 9 | Duplicate RPD meets acceptance criteria | | | |
| 10 | Matrix spike recoveries meets acceptance criteria | | | |
| 11 | Surrogate recoveries meets acceptance criteria | | | |
| 12 | Appropriate control charts updated | | | |
| 13 | Samples above calibration range diluted and reanalyzed | | | |
| 14 | Dilutions clearly documented on tracking record, inst file and verified during data upload | | | |
| 15 | Samples following high level samples checked for carryover. | | | |
| 16 | Mass spectra ion ratios acceptable for positive results, hardcopy in file. | | | |
| 17 | Analytical observations / anomalies documented | | | |
| 18 | DQW comments entered in LIMS, hardcopy in file | | | |
| 19 | Sample Prep section (above) reviewed and verified. | | | |
| 20 | WS Approval performed in LIMS | | | |

Reviewed by: | Date:

Comments:

| Worksheet Validation | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Calibration, QC and sample results reviewed and determined acceptable | | | |
| 2 | Manual integrations verified | | | |
| 3 | Random calculation checked | | | |
| 4 | Data and QC validated in LIMS | | | |
| 5 | Comments reviewed for appropriateness | | | |
| 6 | Reworks / relogs documented in file | | | |
| 7 | Worksheet signed and dated, | | | |
| 8 | Worksheet approved and validated within LIMS | | | |

Reviewed by: | Date:

Comments:

**WS# : 5383466**

Page #: 1/2

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Saturday, February 03, 2018

Assigned to : Shahbaz Ahmad

Test Code : PFOSALCM-W

Instrument Id:

Test Description : PFOS and PFOA in water by LC-MS/MS

sediment gm gm gm SAA 2018/02/03

| | Job Number | Sample Number | D | Sample ID | F | % Moisture | Wt or Vol | Final Vol | DF or AF | # Cont | Expiry Date | Test DeadLine | Criteria | Extract Date | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,5 | | MTRX SPK | 0 | PFOS FZA786-01 | | 0.2 | 125 | 3 | 1X | | | | | 2018/02/03 | 33.0 |
| 5,7 | | MTRX SPK | 1 | PFOS FZA786-01 | | 0.2 | 125 | 3 | 1X | | | | | 2018/02/03 | 34.1 |
| 5,3 | | SPIKE | | PFOS | | 0 | 125 | 3 | 1X | | | | | 2018/02/03 | 26.8 |
| 5,11 | | BLANK | | | | 0 | 125 | 3 | 1X | | | | | 2018/02/03 | 28.8 |
| 5,9 | B818419 | *FZA783-01R | | OLD-002-51A-0118 | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 31.0 |
| 5,11 | B818419 | *FZA784-01R | | OLD-002-51A-0118* | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 31.9 |
| 5,13 | B818419 | *FZA785-01R | | OLD-002-11A-0118 | | LO.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 30.3 |
| 5,15 | B818419 | *FZA786-01R | | OLD-002-03A-0118 | | 0.2 | 125 | 3 | 1X | 6 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 26.8 |
| 5,17 | B818419 | *FZA788-01R | | EB-GW-012218-1 | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 31 |
| 5,19 | B818419 | *FZA789-01R | | FB-OLD-012218-1 | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 31.3 |
| 6,1 | B818419 | *FZA790-01R | | FB-OLD-012218-2 | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 25.8 |
| 6,3 | B818419 | *FZA791-01R | | EB-WC-012218-1 | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 25.8 |
| 6,5 | B818419 | *FZA792-01R | | EB-DPT-012218-1 | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/03 | 27.9 |
| 6,7 | B819794 | *FZH336-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/03 | 34.8 |
| 6,9 | B819794 | *FZH338-01R | | [redacted] | | LO.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/03 | 25.3 |
| 6,11 | B819794 | *FZH339-01R | | [redacted] | | LO.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/03 | 27.5 |
| 6,13 | B819794 | *FZH340-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/03 | 28.3 |
| 6,15 | B819794 | *FZH341-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/03 | 28.5 |
| 6,17 | B819794 | *FZH342-01R | | [redacted] | | LO.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/03 | 35.0 |
| 6,19 | B819794 | *FZH343-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/03 | 31.8 |

SAA 2018/02/03

Remarks:

Samples extracted by: Shahbaz Ahmad SAA 2018/02/03

Instrumentation performed by: [signature] Date: 2018/02/07

Calculations performed by: AZ Date: 2018/02/07

Validated by: AD Date: 2018/02/08

| Job No. | Rep / Client Name / Remarks | Contact | Client Tier | National |
|---|---|---|---|---|
| GB818419 | SP8 Earth Toxics Inc<br>NREG. PFOSALCM-W MS/MSD required on FZA786 Level IV Package and TetraTech EDD required Project #: JM11<br>NTC Orlando | Rick Carr | Tier 5 (Enviro.) AECOM | |
| GB819794 | [redacted] | | | |

SP8 2018/02/03

| Job | Sample | Lab Comments |
|---|---|---|
| | MTRX SPK | |
| | MTRX SPK | |
| | SPIKE | |
| | BLANK | |
| B818419 | FZA783-01R | |
| B818419 | FZA784-01R | |
| B818419 | FZA785-01R | |
| B818419 | FZA786-01R | |
| B818419 | FZA788-01R | |
| B818419 | FZA789-01R | |
| B818419 | FZA790-01R | |
| B818419 | FZA791-01R | |
| B818419 | FZA792-01R | |
| B819794 | FZH336-01R | |
| B819794 | FZH338-01R | |
| B819794 | FZH339-01R | |
| B819794 | FZH340-01R | |
| B819794 | FZH341-01R | |
| B819794 | FZH342-01R | |
| B819794 | FZH343-01R | |

Folder: 20180206

| Standard | vol of MeOH | Amount Spiked | |
|---|---|---|---|
| S1 | 2825 | 25 | SK-7390 1/2 |
| S2 | 2800 | 50 | |
| S3 | 2700 | 150 | |
| S4 | 2813 | 37.5 | I-5297 |
| S5 | 2775 | 75 | |
| S6 | | | |
| ICV | 2725 | 125 | |
| ICB | 2788<br>2850 | 62.5 | I-5299 |

Worksheet Reagent Tracking Record  Worksheet # 5383466

| Surrogate/Spike solutions | √ | Solution ID # | Conc. | Volume (µL) Blk-Spk Solid | Blk-Spk Liquid | MS Solid | MS Liquid | Samples Solid | Samples Liquid |
|---|---|---|---|---|---|---|---|---|---|
| DGT Spike | | | 100 ug/mL | 60 | 30 | 60 | 30 | NA | NA |
| Diquat Dibromide | | | 50 ug/mL | NA | 350 | NA | 350 | NA | NA |
| Explosives Spiking solution A | | | 20 ug/mL | 250 | 100 | 250 | 100 | NA | NA |
| Explosives Spiking solution B | | | 20/80 ug/mL | 250 | 100 | 250 | 100 | NA | NA |
| Formaldehyde Spike | | | 100 ug/mL | 25 | 25 | 25 | 25 | NA | NA |
| Glyphosate Spike | | | 25 ug/mL | 500 | 20 | 500 | 20 | NA | NA |
| Nonylphenol Ethoxylate Spike | | | 100 ug/mL | 100 | 100 | 100 | 100 | NA | NA |
| Nonylphenol Spike | | | 10 ug/mL | 100 | 100 | 100 | 100 | NA | NA |
| Paraquat Cl Tetrahydrate | | | 20 ug/mL | NA | 125 | NA | 125 | NA | NA |
| Perchlorate Standard Spike | | | 10 ng/mL | NA | 100 | NA | 100 | NA | NA |
| Perchlorate Standard Spike | | | 500 ng/mL | 40 | NA | 40 | NA | NA | NA |
| Perchlorate O-18 Internal Standard | | | 0.10 ng/uL | 20 | 20 | 20 | 20 | 20 | 20 |
| Morpholine Second Source Working Std | | | 2500 ug/L | NA | 80 | NA | 80 | NA | NA |
| Morpholine-D8 Internal Standard | | | 10 ug/mL | NA | 50 | NA | 50 | NA | 50 |
| Steril Second Source Spiking Solution | | | NA | 20 | NA | 20 | NA | NA | NA |
| Sterilants Comp. IS Working Solution | | | 3 ug/mL | 50 | NA | 50 | NA | 50 | NA |
| Comp. PFC Working Solution A | ✓ | F-5299 1/3 | 1ug/mL | 75 | 21 62.5 | 75 | 21 62.5 | NA | NA |
| PFC Internal Standard Solution | ✓ | SF 6765 2/4 SMB | 50/125 ng/mL | 200 | 100 150 | 200 | 100 150 | 200 | 100/150 |
| PFC Injection IS | ✓ | SF 6716 3/4 SMB | 400 ng/mL | 20 | 20 | 20 | 20 | 20 | 20 |
| ICV | ✓ | F 5299 1/3 | | | | | | | |

| Solvent/Reagent | √ | Lot No. | Date Opened | Solvent/Reagent | √ | Lot No. | Date Opened/ Prepared |
|---|---|---|---|---|---|---|---|
| DCM | | | | 50% NaOH | | | |
| Ottawa Sand | | | | o-Phosphoric Acid | | | |
| Methanol | ✓ | SHBJ545 | 2018/02/02 | Borax | | | |
| 2-Propanol (IPA) | | | | Calcium Chloride | | | |
| Acetonitrile | | | | EDTA | | | |
| Sodium Sulfate | | | | Phosphate Buffer | | | |
| 70:30 Methanol: Water | | | | Sodium Thiosulphate | | | |
| 60:40 Water: Methanol | | | | DNPH | | | |
| DCM:Ethyl Ether (75:25) | | | | FMOC | | | |
| Hexane:IPA (98:2) | | | | 5M Acetate Buffer | | | |
| 2% Formic Acid | ✓ | PRLRE | 108-334 | 0.2% $NH_4OH$ | ✓ | PRLRE | 108-337 |
| 0.2% Formic Acid | | | | Leachate Fluid | | | |
| 0.05M KOH | | | | Reagent Water | ✓ | 57297 | 2018/2/2 |
| 0.05M HCl | | | | | | | |
| | | | | | | | |
| | | | | | | | |

*Spiked by: SAD

Spike Date: 2018/02/03

Spike Syringe/Pipette ID#: L132773F

Int. Std Syringe/Pipette ID#: K19865F

*Spiking Witnessed by: JPB

Final pH:

| Equipment & ID | √ | Equipment | ID# | √ | Equipment | Lot # |
|---|---|---|---|---|---|---|
| Pipettor L132773F K19865F | | SPE Cartridge | | | QC Balance ID | |
| | | Filter | | | Thermometer ID &Temp | |
| Dispenser | | Centrifuge | | | | |
| | | Sonicator | | | | |

Bottle Tracking ✓

Bottle# 18587

Cap# 18422

Systems plus Lot#: 17-12-11

Comments:

* - SPIKING OF QC'S & SAMPLES MUST BE WITNESSED AT ALL TIMES.

Worksheet Number: **5383466**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | Units | MTRX SPK | MTRX SPK Dup1 | SPIKE | BLANK | B818419 FZA783 | B818419 FZA784 |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | ug/L | 98.37626 | 92.01237 | 96.11331 | 0 | N/A******* | N/A******* |
| 8:2 Fluorotelomer sulfonate | ug/L | 86.62930 | 92.03689 | 90.62876 | 0 | N/A******* | N/A******* |
| N-ethylperfluorooctane sulfonamide | ug/L | 74.44754 | 97.35368 | N/A******* | 0 | N/A******* | N/A******* |
| EtFOSAA | ug/L | 87.30327 | 93.84580 | !! 63.7510 | 0 | 0 | 0 |
| N-ethylperfluorooctane sulfonamidoe | ug/L | 91.90741 | 104.11467 | N/A******* | 0 | N/A******* | N/A******* |
| N-methylperfluorooctane sulfonamide | ug/L | 76.91467 | 100.23684 | N/A******* | 0 | N/A******* | N/A******* |
| MeFOSAA | ug/L | 90.03268 | 93.65003 | !! 68.0806 | 0 | 0 | 0 |
| N-methylperfluorooctanesulfonamidol | ug/L | 95.67363 | 106.57021 | N/A******* | 0 | N/A******* | N/A******* |
| Perfluorobutanoic acid | ug/L | 98.21468 | 106.85716 | N/A******* | 0 | N/A******* | N/A******* |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 82.89653 | 95.79209 | 99.67851 | 0 | 0 | 0.00518978 |
| Perfluorodecane Sulfonate | ug/L | 92.45756 | 91.41692 | N/A******* | 0 | N/A******* | N/A******* |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 86.81164 | 94.10782 | 93.60885 | 0 | 0 | 0 |
| Perfluoroheptane sulfonate | ug/L | 90.98726 | 101.20481 | N/A******* | 0 | N/A******* | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 91.96093 | 92.78204 | 88.50372 | 0 | 0.01054153 | 0 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 87.52991 | 95.60760 | 97.20073 | 0 | 0.00887340 | 0.00870697 |
| Perfluorononanoic Acid (PFNA) | ug/L | 93.43522 | 96.72312 | 92.66732 | 0 | 0 | 0 |
| Perfluorooctane Sulfonamide (PFOSA) | ug/L | 89.72318 | 92.62598 | 73.80000 | 0 | N/A******* | N/A******* |
| Perfluoropentanoic Acid (PFPeA) | ug/L | 89.37200 | 95.20211 | N/A******* | 0 | N/A******* | N/A******* |
| Perfluorotetradecanoic Acid | ug/L | 95.89857 | 96.32574 | !! 67.7402 | 0 | 0 | 0 |
| Perfluorotridecanoic Acid | ug/L | 96.29521 | 95.44624 | !! 65.8448 | 0 | 0 | 0 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 96.46350 | 102.22507 | 72.08254 | 0 | 0 | 0 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 102.37893 | 95.12233 | 83.49513 | 0 | 0 | 0 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 90.78481 | 96.72123 | !! 62.1820 | 0 | 0 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 95.93662 | 93.98174 | 97.19234 | 0 | 0 | 0 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 94.99755 | 108.74849 | 100.84658 | 0 | 0 | 0 |
| 13C2-6:2 Fluorotelomer sulfonate | ug/L | 114.338062 | 127.448872 | N/A******* | 113.307957 | N/A******* | N/A******* |
| 13C2-8:2 Fluorotelomer sulfonate | ug/L | 115.440507 | 121.518490 | N/A******* | 106.113909 | N/A******* | N/A******* |
| 13C2-perfluorotetradecanoic acid | ug/L | 82.1416632 | 98.8016425 | 109.679857 | 51.9150278 | 76.4072488 | 85.4869829 |
| 13C4-Perfluorobutanoic acid | ug/L | 77.5120182 | 83.1025398 | N/A******* | 105.324665 | N/A******* | N/A******* |
| D3-MeFOSAA | ug/L | 85.9779888 | 94.4857630 | 97.3966072 | 56.8873348 | 75.2789238 | 96.7656805 |
| D5-EtFOSAA | ug/L | 86.9803015 | 94.0731946 | 101.825486 | 51.6461405 | 76.6323194 | 94.6359966 |
| N-methyl-d3-perfluorooctane sulfona | ug/L | 69.3815036 | 80.5225348 | N/A******* | 49.9444954 | N/A******* | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | ug/L | 74.2509996 | 82.4447942 | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-Perfluorodecanoic acid | ug/L | 84.9829149 | 104.124832 | 102.743556 | 84.5472739 | 85.8951135 | 107.176218 |
| 13C2-Perfluorododecanoic acid | ug/L | 85.0687692 | 96.3858250 | 121.072838 | !! 47.0485 | 80.7479578 | 98.6366498 |
| 13C2-Perfluorohexanoic acid | ug/L | 91.9963409 | 97.1022640 | 90.1829971 | 106.199163 | 88.1415799 | 109.981383 |
| 13C2-Perfluoroundecanoic acid | ug/L | 87.1043163 | 97.3023074 | 122.399275 | 55.3508344 | 82.7148159 | 91.0925685 |
| 13C4-Perfluoroheptanoic acid | ug/L | 102.395216 | 103.278540 | 92.4433542 | 109.351244 | 86.9681260 | 114.092549 |
| 13C5-Perfluorononanoic acid | ug/L | 100.042328 | 101.475792 | 97.4697765 | 103.507539 | 91.3425498 | 118.788865 |
| 13C4-Perfluorooctanoic acid | ug/L | 96.7876585 | 104.962665 | 89.9736143 | 107.163039 | 89.9404074 | 111.145407 |
| 13C4-Perfluorooctanesulfonate | ug/L | 100.788647 | 99.1059572 | 88.3395098 | 104.464942 | 95.2156371 | 122.062293 |
| 13C5-Perfluoropentanoic acid | ug/L | 103.538890 | 100.012540 | N/A******* | 104.079397 | N/A******* | N/A******* |
| 13C8-Perfluorooctane Sulfonamide | ug/L | 83.4616405 | 94.3043519 | N/A******* | 76.7569834 | N/A******* | N/A******* |
| 18O2-Perfluorohexanesulfonate | ug/L | 103.719356 | 102.254100 | 89.3711957 | 103.625993 | 87.7003331 | 114.442701 |

2018/02/07

PFOS and PFOA in water by SPE/LCMS - Water
ug/L

| Parameter Name | B818419 FZA785 | B818419 FZA786 | B818419 FZA788 | B818419 FZA789 | B818419 FZA790 | B818419 FZA791 | B818419 FZA792 |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-ethylperfluorooctane sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| EtFOSAA | 0 | 0 | 0 | 0.00631487 | 0 | 0.00686332 | 0 |
| N-ethylperfluorooctane sulfonamidoe | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-methylperfluorooctane sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| MeFOSAA | 0 | 0 | 0 | 0.00425524 | 0 | 0.00472317 | 0 |
| N-methylperfluorooctanesulfonamidoi | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorobutanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorobutane Sulfonate (PFBS) | 0 | 0.01193250 | 0 | 0 | 0 | 0 | 0 |
| Perfluorodecane Sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluoroheptanoic Acid (PFHpA) | 0 | 0.02478493 | 0 | 0 | 0 | 0 | 0 |
| Perfluoroheptane sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | 0.01013417 | 0.03463848 | 0 | 0 | 0 | 0 | 0 |
| Perfluorohexane Sulfonate (PFHxS) | 0.01292668 | 0.02680901 | 0 | 0 | 0 | 0 | 0 |
| Perfluorononanoic Acid (PFNA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perfluorooctane Sulfonamide (PFOSA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluoropentanoic Acid (PFPeA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorotetradecanoic Acid | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perfluorotridecanoic Acid | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perfluoroundecanoic Acid (PFUnA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perfluorodecanoic Acid (PFDA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perfluorododecanoic Acid (PFDoA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.01241350 | 0.13900978 | 0 | 0 | 0 | 0 | 0 |
| Perfluorooctane Sulfonate (PFOS) | 0 | 0.08384642 | 0 | 0 | 0 | 0 | 0 |
| 13C2-6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-perfluorotetradecanoic acid | 85.4142379 | 88.0451122 | 90.3541599 | 82.7616701 | 79.7376927 | 91.8342583 | 78.6502893 |
| 13C4-Perfluorobutanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| D3-MeFOSAA | 88.7512946 | 96.5307079 | 79.8667176 | 84.4242428 | 80.6499269 | 85.7074761 | 81.0173050 |
| D5-EtFOSAA | 92.2812853 | 94.4723015 | 83.1968631 | 86.3076807 | 76.2579366 | 85.8390887 | 80.1326144 |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-Perfluorodecanoic acid | 94.7633248 | 92.9341622 | 98.2133293 | 93.5583158 | 85.5432448 | 105.273795 | 101.554717 |
| 13C2-Perfluorododecanoic acid | 85.7494157 | 89.7584173 | 86.2010403 | 90.0551321 | 84.4332738 | 97.0746443 | 89.3930862 |
| 13C2-Perfluorohexanoic acid | 82.2543348 | 96.1208807 | 108.781731 | 109.242403 | 99.6946472 | 103.727305 | 89.7307559 |
| 13C2-Perfluoroundecanoic acid | 96.3707223 | 91.5754004 | 96.1159327 | 91.3052098 | 83.6232551 | 102.356730 | 94.9027912 |
| 13C4-Perfluoroheptanoic acid | 98.9300004 | 101.168675 | 116.185939 | 113.024733 | 107.022817 | 107.029242 | 92.1590805 |
| 13C5-Perfluorononanoic acid | 101.219717 | 103.281922 | 111.933531 | 106.056714 | 103.080275 | 109.467849 | 93.0812003 |
| 13C4-Perfluorooctanoic acid | 98.2843273 | 99.7939782 | 109.683986 | 113.264299 | 99.6416921 | 108.631589 | 101.487366 |
| 13C4-Perfluorooctanesulfonate | 99.0594609 | 111.521580 | 109.581844 | 114.476256 | 102.068445 | 105.769386 | 103.628421 |
| 13C5-Perfluoropentanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C8-Perfluorooctane Sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 18O2-Perfluorohexanesulfonate | 96.7596645 | 102.692574 | 111.368531 | 102.706610 | 100.921354 | 94.7315136 | 96.1584669 |

Worksheet Number: **5383466**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

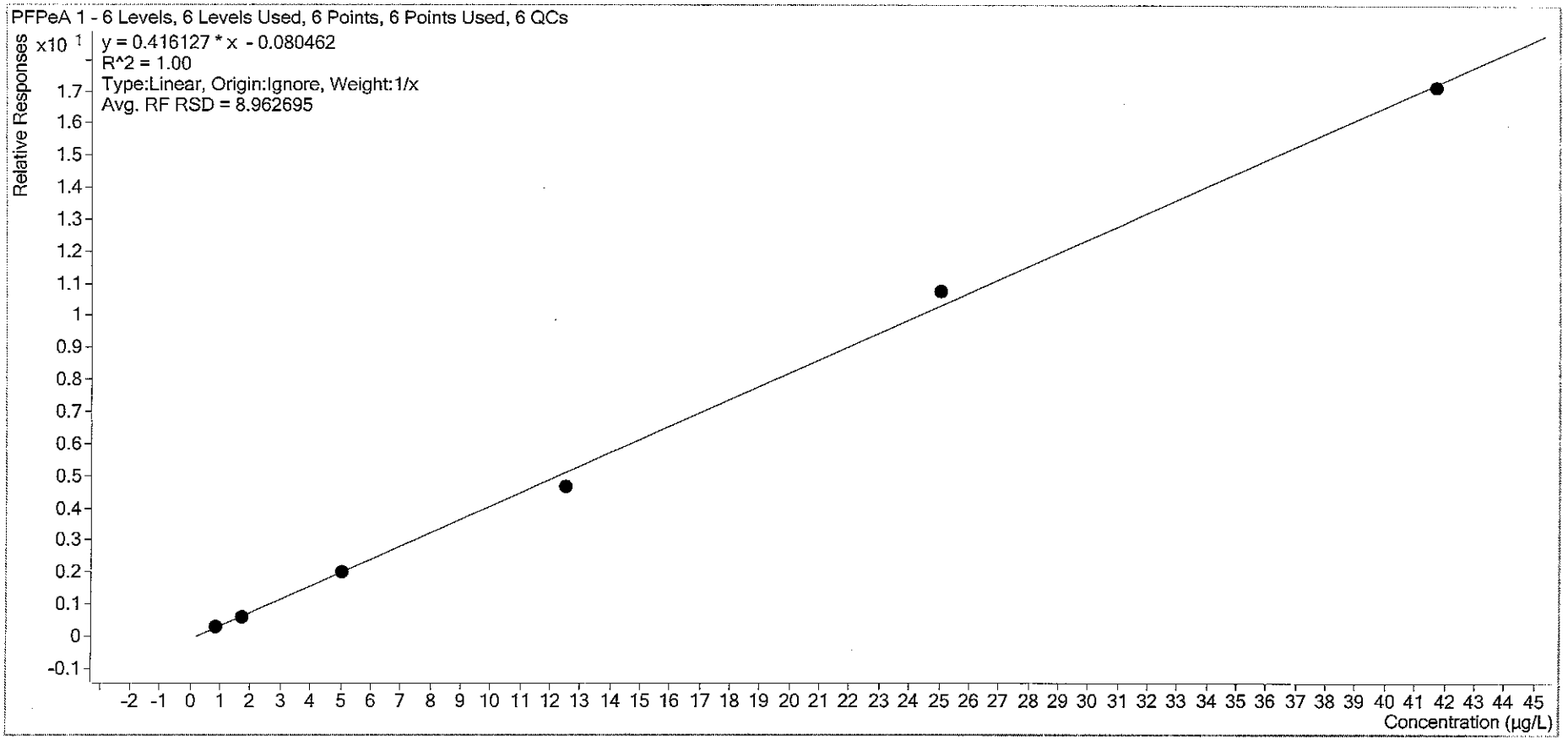
| Parameter Name | B819794 FZH336 | B819794 FZH338 | B819794 FZH339 | B819794 FZH340 | B819794 FZH341 | B819794 FZH342 | B819794 FZH343 |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0 | N/A******* | N/A******* | N/A******* | 0 | N/A******* | N/A******* |
| 8:2 Fluorotelomer sulfonate | 0 | N/A******* | N/A******* | N/A******* | 0 | N/A******* | N/A******* |
| N-ethylperfluorooctane sulfonamide | 0 | N/A******* | N/A******* | N/A******* | 0 | N/A******* | N/A******* |
| EtFOSAA | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N-ethylperfluorooctane sulfonamidoe | 0 | N/A******* | N/A******* | N/A******* | 0 | N/A******* | N/A******* |
| N-methylperfluorooctane sulfonamide | 0 | N/A******* | N/A******* | N/A******* | 0 | N/A******* | N/A******* |
| MeFOSAA | 0 | 0 | 0 | 0 | 0 | 0.00369223 | 0 |
| N-methylperfluorooctanesulfonamidol | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorobutanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorobutane Sulfonate (PFBS) | N/A******* | 0.00578757 | 0.00580984 | 0.00830906 | N/A******* | 0.00546567 | 0 |
| Perfluorodecane Sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluoroheptanoic Acid (PFHpA) | N/A******* | 0 | 0 | 0.03766183 | N/A******* | 0.01384674 | 0.03785991 |
| Perfluoroheptane sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | N/A******* | 0.01087472 | 0.01061936 | 0.03328450 | N/A******* | 0.02075096 | 0.02922022 |
| Perfluorohexane Sulfonate (PFHxS) | N/A******* | 0.01865163 | 0.02011585 | 0.03548554 | N/A******* | 0.01337441 | 0.01063257 |
| Perfluorononanoic Acid (PFNA) | N/A******* | 0 | 0 | 0.02114793 | N/A******* | 0 | 0.01371525 |
| Perfluorooctane Sulfonamide (PFOSA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluoropentanoic Acid (PFPeA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorotetradecanoic Acid | N/A******* | 0 | 0 | 0 | N/A******* | 0 | 0 |
| Perfluorotridecanoic Acid | N/A******* | 0 | 0 | 0 | N/A******* | 0 | 0 |
| Perfluoroundecanoic Acid (PFUnA) | N/A******* | 0 | 0 | 0 | N/A******* | 0 | 0 |
| Perfluorodecanoic Acid (PFDA) | N/A******* | 0 | 0 | 0 | N/A******* | 0 | 0 |
| Perfluorododecanoic Acid (PFDoA) | N/A******* | 0 | 0 | 0 | N/A******* | 0 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | N/A******* | 0 | 0 | 0.11760894 | N/A******* | 0.00999132 | 0.03320958 |
| Perfluorooctane Sulfonate (PFOS) | N/A******* | 0 | 0.00729654 | 0.16776425 | N/A******* | 0.01122045 | 0.05863242 |
| 13C2-6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-perfluorotetradecanoic acid | N/A******* | 73.9561732 | 79.4066955 | 85.3303714 | N/A******* | 83.0714057 | 92.8280190 |
| 13C4-Perfluorobutanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| D3-MeFOSAA | N/A******* | 85.3319462 | 95.1483448 | 80.3632760 | N/A******* | 88.2167770 | 93.7794006 |
| D5-EtFOSAA | N/A******* | 82.0348917 | 90.3125828 | 82.1893041 | N/A******* | 90.4363256 | 93.1031969 |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-Perfluorodecanoic acid | N/A******* | 90.0390222 | 112.392065 | 96.7434826 | N/A******* | 100.549863 | 100.976896 |
| 13C2-Perfluorododecanoic acid | N/A******* | 86.1004444 | 102.156897 | 91.3866200 | N/A******* | 89.0216764 | 95.7538358 |
| 13C2-Perfluorohexanoic acid | N/A******* | 97.6177087 | 105.148131 | 106.286616 | N/A******* | 100.102876 | 108.780066 |
| 13C2-Perfluoroundecanoic acid | N/A******* | 86.1893416 | 108.104630 | 85.0206170 | N/A******* | 91.9654141 | 98.7652956 |
| 13C4-Perfluoroheptanoic acid | N/A******* | 100.249172 | 113.607486 | 108.784192 | N/A******* | 106.836593 | 112.639666 |
| 13C5-Perfluorononanoic acid | N/A******* | 103.568549 | 106.424781 | 112.255674 | N/A******* | 103.583624 | 117.561769 |
| 13C4-Perfluorooctanoic acid | N/A******* | 99.8442087 | 112.712030 | 103.491143 | N/A******* | 100.938387 | 116.551762 |
| 13C4-Perfluorooctanesulfonate | N/A******* | 92.1919661 | 113.246941 | 98.0248112 | N/A******* | 108.324230 | 100.908838 |
| 13C5-Perfluoropentanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C8-Perfluorooctane Sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 18O2-Perfluorohexanesulfonate | N/A******* | 100.398533 | 115.916245 | 111.416464 | N/A******* | 94.1928131 | 109.218905 |

Worksheet Number: **5383466**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | DL | RDL | MDL | IDL | | | |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0.02 | 0.02 | 0.0066 | 0 | | | |
| 8:2 Fluorotelomer sulfonate | 0.02 | 0.02 | 0.0066 | 0 | | | |
| N-ethylperfluorooctane sulfonamide | 0.02 | 0.02 | 0.01 | 0 | | | |
| EtFOSAA | 0.02 | 0.02 | 0.0033 | 0 | | | |
| N-ethylperfluorooctane sulfonamidoe | 0.02 | 0.02 | 0.0079 | 0 | | | |
| N-methylperfluorooctane sulfonamide | 0.02 | 0.02 | 0.013 | 0 | | | |
| MeFOSAA | 0.02 | 0.02 | 0.0029 | 0 | | | |
| N-methylperfluorooctanesulfonamidol | 0.02 | 0.02 | 0.012 | 0 | | | |
| Perfluorobutanoic acid | 0.02 | 0.02 | 0.0055 | 0 | | | |
| Perfluorobutane Sulfonate (PFBS) | 0.02 | 0.02 | 0.0054 | 0 | | | |
| Perfluorodecane Sulfonate | 0.02 | 0.02 | 0.006 | 0 | | | |
| Perfluoroheptanoic Acid (PFHpA) | 0.02 | 0.02 | 0.0074 | 0 | | | |
| Perfluoroheptane sulfonate | 0.02 | 0.02 | 0.008 | 0 | | | |
| Perfluorohexanoic Acid (PFHxA) | 0.02 | 0.02 | 0.0035 | 0 | | | |
| Perfluorohexane Sulfonate (PFHxS) | 0.02 | 0.02 | 0.0056 | 0 | | | |
| Perfluorononanoic Acid (PFNA) | 0.02 | 0.02 | 0.0087 | 0 | | | |
| Perfluorooctane Sulfonamide (PFOSA) | 0.02 | 0.02 | 0.0034 | 0 | | | |
| Perfluoropentanoic Acid (PFPeA) | 0.02 | 0.02 | 0.0075 | 0 | | | |
| Perfluorotetradecanoic Acid | 0.02 | 0.02 | 0.0027 | 0 | | | |
| Perfluorotridecanoic Acid | 0.02 | 0.02 | 0.0038 | 0 | | | |
| Perfluoroundecanoic Acid (PFUnA) | 0.02 | 0.02 | 0.0025 | 0 | | | |
| Perfluorodecanoic Acid (PFDA) | 0.02 | 0.02 | 0.0061 | 0 | | | |
| Perfluorododecanoic Acid (PFDoA) | 0.02 | 0.02 | 0.005 | 0 | | | |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.02 | 0.02 | 0.0033 | 0 | | | |
| Perfluorooctane Sulfonate (PFOS) | 0.02 | 0.02 | 0.006 | 0 | | | |
| 13C2-6:2 Fluorotelomer sulfonate | | | | | | | |
| 13C2-8:2 Fluorotelomer sulfonate | | | | | | | |
| 13C2-perfluorotetradecanoic acid | | | | | | | |
| 13C4-Perfluorobutanoic acid | | | | | | | |
| D3-MeFOSAA | | | | | | | |
| D5-EtFOSAA | | | | | | | |
| N-methyl-d3-perfluorooctane sulfona | | | | | | | |
| N-ethyl-d5-perfluorooctane sulfonam | | | | | | | |
| 13C2-Perfluorodecanoic acid | | | | | | | |
| 13C2-Perfluorododecanoic acid | | | | | | | |
| 13C2-Perfluorohexanoic acid | | | | | | | |
| 13C2-Perfluoroundecanoic acid | | | | | | | |
| 13C4-Perfluoroheptanoic acid | | | | | | | |
| 13C5-Perfluorononanoic acid | | | | | | | |
| 13C4-Perfluorooctanoic acid | | | | | | | |
| 13C4-Perfluorooctanesulfonate | | | | | | | |
| 13C5-Perfluoropentanoic acid | | | | | | | |
| 13C8-Perfluorooctane Sulfonamide | | | | | | | |
| 18O2-Perfluorohexanesulfonate | | | | | | | |




Manual calculation for SpK:

8.2275 = 0.416127 x - 0.080462

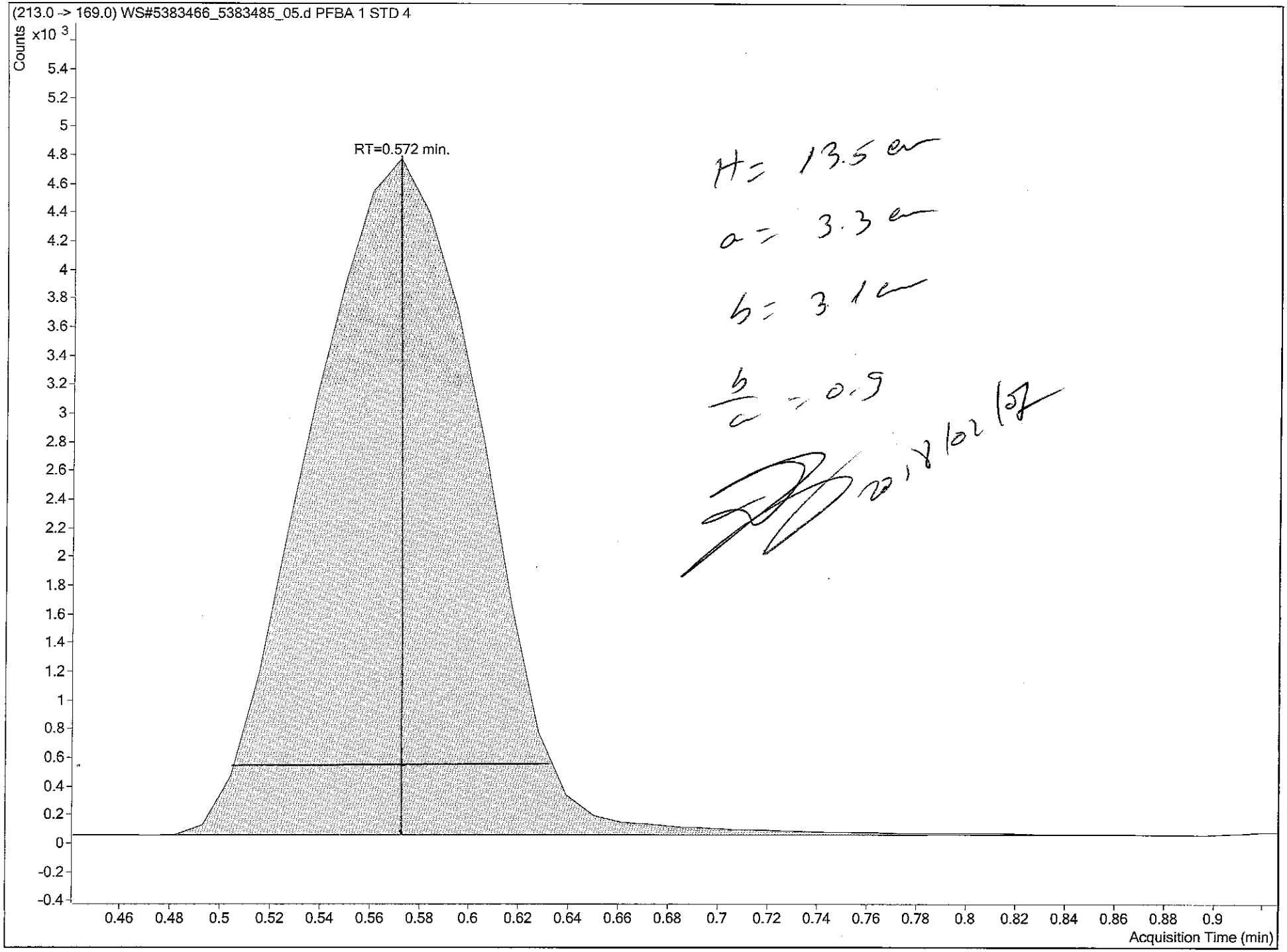
x = 19.964967 x 0.024

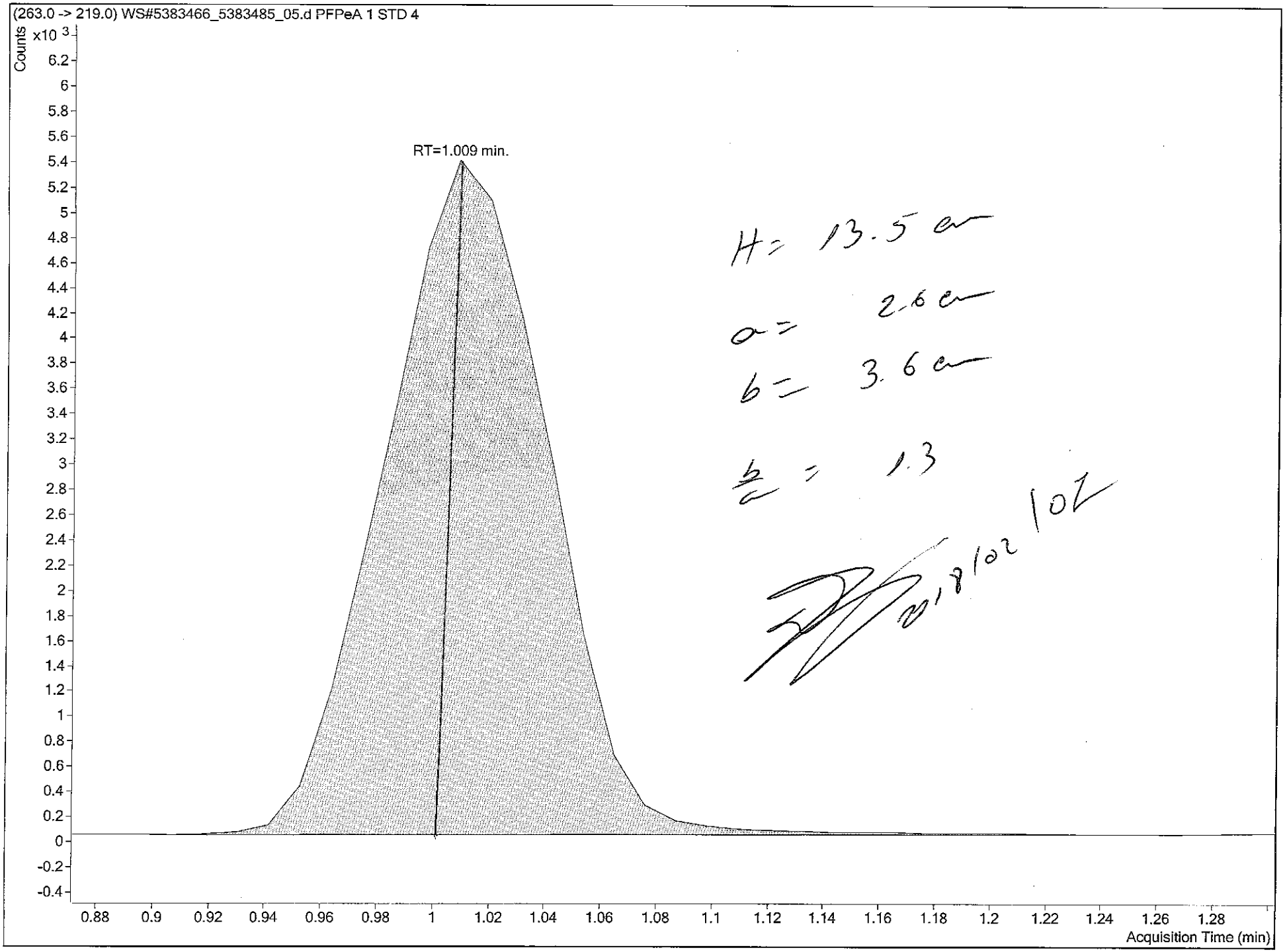
= 0.479159 µg/L

$\frac{0.479159}{0.5} \times 100 = 95.8\%$

AD
2018/02/08

2018/02/10


(213.0 -> 169.0) WS#5383466_5383485_05.d PFBA 1 STD 4
Counts x10 3
RT=0.572 min.
Acquisition Time (min)
H= 13.5 cm
a= 3.3 cm
b= 3.1 cm
b/a = 0.9
20,8/02/17




H = 13.5 cm

a = 2.6 cm

b = 3.6 cm

b/a = 1.3

10/8/02

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/03

Test Code: **PFOSALCM-W**

Worksheet Number: **5383466**

| Sample Number | Parameter Code | Parameter | |
|---|---|---|---|
| FZA783-01 | ETFOSAA | EtFOSAA | * |
| FZA784-01 | MEFOSAA | MeFOSAA | * |
| FZA785-01 | PFBS | Perfluorobutane Sulfonate (PFBS) | |
| FZA786-01 | PFHPA | Perfluoroheptanoic Acid (PFHpA) | |
| FZA788-01 | PFHXA | Perfluorohexanoic Acid (PFHxA) | |
| FZA789-01 | PFHXS | Perfluorohexane Sulfonate (PFHxS) | |
| FZA790-01 | PFNA | Perfluorononanoic Acid (PFNA) | |
| FZA791-01 | PFTEDA | Perfluorotetradecanoic Acid | |
| FZA792-01 | PFTRDA | Perfluorotridecanoic Acid | |
| FZH338-01 | PFUNA | Perfluoroundecanoic Acid (PFUnA) | |
| FZH339-01 | PFDA | Perfluorodecanoic Acid (PFDA) | |
| FZH340-01 | PFDOA | Perfluorododecanoic Acid (PFDoA) | |
| FZH342-01 | PFOA | Perfluoro-n-Octanoic Acid (PFOA) | |
| FZH343-01 | PFOS | Perfluorooctane Sulfonate (PFOS) | |
| FZH336-01 | NONE | NONE | |
| FZH341-01 | | | |

2018/02/03

* - This parameter is usually off, but will be reported for this group of samples!

# WorkSheet 5383466 Instrument Sequences

| | | |
|---|---|---|
| 1. | 5383466:MTRX SPK | MTRX SPK |
| 2. | 5383466:MTRX SPK:D1 | MTRX SPK :D1 |
| 3. | 5383466:SPIKE | SPIKE |
| 4. | 5383466:BLANK | BLANK |
| 5. | 5383466:FZA783-01 | OLD-002-51A-0118 |
| 6. | 5383466:FZA784-01 | OLD-002-51A-0118D |
| 7. | 5383466:FZA785-01 | OLD-002-11A-0118 |
| 8. | 5383466:FZA786-01 | OLD-002-03A-0118 |
| 9. | 5383466:FZA788-01 | EB-GW-012218-1 |
| 10. | 5383466:FZA789-01 | FB-OLD-012218-1 |
| 11. | 5383466:FZA790-01 | FB-OLD-012218-2 |
| 12. | 5383466:FZA791-01 | EB-WC-012218-1 |
| 13. | 5383466:FZA792-01 | EB-DPT-012218-1 |
| 14. | 5383466:FZH336-01 | [redacted] |
| 15. | 5383466:FZH338-01 | [redacted] |
| 16. | 5383466:FZH339-01 | [redacted] |
| 17. | 5383466:FZH340-01 | [redacted] |
| 18. | 5383466:FZH341-01 | [redacted] |
| 19. | 5383466:FZH342-01 | [redacted] |
| 20. | 5383466:FZH343-01 | [redacted] |

2010/02/03

# Worklist Report

Agilent Technologies

Maxxam Analytics

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180206_Low.wkl

**Operator Name:** ---
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\Data\PFC\20180206\WS#5383466_5383485
**Pre-Worklist Script:** ---
**Post-Worklist Script:** SCP_InstrumentStandby(){MH_Acq_Scripts.exe}
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** Column #198
MP A1: Solution# 265 (FSRE18)
MP B1: Methanol lot# SHBJ6339, Sigma

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P2 | |

## Worklist Table

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Solvent | P2-A1 | PFC_Water_Low.m | WS#5383466_5383485_01.d | Sample | | As Method | - |
| 2 | STD 1 | P2-A2 | PFC_Water_Low.m | WS#5383466_5383485_02.d | Calibration | STD 1 | As Method | - |
| 3 | STD 2 | P2-A3 | PFC_Water_Low.m | WS#5383466_5383485_03.d | Calibration | STD 2 | As Method | - |
| 4 | STD 3 | P2-A4 | PFC_Water_Low.m | WS#5383466_5383485_04.d | Calibration | STD 3 | As Method | - |
| 5 | STD 4 | P2-A5 | PFC_Water_Low.m | WS#5383466_5383485_05.d | Calibration | STD 4 | As Method | - |
| 6 | STD 5 | P2-A6 | PFC_Water_Low.m | WS#5383466_5383485_06.d | Calibration | STD 5 | As Method | - |
| 7 | STD 6 | P2-A7 | PFC_Water_Low.m | WS#5383466_5383485_07.d | Calibration | STD 6 | As Method | - |

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# Worklist Report

Agilent Technologies

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 8 | IB | P2-A8 | PFC_Water_Low.m | WS#5383466_53834 85_08.d | Sample | | As Method | - |
| 9 | ICV | P2-A9 | PFC_Water_Low.m | WS#5383466_53834 85_09.d | QC | ICV | As Method | - |
| 10 | ISC | P2-A2 | PFC_Water_Low.m | WS#5383466_53834 85_10.d | ConCal | STD 1 | As Method | - |
| 11 | 5383466:BLANK | P2-B1 | PFC_Water_Low.m | WS#5383466_53834 85_11.d | Sample | | As Method | - |
| 12 | 5383466:SPIKE | P2-B2 | PFC_Water_Low.m | WS#5383466_53834 85_12.d | QC | ICV | As Method | - |
| 13 | 5383466:MTRX SPK | P2-B3 | PFC_Water_Low.m | WS#5383466_53834 85_13.d | QC | ICV | As Method | - |
| 14 | 5383466:MTRX SPK:D1 | P2-B4 | PFC_Water_Low.m | WS#5383466_53834 85_14.d | Sample | | As Method | - |
| 15 | IB | P2-A8 | PFC_Water_Low.m | WS#5383466_53834 85_15.d | Sample | | As Method | - |
| 16 | 5383466:FZA783-01 | P2-B5 | PFC_Water_Low.m | WS#5383466_53834 85_16.d | Sample | | As Method | - |
| 17 | 5383466:FZA784-01 | P2-B6 | PFC_Water_Low.m | WS#5383466_53834 85_17.d | Sample | | As Method | - |
| 18 | 5383466:FZA785-01 | P2-B7 | PFC_Water_Low.m | WS#5383466_53834 85_18.d | Sample | | As Method | - |
| 19 | 5383466:FZA786-01 | P2-B8 | PFC_Water_Low.m | WS#5383466_53834 85_19.d | Sample | | As Method | - |
| 20 | 5383466:FZA788-01 | P2-B9 | PFC_Water_Low.m | WS#5383466_53834 85_20.d | Sample | | As Method | - |
| 21 | 5383466:FZA789-01 | P2-C1 | PFC_Water_Low.m | WS#5383466_53834 85_21.d | Sample | | As Method | - |
| 22 | 5383466:FZA790-01 | P2-C2 | PFC_Water_Low.m | WS#5383466_53834 85_22.d | Sample | | As Method | - |
| 23 | 5383466:FZA791-01 | P2-C3 | PFC_Water_Low.m | WS#5383466_53834 85_23.d | Sample | | As Method | - |
| 24 | 5383466:FZA792-01 | P2-C4 | PFC_Water_Low.m | WS#5383466_53834 85_24.d | Sample | | As Method | - |
| 25 | CCV | P2-A5 | PFC_Water_Low.m | WS#5383466_53834 85_25.d | ConCal | STD 4 | As Method | - |
| 26 | 5383466:FZH336-01 | P2-C5 | PFC_Water_Low.m | WS#5383466_53834 85_26.d | Sample | | As Method | - |
| 27 | 5383466:FZH338-01 | P2-C6 | PFC_Water_Low.m | WS#5383466_53834 85_27.d | Sample | | As Method | - |
| 28 | 5383466:FZH339-01 | P2-C7 | PFC_Water_Low.m | WS#5383466_53834 85_28.d | Sample | | As Method | - |
| 29 | 5383466:FZH340-01 | P2-C8 | PFC_Water_Low.m | WS#5383466_53834 85_29.d | Sample | | As Method | - |
| 30 | 5383466:FZH341-01 | P2-C9 | PFC_Water_Low.m | WS#5383466_53834 85_30.d | Sample | | As Method | - |

Maxxam Analytics

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# Worklist Report

Agilent Technologies

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 31 | 5383466:FZH342-01 | P2-D1 | PFC_Water_Low.m | WS#5383466_5383485_31.d | Sample | | As Method | - |
| 32 | 5383466:FZH343-01 | P2-D2 | PFC_Water_Low.m | WS#5383466_5383485_32.d | Sample | | As Method | - |
| 33 | CCV | P2-A5 | PFC_Water_Low.m | WS#5383466_5383485_33.d | ConCal | STD 4 | As Method | - |
| 34 | 5383485:FZH337-01 | P2-D3 | PFC_Water_Low.m | WS#5383466_5383485_34.d | Sample | | As Method | - |
| 35 | 5383485:MTRX SPK | P2-D4 | PFC_Water_Low.m | WS#5383466_5383485_35.d | Sample | | As Method | - |
| 36 | 5383485:MTRX SPK:D1 | P2-D5 | PFC_Water_Low.m | WS#5383466_5383485_36.d | Sample | | As Method | - |
| 37 | IB | P2-A8 | PFC_Water_Low.m | WS#5383466_5383485_37.d | Sample | | As Method | - |
| 38 | CCV | P2-A5 | PFC_Water_Low.m | WS#5383466_5383485_38.d | ConCal | STD 4 | As Method | - |

# Worklist Report

Agilent Technologies

Maxxam Analytics

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180206_Low_FOSAA.wkl

**Operator Name:** ---
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\Data\PFC\20180206\WS#5383466_5383485_FOSAA
**Pre-Worklist Script:** ---
**Post-Worklist Script:** SCP_InstrumentStandby(){MH_Acq_Scripts.exe}
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** Column #198
MP A1: Solution# 265 (FSRE18)
MP B2: Solution# 272 [FSRE18]

2018/02/06 MG

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P2 | |

## Worklist Table

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Solvent | P2-A1 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_01.d | Sample | | As Method | - |
| 2 | STD 1 | P2-A2 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_02.d | Calibration | STD 1 | As Method | - |
| 3 | STD 2 | P2-A3 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_03.d | Calibration | STD 2 | As Method | - |
| 4 | STD 3 | P2-A4 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_04.d | Calibration | STD 3 | As Method | - |
| 5 | STD 4 | P2-A5 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_05.d | Calibration | STD 4 | As Method | - |
| 6 | STD 5 | P2-A6 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_06.d | Calibration | STD 5 | As Method | - |
| 7 | STD 6 | P2-A7 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_07.d | Calibration | STD 6 | As Method | - |
| 8 | IB | P2-A8 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_08.d | Sample | | As Method | - |

2018/02/06

# Worklist Report

Agilent Technologies

Maxxam Analytics

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 9 | ICV | P2-A9 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_09.d | QC | ICV | As Method | - |
| 10 | ISC | P2-A2 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_10.d | ConCal | STD 1 | As Method | - |
| 11 | 5383466:BLANK | P2-B1 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_11.d | Sample | | As Method | - |
| 12 | 5383466:SPIKE | P2-B2 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_12.d | QC | ICV | As Method | - |
| 13 | 5383466:MTRX SPK | P2-B3 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_13.d | QC | ICV | As Method | - |
| 14 | 5383466:MTRX SPK:D1 | P2-B4 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_14.d | Sample | | As Method | - |
| 15 | IB | P2-A8 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_15.d | Sample | | As Method | - |
| 16 | 5383466:FZA783-01 | P2-B5 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_16.d | Sample | | As Method | - |
| 17 | 5383466:FZA784-01 | P2-B6 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_17.d | Sample | | As Method | - |
| 18 | 5383466:FZA785-01 | P2-B7 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_18.d | Sample | | As Method | - |
| 19 | 5383466:FZA786-01 | P2-B8 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_19.d | Sample | | As Method | - |
| 20 | 5383466:FZA788-01 | P2-B9 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_20.d | Sample | | As Method | - |
| 21 | 5383466:FZA789-01 | P2-C1 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_21.d | Sample | | As Method | - |
| 22 | 5383466:FZA790-01 | P2-C2 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_22.d | Sample | | As Method | - |
| 23 | 5383466:FZA791-01 | P2-C3 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_23.d | Sample | | As Method | - |
| 24 | 5383466:FZA792-01 | P2-C4 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_24.d | Sample | | As Method | - |
| 25 | CCV | P2-A5 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_25.d | ConCal | STD 4 | As Method | - |
| 26 | 5383466:FZH336-01 | P2-C5 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_26.d | Sample | | As Method | - |
| 27 | 5383466:FZH338-01 | P2-C6 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_27.d | Sample | | As Method | - |
| 28 | 5383466:FZH339-01 | P2-C7 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_28.d | Sample | | As Method | - |
| 29 | 5383466:FZH340-01 | P2-C8 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_29.d | Sample | | As Method | - |
| 30 | 5383466:FZH341-01 | P2-C9 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_30.d | Sample | | As Method | - |
| 31 | 5383466:FZH342-01 | P2-D1 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_31.d | Sample | | As Method | - |
| 32 | 5383466:FZH343-01 | P2-D2 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_32.d | Sample | | As Method | - |
| 33 | CCV | P2-A5 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_33.d | ConCal | STD 4 | As Method | - |
| 34 | 5383485:FZH337-01 | P2-D3 | PFC_Water_Low_FOSAA.m | WS#5383466_53834 85_FOSAA_34.d | Sample | | As Method | - |



D:\MassHunter\Worklists\PFCs\PFC_180206_Low_FOSAA.wkl

Report generation date: 06-Feb-2018 12:51:12 PM

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 35 | 5383485:MTRX SPK | P2-D4 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_35.d | Sample | | As Method | - |
| 36 | 5383485:MTRX SPK:D1 | P2-D5 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_36.d | Sample | | As Method | - |
| 37 | IB | P2-A8 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_37.d | Sample | | As Method | - |
| 38 | CCV | P2-A5 | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_38.d | ConCal | STD 4 | As Method | - |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| STD 1 | - | 2018/02/06 6:11 PM | PFC_Water_Low.m | WS#5383466_5383485_02.d | P2-A2 |
| STD 2 | - | 2018/02/06 6:16 PM | PFC_Water_Low.m | WS#5383466_5383485_03.d | P2-A3 |
| STD 3 | - | 2018/02/06 6:21 PM | PFC_Water_Low.m | WS#5383466_5383485_04.d | P2-A4 |
| STD 4 | - | 2018/02/06 6:26 PM | PFC_Water_Low.m | WS#5383466_5383485_05.d | P2-A5 |
| STD 5 | - | 2018/02/06 6:31 PM | PFC_Water_Low.m | WS#5383466_5383485_06.d | P2-A6 |
| STD 6 | - | 2018/02/06 6:36 PM | PFC_Water_Low.m | WS#5383466_5383485_07.d | P2-A7 |
| IB | - | 2018/02/06 6:41 PM | PFC_Water_Low.m | WS#5383466_5383485_08.d | P2-A8 |
| ICV | - | 2018/02/06 6:46 PM | PFC_Water_Low.m | WS#5383466_5383485_09.d | P2-A9 |
| ISC | - | 2018/02/06 6:51 PM | PFC_Water_Low.m | WS#5383466_5383485_10.d | P2-A2 |
| 5383466:BLANK | - | 2018/02/06 6:56 PM | PFC_Water_Low.m | WS#5383466_5383485_11.d | P2-B1 |
| 5383466:SPIKE | - | 2018/02/06 7:01 PM | PFC_Water_Low.m | WS#5383466_5383485_12.d | P2-B2 |
| 5383466:MTRX SPK | FZA786 | 2018/02/06 7:06 PM | PFC_Water_Low.m | WS#5383466_5383485_13.d | P2-B3 |
| 5383466:MTRX SPK:D1 | FZA786 | 2018/02/06 7:11 PM | PFC_Water_Low.m | WS#5383466_5383485_14.d | P2-B4 |
| IB | - | 2018/02/06 7:16 PM | PFC_Water_Low.m | WS#5383466_5383485_15.d | P2-A8 |
| 5383466:FZA783-01 | - | 2018/02/06 7:21 PM | PFC_Water_Low.m | WS#5383466_5383485_16.d | P2-B5 |
| 5383466:FZA784-01 | - | 2018/02/06 7:25 PM | PFC_Water_Low.m | WS#5383466_5383485_17.d | P2-B6 |
| 5383466:FZA785-01 | - | 2018/02/06 7:30 PM | PFC_Water_Low.m | WS#5383466_5383485_18.d | P2-B7 |
| 5383466:FZA786-01 | - | 2018/02/06 7:35 PM | PFC_Water_Low.m | WS#5383466_5383485_19.d | P2-B8 |
| 5383466:FZA788-01 | - | 2018/02/06 7:40 PM | PFC_Water_Low.m | WS#5383466_5383485_20.d | P2-B9 |
| 5383466:FZA789-01 | - | 2018/02/06 7:45 PM | PFC_Water_Low.m | WS#5383466_5383485_21.d | P2-C1 |
| 5383466:FZA790-01 | - | 2018/02/06 7:50 PM | PFC_Water_Low.m | WS#5383466_5383485_22.d | P2-C2 |
| 5383466:FZA791-01 | - | 2018/02/06 7:55 PM | PFC_Water_Low.m | WS#5383466_5383485_23.d | P2-C3 |
| 5383466:FZA792-01 | - | 2018/02/06 8:00 PM | PFC_Water_Low.m | WS#5383466_5383485_24.d | P2-C4 |
| CCV | - | 2018/02/06 8:05 PM | PFC_Water_Low.m | WS#5383466_5383485_25.d | P2-A5 |
| 5383466:FZH336-01 | - | 2018/02/06 8:10 PM | PFC_Water_Low.m | WS#5383466_5383485_26.d | P2-C5 |
| 5383466:FZH338-01 | - | 2018/02/06 8:15 PM | PFC_Water_Low.m | WS#5383466_5383485_27.d | P2-C6 |
| 5383466:FZH339-01 | - | 2018/02/06 8:20 PM | PFC_Water_Low.m | WS#5383466_5383485_28.d | P2-C7 |
| 5383466:FZH340-01 | - | 2018/02/06 8:25 PM | PFC_Water_Low.m | WS#5383466_5383485_29.d | P2-C8 |
| 5383466:FZH341-01 | - | 2018/02/06 8:30 PM | PFC_Water_Low.m | WS#5383466_5383485_30.d | P2-C9 |
| 5383466:FZH342-01 | - | 2018/02/06 8:34 PM | PFC_Water_Low.m | WS#5383466_5383485_31.d | P2-D1 |
| 5383466:FZH343-01 | - | 2018/02/06 8:39 PM | PFC_Water_Low.m | WS#5383466_5383485_32.d | P2-D2 |
| CCV | - | 2018/02/06 8:44 PM | PFC_Water_Low.m | WS#5383466_5383485_33.d | P2-A5 |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| STD 1 | - | 2018/02/06 12:28 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_02.d | P2-A2 |
| STD 2 | - | 2018/02/06 12:30 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_03.d | P2-A3 |
| STD 3 | - | 2018/02/06 12:32 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_04.d | P2-A4 |
| STD 4 | - | 2018/02/06 12:35 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_05.d | P2-A5 |
| STD 5 | - | 2018/02/06 12:37 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_06.d | P2-A6 |
| STD 6 | - | 2018/02/06 12:40 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_07.d | P2-A7 |
| IB | - | 2018/02/06 12:42 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_08.d | P2-A8 |
| ICV | - | 2018/02/06 12:44 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_09.d | P2-A9 |
| ISC | - | 2018/02/06 12:47 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_10.d | P2-A2 |
| 5383466:BLANK | - | 2018/02/06 12:49 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_11.d | P2-B1 |
| 5383466:SPIKE | - | 2018/02/06 12:52 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_12.d | P2-B2 |
| 5383466:MTRX SPK | FZA786 | 2018/02/06 12:54 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_13.d | P2-B3 |
| 5383466:MTRX SPK:D1 | FZA786 | 2018/02/06 12:57 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_14.d | P2-B4 |
| IB | - | 2018/02/06 12:59 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_15.d | P2-A8 |
| 5383466:FZA783-01 | - | 2018/02/06 1:01 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_16.d | P2-B5 |
| 5383466:FZA784-01 | - | 2018/02/06 1:04 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_17.d | P2-B6 |
| 5383466:FZA785-01 | - | 2018/02/06 1:06 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_18.d | P2-B7 |
| 5383466:FZA786-01 | - | 2018/02/06 1:09 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_19.d | P2-B8 |
| 5383466:FZA788-01 | - | 2018/02/06 1:11 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_20.d | P2-B9 |
| 5383466:FZA789-01 | - | 2018/02/06 1:13 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_21.d | P2-C1 |
| 5383466:FZA790-01 | - | 2018/02/06 1:16 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_22.d | P2-C2 |
| 5383466:FZA791-01 | - | 2018/02/06 1:18 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_23.d | P2-C3 |
| 5383466:FZA792-01 | - | 2018/02/06 1:21 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_24.d | P2-C4 |
| CCV | - | 2018/02/06 1:23 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_25.d | P2-A5 |
| 5383466:FZH336-01 | - | 2018/02/06 1:25 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_26.d | P2-C5 |
| 5383466:FZH338-01 | - | 2018/02/06 1:28 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_27.d | P2-C6 |
| 5383466:FZH339-01 | - | 2018/02/06 1:30 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_28.d | P2-C7 |
| 5383466:FZH340-01 | - | 2018/02/06 1:33 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_29.d | P2-C8 |
| 5383466:FZH341-01 | - | 2018/02/06 1:35 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_30.d | P2-C9 |
| 5383466:FZH342-01 | - | 2018/02/06 1:38 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_31.d | P2-D1 |
| 5383466:FZH343-01 | - | 2018/02/06 1:40 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_32.d | P2-D2 |
| CCV | - | 2018/02/06 1:42 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_33.d | P2-A5 |
| CCV | - | 2018/02/06 2:52 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_39.d | P2-A5 |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| 5383466:SPIKE:R | Not used | 2018/02/06 2:55 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_40.d | P2-B2 |
| CCV | - | 2018/02/06 2:57 PM | PFC_Water_Low_FOSAA.m | WS#5383466_5383485_FOSAA_41.d | P2-A5 |

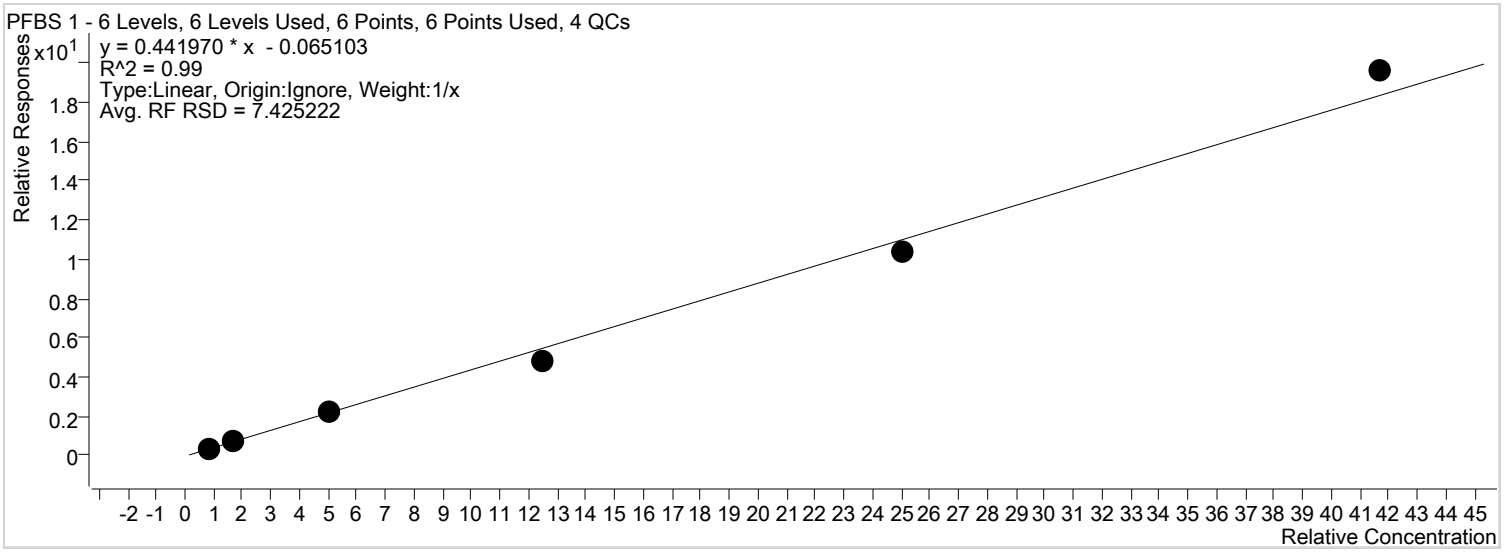
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFBS 1

**Internal Standard:** MPFHxS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.89 | 560 | 0.3948 | 57 | 107.1 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.77 | 1174 | 0.4229 | 207 | 104.3 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 5.00 | 3442 | 0.4289 | 103 | 100.0 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 10.92 | 7910 | 0.3810 | 165 | 87.4 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 23.59 | 18029 | 0.4145 | 120 | 94.4 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 44.55 | 30068 | 0.4707 | 187 | 106.8 |

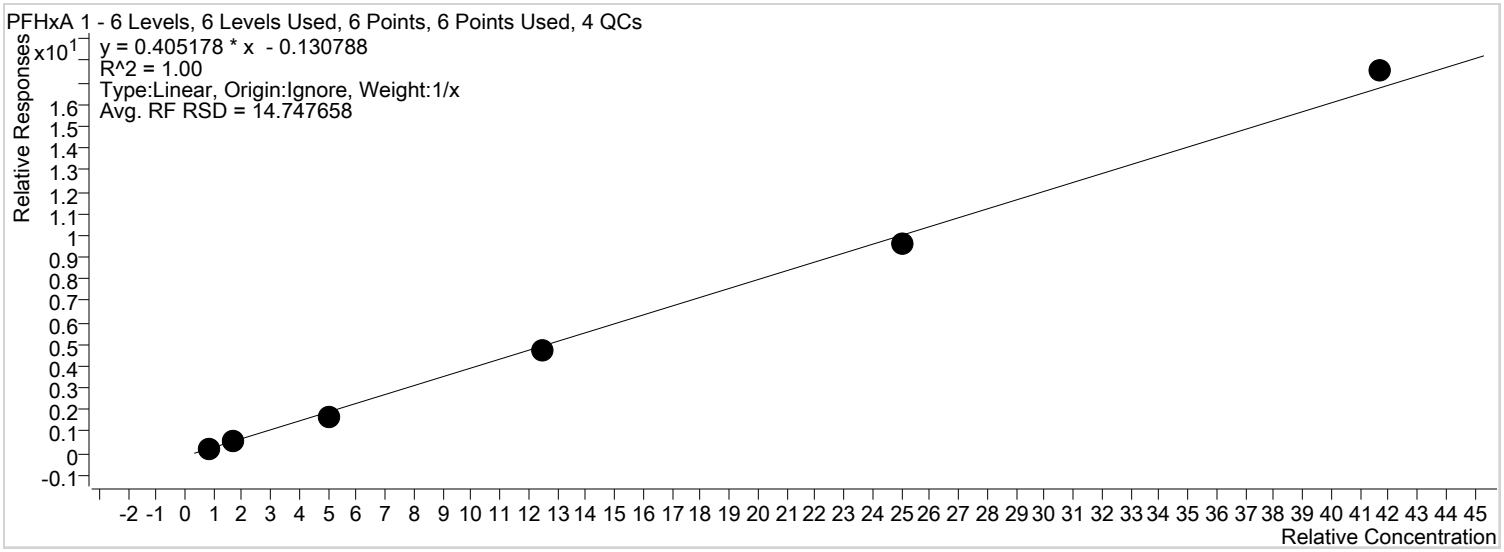
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFHxA 1

**Internal Standard:** MPFHxA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.86 | 1612 | 0.2639 | 65 | 104.0 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.86 | 4054 | 0.3665 | 319 | 109.5 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 4.56 | 11982 | 0.3431 | 1042 | 91.1 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.87 | 29220 | 0.3744 | 3543 | 95.0 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 23.94 | 67616 | 0.3827 | 2597 | 95.7 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 43.64 | 107039 | 0.4209 | 8065 | 104.6 |

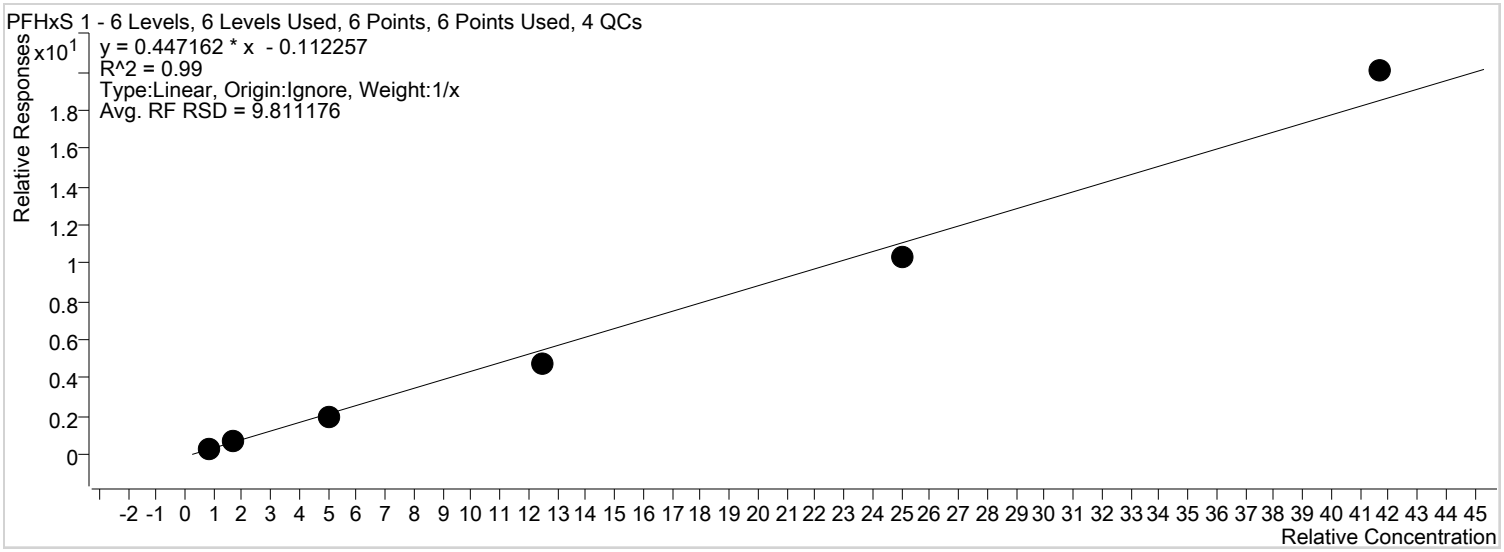
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFHxS 1

**Internal Standard:** MPFHxS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.94 | 524 | 0.3694 | 114 | 112.9 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.78 | 1115 | 0.4016 | 66 | 104.6 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 4.73 | 3214 | 0.4005 | 429 | 94.6 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 10.80 | 7832 | 0.3772 | 361 | 86.4 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 23.32 | 17949 | 0.4126 | 1264 | 93.3 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 45.17 | 30772 | 0.4817 | 2986 | 108.3 |

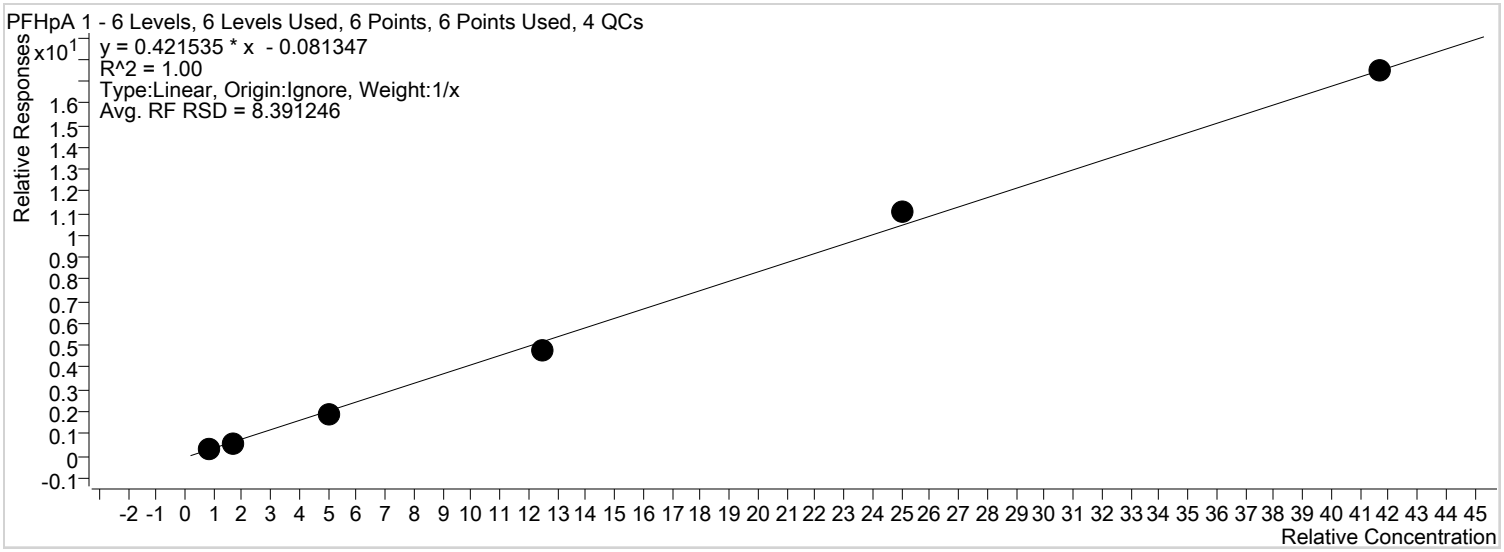
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFHpA 1

**Internal Standard:** MPFHpA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.96 | 2769 | 0.3900 | 28 | 115.8 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.63 | 5056 | 0.3562 | 60 | 95.9 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 4.55 | 15761 | 0.3676 | 190 | 91.1 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.43 | 38005 | 0.3789 | 352 | 91.4 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 26.49 | 87578 | 0.4433 | 1189 | 105.9 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 41.67 | 144581 | 0.4193 | 1765 | 99.9 |

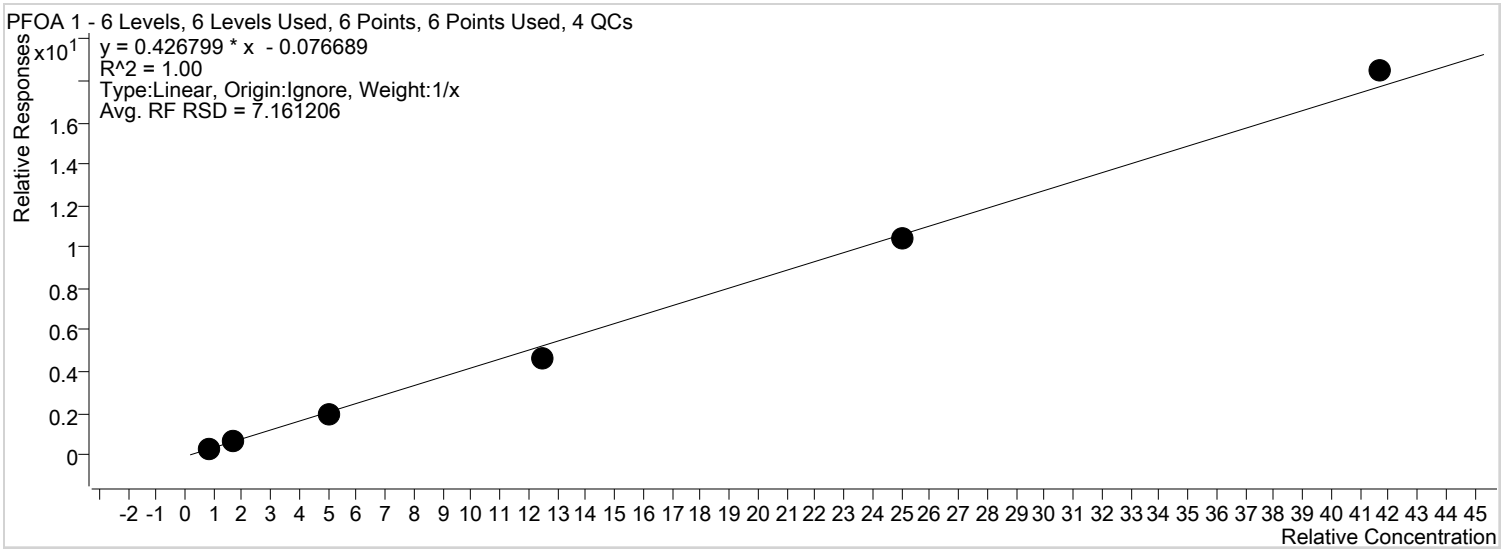
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFOA 1

**Internal Standard:** MPFOA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.89 | 2835 | 0.3675 | 27 | 107.8 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.77 | 5942 | 0.4001 | 55 | 104.3 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 4.82 | 17315 | 0.3960 | 251 | 96.4 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.06 | 42523 | 0.3716 | 363 | 88.5 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 24.69 | 94546 | 0.4184 | 1057 | 98.7 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 43.49 | 154971 | 0.4433 | 1698 | 104.3 |

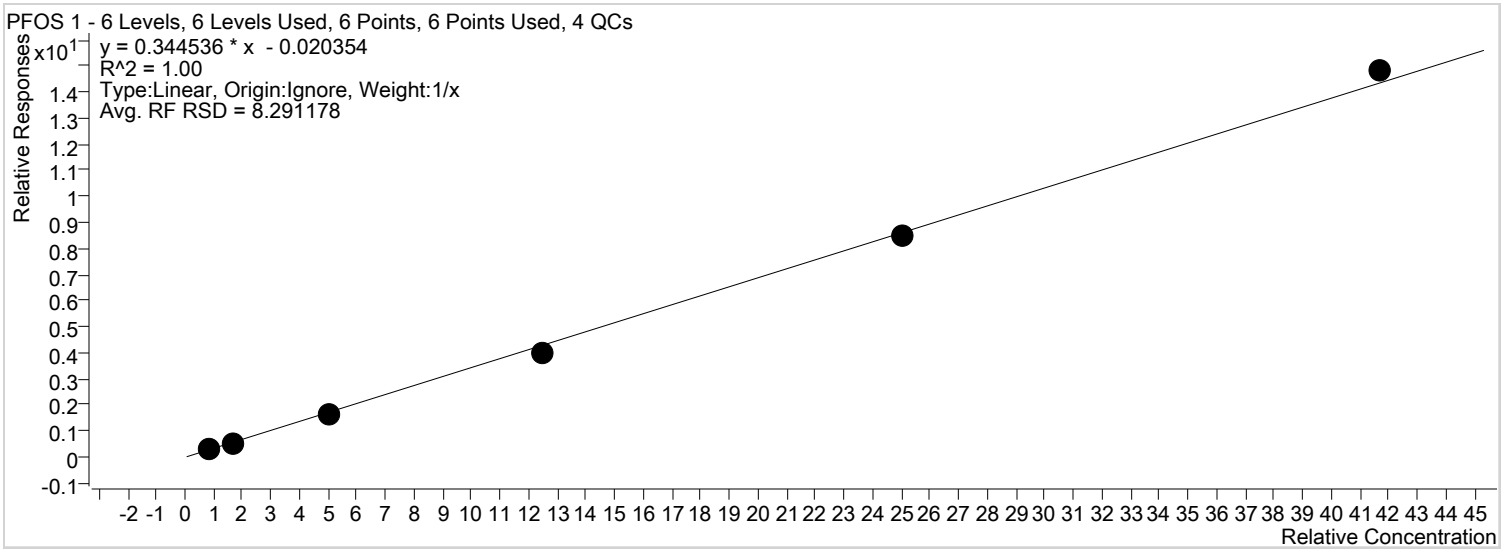
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFOS 1

**Internal Standard:** MPFOS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.97 | 592 | 0.3794 | 90 | 117.2 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.54 | 961 | 0.2993 | 162 | 90.3 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 4.87 | 3310 | 0.3318 | 213 | 97.5 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.63 | 7727 | 0.3190 | 147 | 93.1 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 24.66 | 17307 | 0.3390 | 292 | 98.6 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 43.06 | 29880 | 0.3553 | 242 | 103.3 |

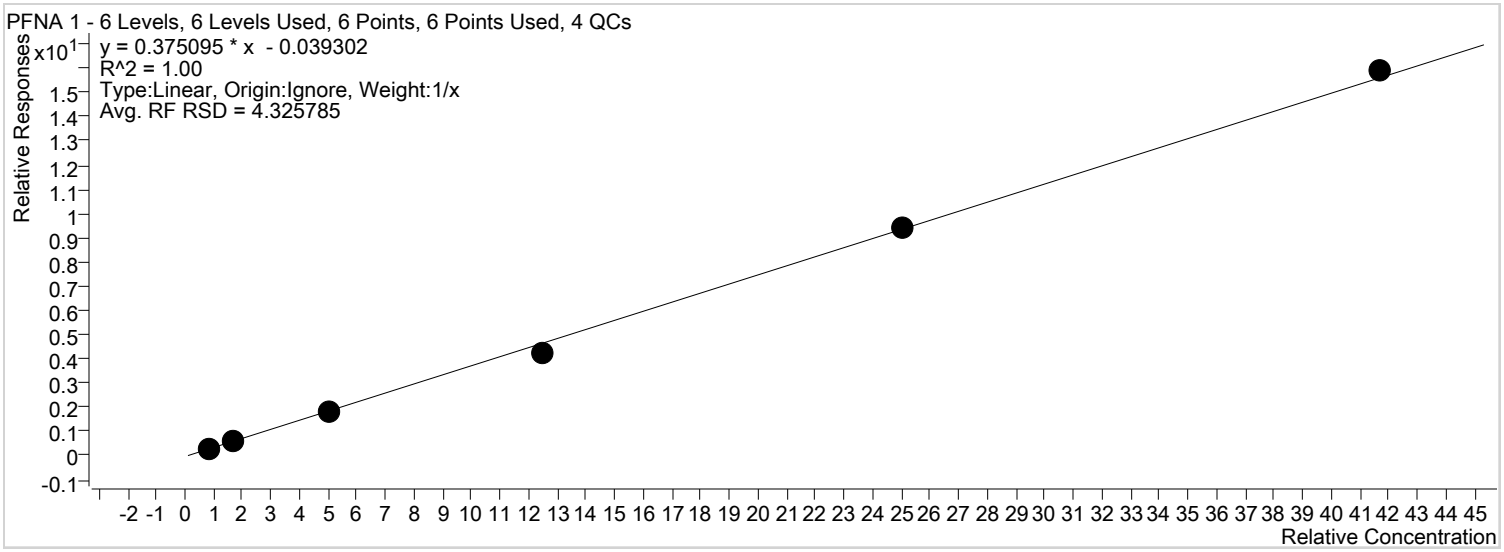
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFNA 1

**Internal Standard:** MPFNA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.88 | 2562 | 0.3499 | 48 | 105.9 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.71 | 5291 | 0.3533 | 151 | 100.4 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 4.95 | 16213 | 0.3636 | 293 | 99.0 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.49 | 37466 | 0.3417 | 727 | 91.9 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 25.23 | 84183 | 0.3770 | 1433 | 100.9 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 42.47 | 137494 | 0.3811 | 1911 | 101.9 |

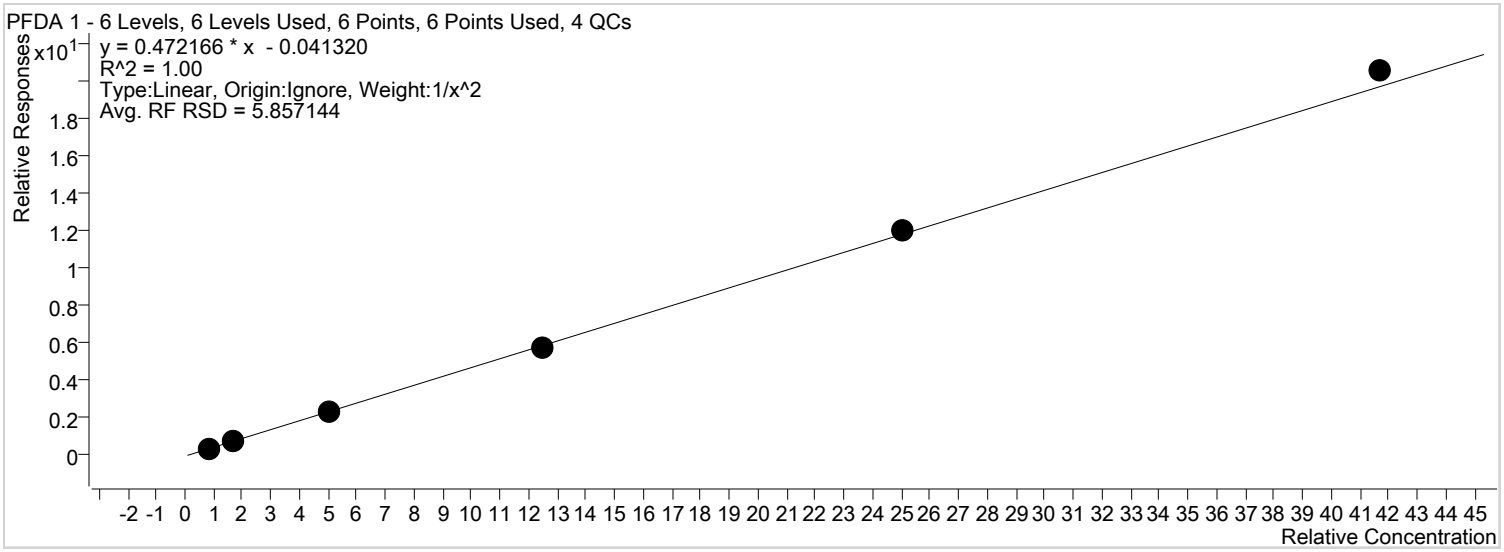
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFDA 1

**Internal Standard:** MPFDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.86 | 2686 | 0.4377 | 29 | 103.3 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.60 | 5351 | 0.4187 | 62 | 93.8 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 4.92 | 16796 | 0.4562 | 188 | 98.4 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 12.26 | 39281 | 0.4599 | 409 | 98.1 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 25.54 | 87430 | 0.4806 | 700 | 102.1 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 43.49 | 147759 | 0.4915 | 1476 | 104.3 |

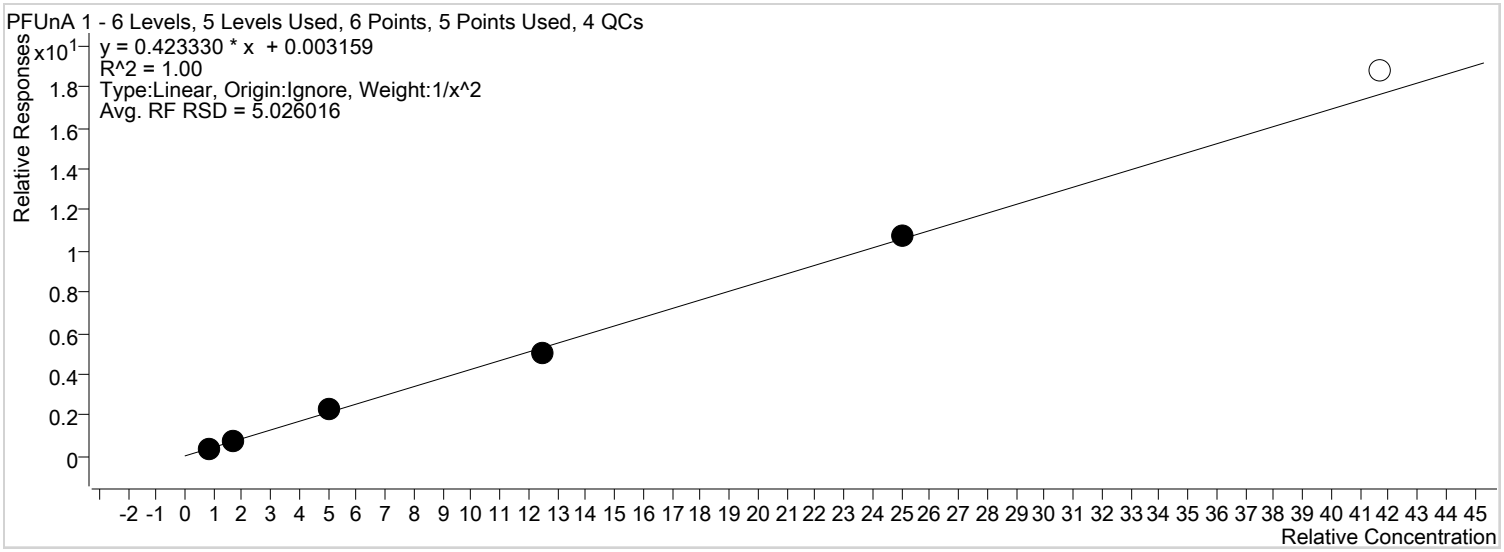
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFUnA 1

**Internal Standard:** MPFUnA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.85 | 3117 | 0.4360 | 20 | 102.1 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.60 | 5994 | 0.3998 | 71 | 94.0 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 5.32 | 19129 | 0.4508 | 113 | 106.3 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.98 | 42745 | 0.4059 | 217 | 95.8 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 25.43 | 96084 | 0.4308 | 236 | 101.7 |
| STD 6 | STD 6 | | 2018/02/06 6:36:29 PM | 41.70 | 44.42 | 162248 | 0.4511 | 303 | 106.5 |

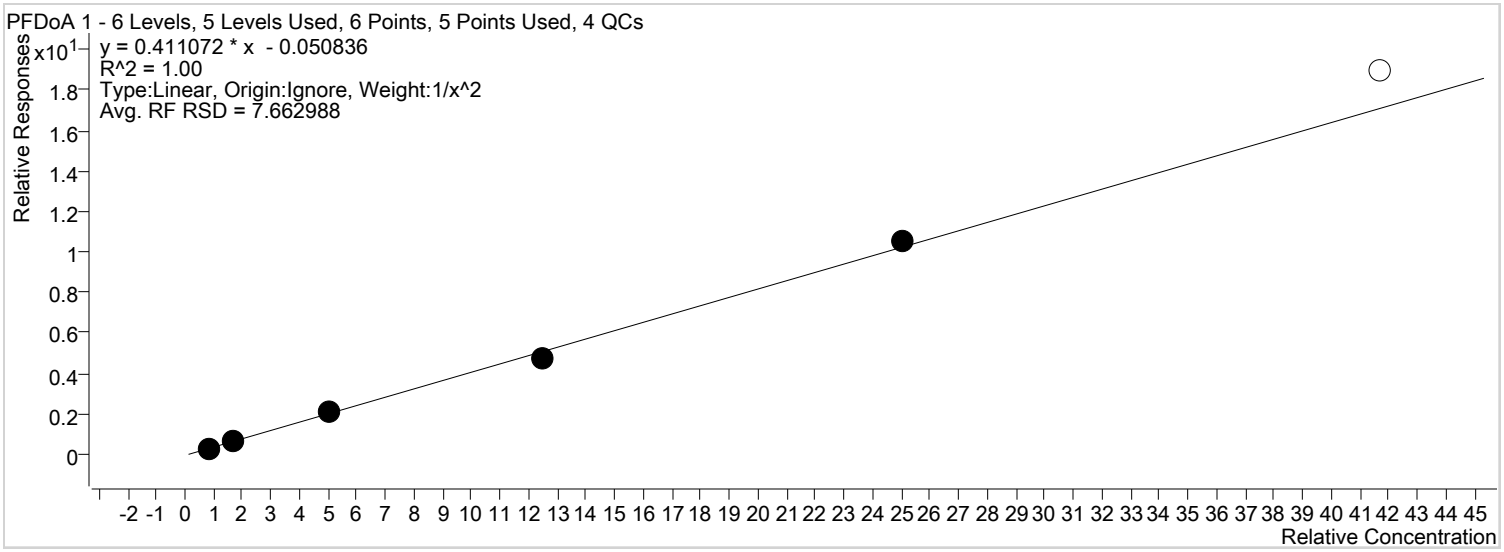
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFDoA 1

**Internal Standard:** MPFDoA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.82 | 3531 | 0.3457 | 89 | 99.0 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.73 | 7517 | 0.3894 | 128 | 102.0 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 5.11 | 23281 | 0.4097 | 657 | 102.1 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.67 | 54842 | 0.3799 | 1503 | 93.4 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 25.87 | 122186 | 0.4233 | 2081 | 103.5 |
| STD 6 | STD 6 | | 2018/02/06 6:36:29 PM | 41.70 | 46.23 | 206576 | 0.4545 | 3325 | 110.9 |

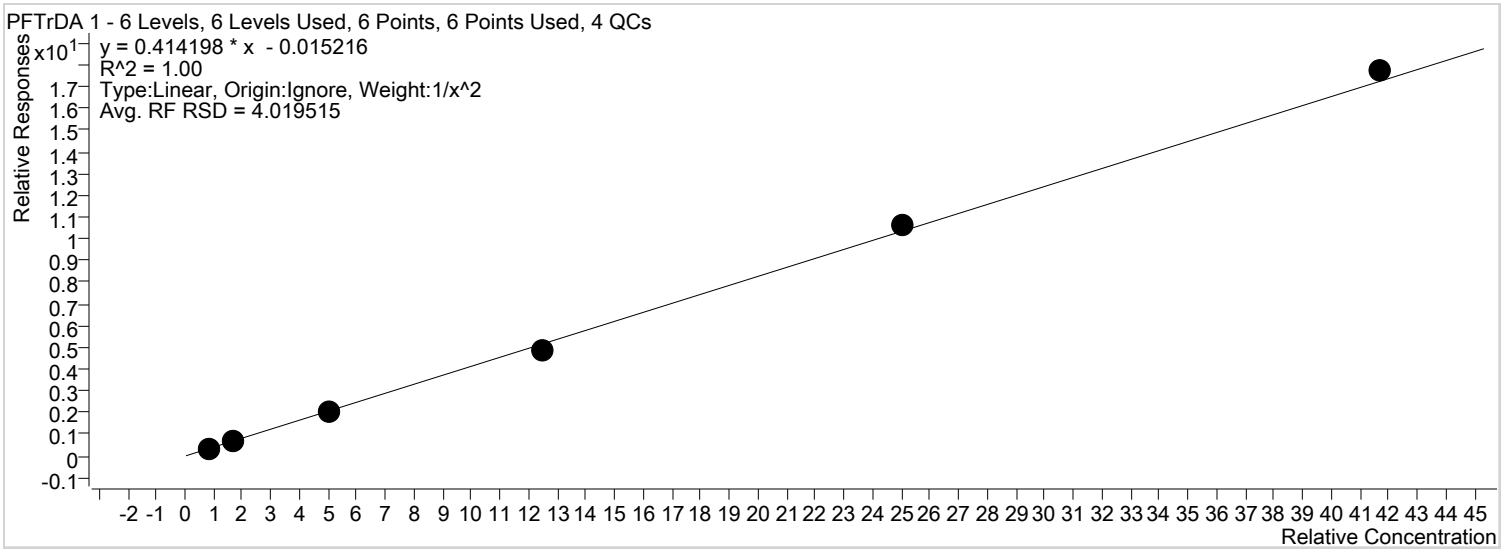
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFTrDA 1

**Internal Standard:** MPFTeDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.84 | 4399 | 0.4002 | 42 | 101.0 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.67 | 8288 | 0.3973 | 53 | 98.1 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 5.05 | 27306 | 0.4149 | 174 | 100.9 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.72 | 61125 | 0.3871 | 125 | 93.8 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 25.85 | 138442 | 0.4277 | 142 | 103.4 |
| STD 6 | STD 6 | x | 2018/02/06 6:36:29 PM | 41.70 | 42.87 | 231782 | 0.4255 | 161 | 102.8 |

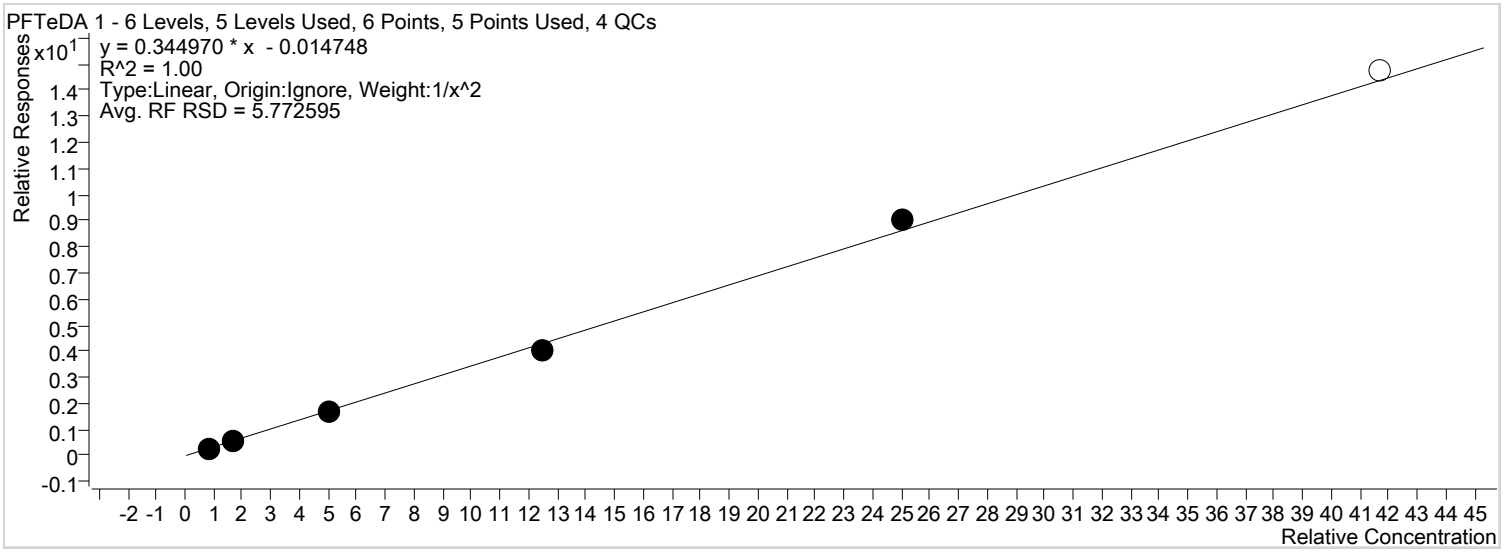
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics.batch.bin

**Last Calib Update** 2018/02/08 1:24:10 PM

**Instrument:** LCMS04

**Analyte:** PFTeDA 1

**Internal Standard:** MPFTeDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 6:11:47 PM | 0.83 | 0.81 | 3520 | 0.3202 | 18 | 98.0 |
| STD 2 | STD 2 | x | 2018/02/06 6:16:44 PM | 1.70 | 1.79 | 7406 | 0.3550 | 45 | 105.4 |
| STD 3 | STD 3 | x | 2018/02/06 6:21:40 PM | 5.00 | 4.89 | 22027 | 0.3347 | 86 | 97.9 |
| STD 4 | STD 4 | x | 2018/02/06 6:26:36 PM | 12.50 | 11.67 | 50660 | 0.3209 | 113 | 93.4 |
| STD 5 | STD 5 | x | 2018/02/06 6:31:33 PM | 25.00 | 26.34 | 117482 | 0.3629 | 124 | 105.4 |
| STD 6 | STD 6 | | 2018/02/06 6:36:29 PM | 41.70 | 42.78 | 192586 | 0.3535 | 126 | 102.6 |

# By Compound Report

Agilent Technologies

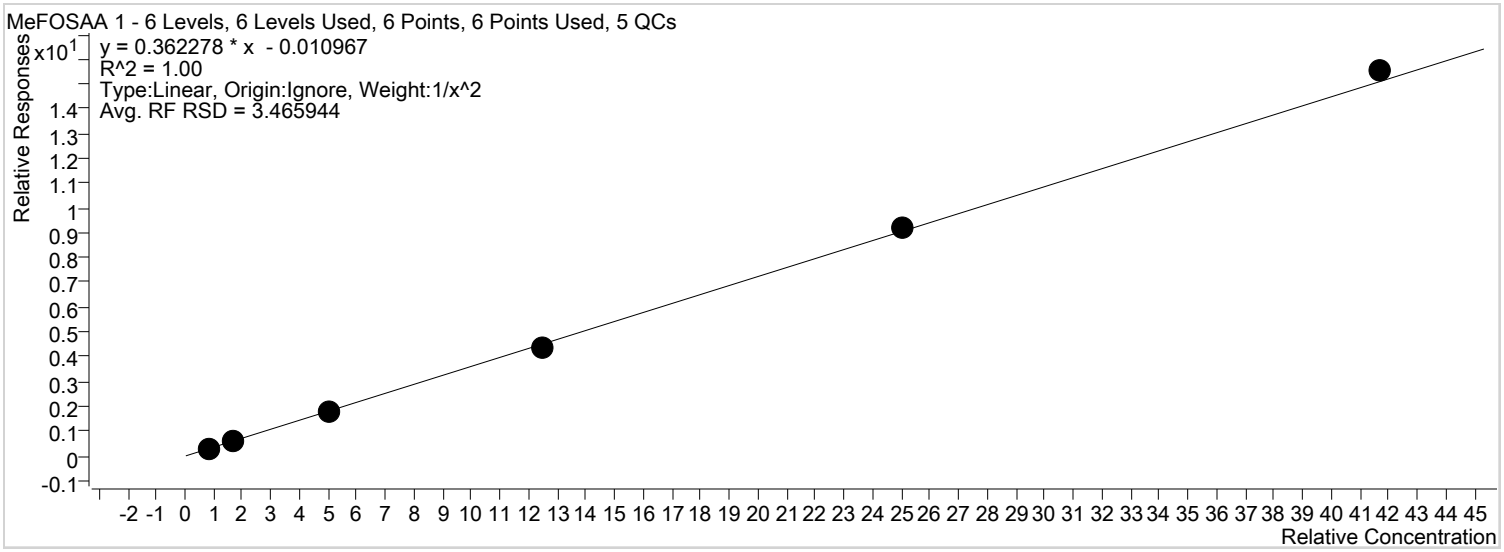
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/08 3:32:49 PM

**Instrument:** LCMS04

**Analyte:** MeFOSAA 1

**Internal Standard:** D3-MeFOSAA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 12:28:01 PM | 0.83 | 0.84 | 581 | 0.3546 | 187 | 101.5 |
| STD 2 | STD 2 | x | 2018/02/06 12:30:26 PM | 1.70 | 1.64 | 1088 | 0.3437 | 497 | 96.7 |
| STD 3 | STD 3 | x | 2018/02/06 12:32:51 PM | 5.00 | 5.09 | 3380 | 0.3664 | 578 | 101.7 |
| STD 4 | STD 4 | x | 2018/02/06 12:35:16 PM | 12.50 | 11.93 | 7647 | 0.3448 | 1165 | 95.4 |
| STD 5 | STD 5 | x | 2018/02/06 12:37:42 PM | 25.00 | 25.44 | 17314 | 0.3682 | 913 | 101.8 |
| STD 6 | STD 6 | x | 2018/02/06 12:40:07 PM | 41.70 | 42.90 | 27554 | 0.3725 | 1045 | 102.9 |

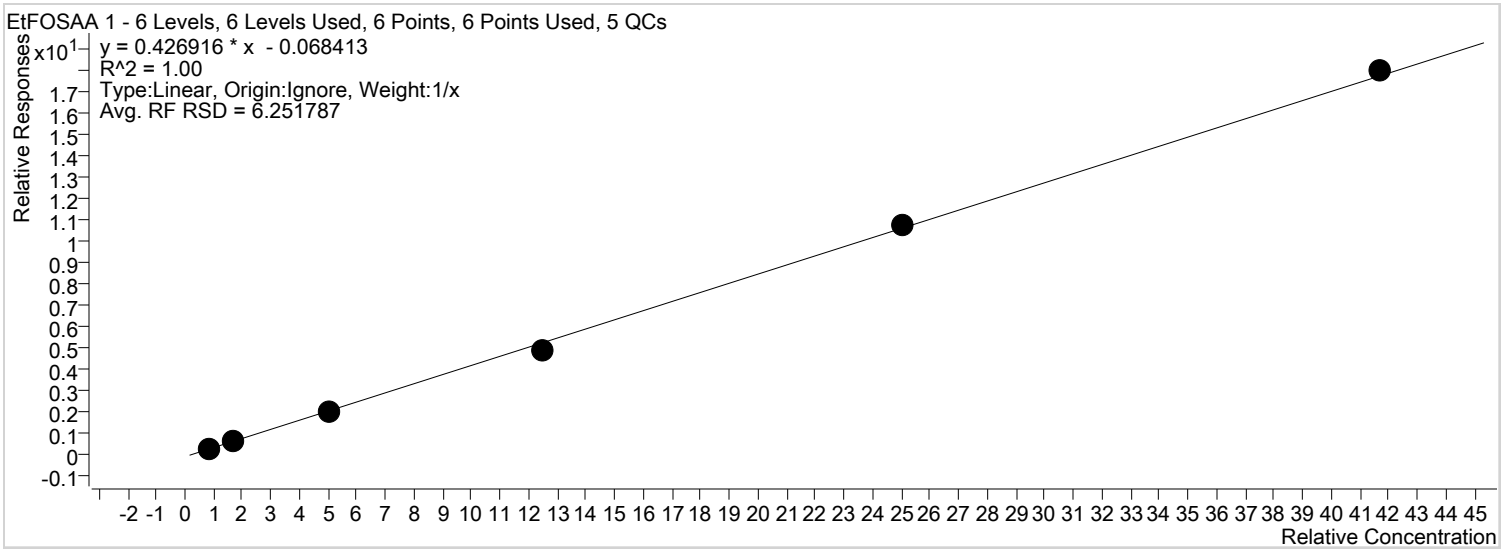
**Batch Path** T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/08 3:32:49 PM

**Instrument:** LCMS04

**Analyte:** EtFOSAA 1

**Internal Standard:** D5-EtFOSAA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/06 12:28:01 PM | 0.83 | 0.89 | 520 | 0.3761 | 76 | 107.4 |
| STD 2 | STD 2 | x | 2018/02/06 12:30:26 PM | 1.70 | 1.66 | 1054 | 0.3778 | 119 | 97.9 |
| STD 3 | STD 3 | x | 2018/02/06 12:32:51 PM | 5.00 | 4.97 | 3261 | 0.4104 | 283 | 99.3 |
| STD 4 | STD 4 | x | 2018/02/06 12:35:16 PM | 12.50 | 11.55 | 7583 | 0.3891 | 591 | 92.4 |
| STD 5 | STD 5 | x | 2018/02/06 12:37:42 PM | 25.00 | 25.39 | 17091 | 0.4308 | 1008 | 101.5 |
| STD 6 | STD 6 | x | 2018/02/06 12:40:07 PM | 41.70 | 42.27 | 27557 | 0.4311 | 1223 | 101.4 |

# Quantitation Results

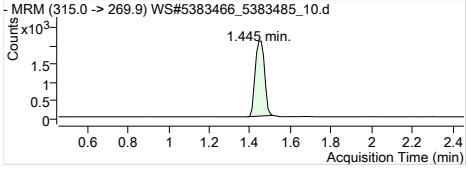
Agilent Technologies

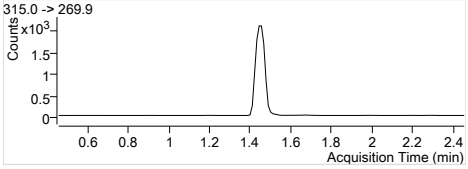
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A2 |
| **Acq. Date** | 2018/02/06 6:51:16 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

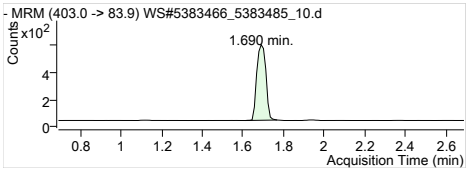
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6584 | 1.44 | 1 µg/L | | |
| MPFHxS | 1727 | 1.69 | 1 µg/L | | |
| MPFHpA | 8753 | 1.71 | 1 µg/L | | |
| MPFOA | 9011 | 1.89 | 1 µg/L | | |
| MPFOS | 2012 | 1.99 | 1 µg/L | | |
| MPFNA | 9174 | 2.04 | 1 µg/L | | |
| MPFDA | 7976 | 2.15 | 1 µg/L | | |
| MPFUnA | 8831 | 2.25 | 1 µg/L | | |
| MPFDoA | 11268 | 2.33 | 1 µg/L | | |
| MPFTeDA | 13509 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 26497 | 1.44 | 1 µg/L | | |
| 13C9-PFDA IS | 34805 | 2.15 | 1 µg/L | | |

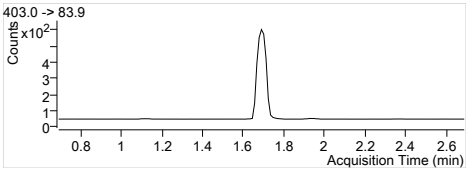
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 578 | 1.11 | 0.83 | 0.90 µg/L | 108.98 |
| PFHxA 1 | 1948 | 1.46 | 0.83 | 1.05 µg/L | 126.87 |
| PFHxS 1 | 567 | 1.69 | 0.83 | 0.99 µg/L | 118.71 |
| PFHpA 1 | 2703 | 1.71 | 0.83 | 0.93 µg/L | 111.51 |
| PFOA 1 | 2981 | 1.89 | 0.83 | 0.95 µg/L | 115.04 |
| PFOS 1 | 550 | 1.98 | 0.83 | 0.85 µg/L | 102.71 |
| PFNA 1 | 2344 | 2.04 | 0.83 | 0.79 µg/L | 94.69 |
| PFDA 1 | 2847 | 2.15 | 0.83 | 0.84 µg/L | 101.62 |
| PFUnA 1 | 3094 | 2.25 | 0.83 | 0.82 µg/L | 98.81 |
| PFDoA 1 | 4022 | 2.33 | 0.83 | 0.99 µg/L | 119.52 |
| PFTrDA 1 | 4356 | 2.41 | 0.83 | 0.82 µg/L | 98.22 |
| PFTeDA 1 | 3525 | 2.48 | 0.83 | 0.80 µg/L | 96.28 |
| 13C2-PFHxA | 6584 | 1.44 | 100.00 | 104.88 µg/L | 104.88 |
| 18O2-PFHxS | 1727 | 1.69 | 100.00 | 112.16 µg/L | 112.16 |
| 13C4-PFHpA | 8753 | 1.71 | 100.00 | 113.07 µg/L | 113.07 |
| 13C4-PFOA | 9011 | 1.89 | 100.00 | 108.34 µg/L | 108.34 |
| 13C4-PFOS | 2012 | 1.99 | 100.00 | 110.01 µg/L | 110.01 |
| 13C5-PFNA | 9154 | 2.04 | 100.00 | 111.70 µg/L | 111.70 |
| 13C2-PFDA | 7930 | 2.15 | 100.00 | 113.54 µg/L | 113.54 |
| 13C2-PFUnA | 8831 | 2.25 | 100.00 | 104.90 µg/L | 104.90 |
| 13C2-PFDoA | 11268 | 2.33 | 100.00 | 100.57 µg/L | 100.57 |
| 13C2-PFTeDA | 13849 | 2.48 | 100.00 | 108.48 µg/L | 108.48 |
| 13C6-PFHxA | 26497 | 1.44 | 100.00 | 93.20 µg/L | 93.20 |
| 13C9-PFDA | 34805 | 2.15 | 100.00 | 97.29 µg/L | 97.29 |



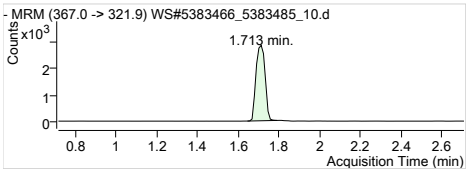



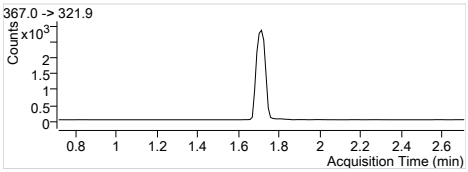

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.445 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



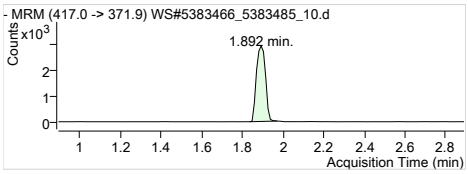



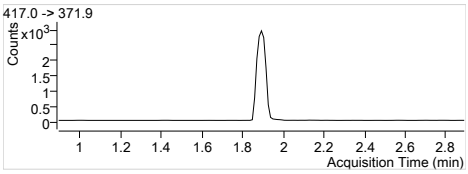

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: CC



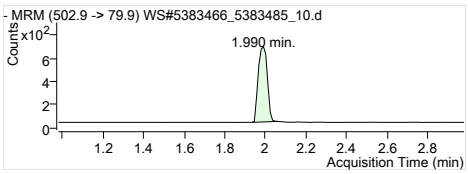



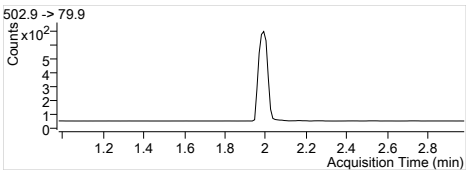

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: CC



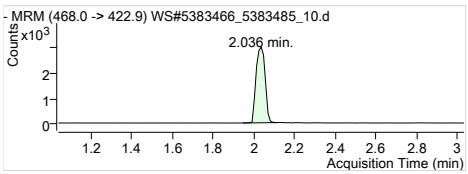



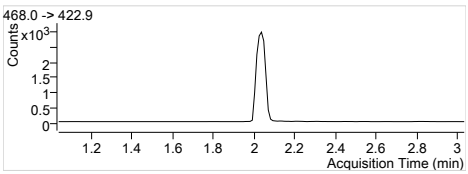

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: CC



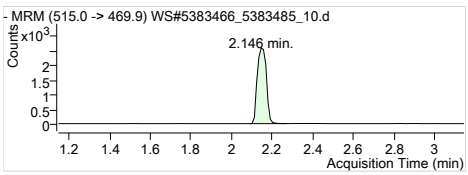



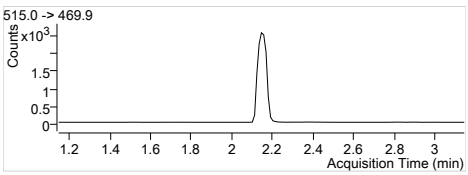

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: CC



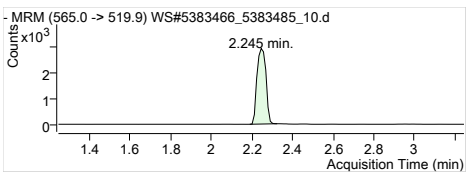



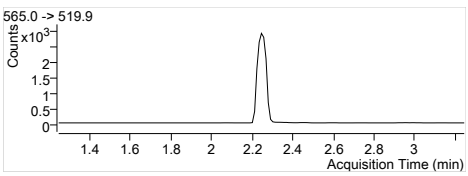

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: CC



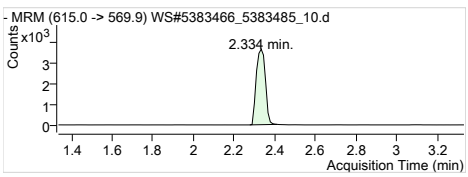



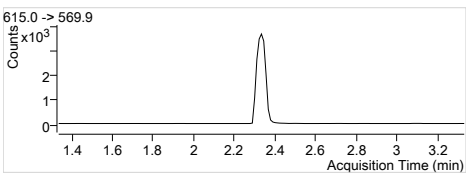

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



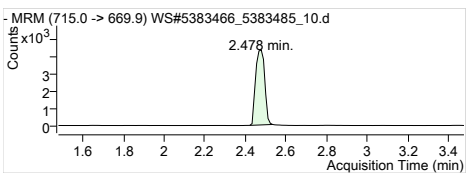



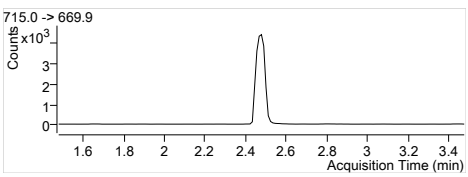

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: CC



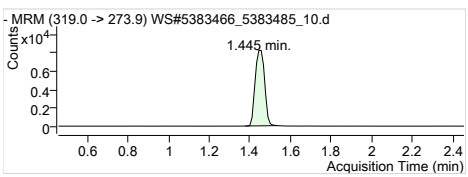



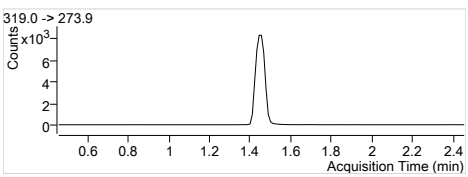

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: CC



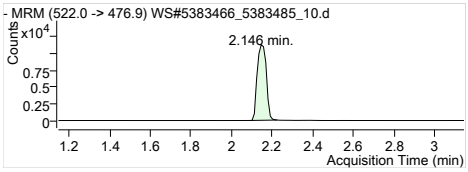



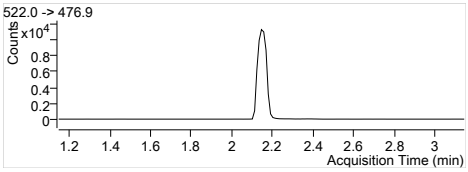

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: CC



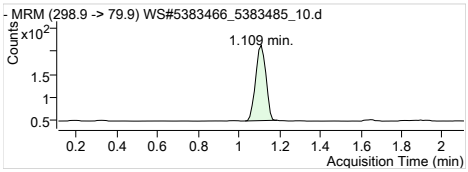



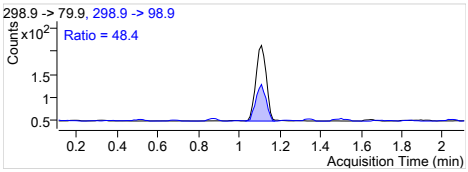

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.445 (1.456)
Concentration: 1 µg/L
Sample type: CC



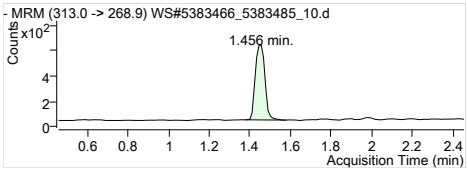



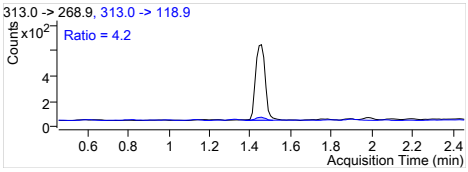

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



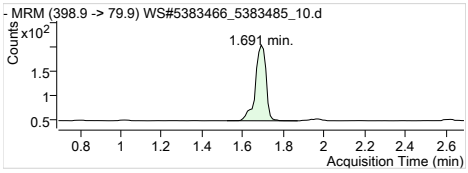



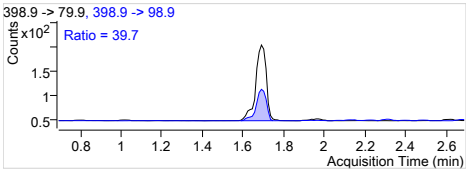

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 0.90 µg/L
Area ratio: 0.33468
Sample type: CC



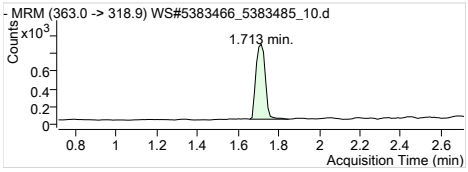



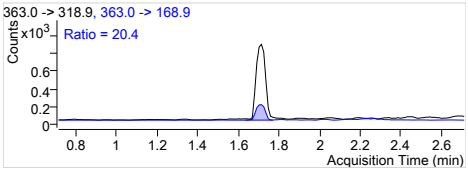

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 1.05 µg/L
Area ratio: 0.29587
Sample type: CC



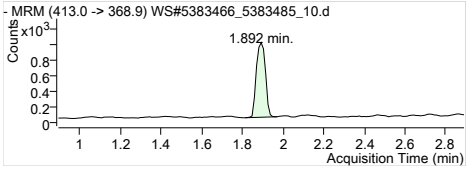



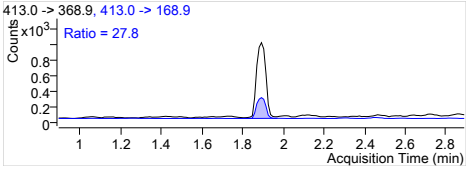

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.99 µg/L
Area ratio: 0.32831
Sample type: CC



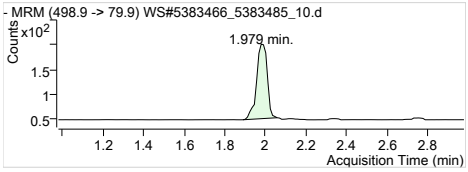



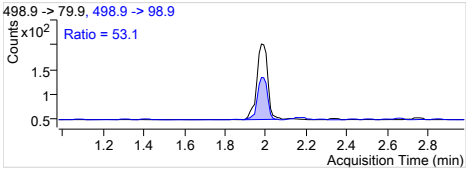

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 0.93 µg/L
Area ratio: 0.30881
Sample type: CC



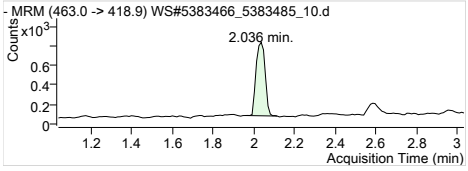



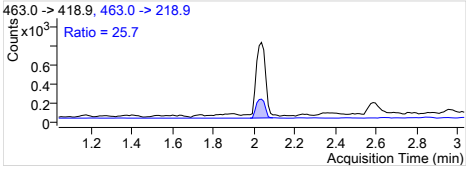

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 0.95 µg/L
Area ratio: 0.33082
Sample type: CC



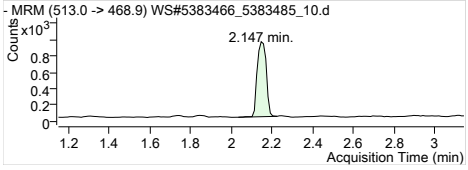



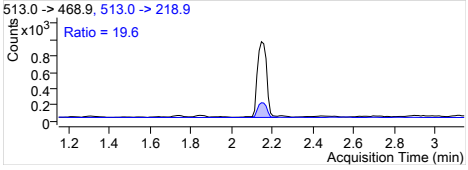

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 0.85 µg/L
Area ratio: 0.27336
Sample type: CC



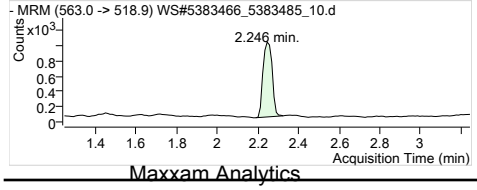



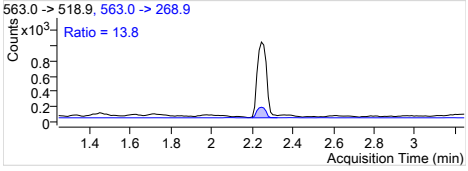

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 0.79 µg/L
Area ratio: 0.25550
Sample type: CC



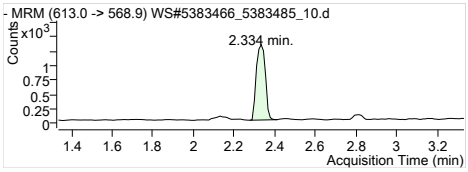



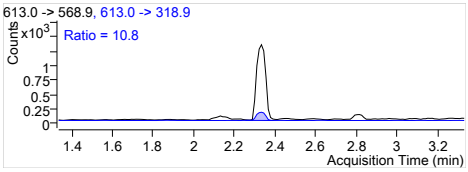

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.147)
Calc. conc. 0.84 µg/L
Area ratio: 0.35695
Sample type: CC



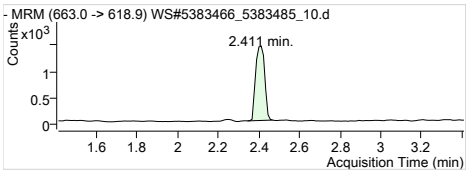



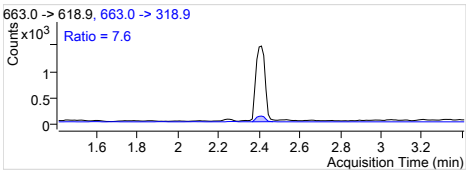

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 0.82 µg/L
Area ratio: 0.35036
Sample type: CC



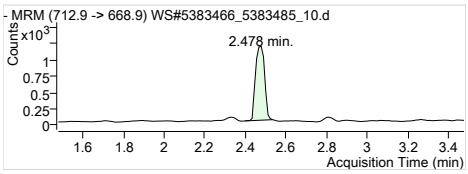



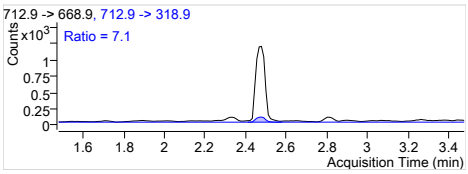

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 0.99 µg/L
Area ratio: 0.35694
Sample type: CC



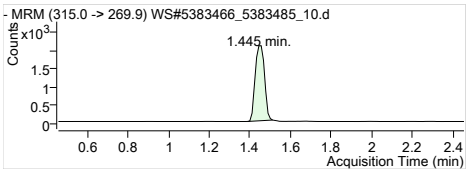



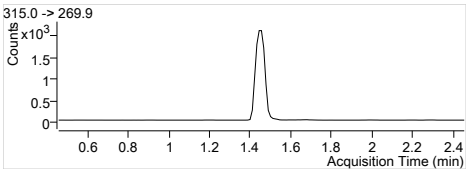

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.411 (2.411)
Calc. conc. 0.82 µg/L
Area ratio: 0.32245
Sample type: CC



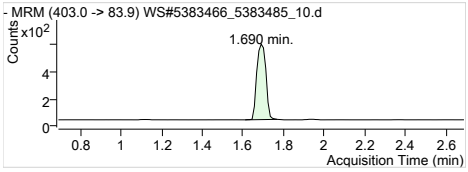



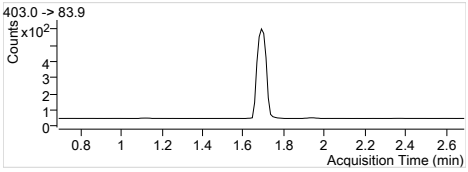

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 0.80 µg/L
Area ratio: 0.26094
Sample type: CC



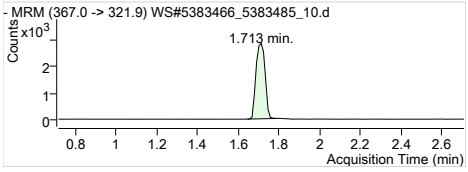



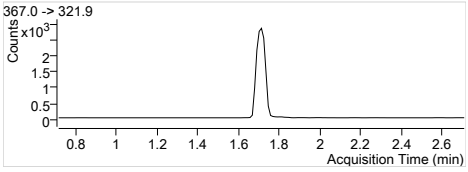

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.445 (1.456)
Calc. conc. 104.88 µg/L
Area ratio: 0.24848
Sample type: CC



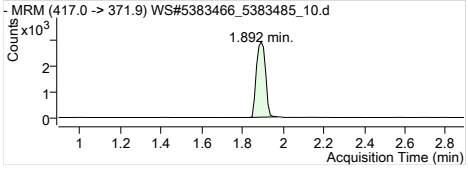



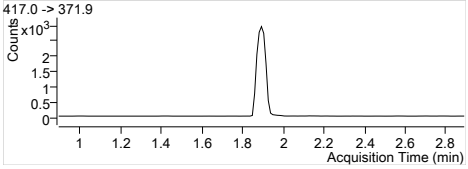

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 112.16 µg/L
Area ratio: 0.06518
Sample type: CC



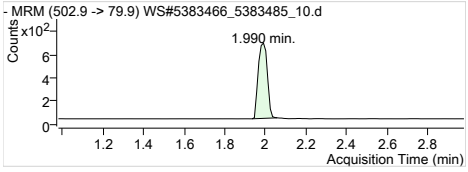



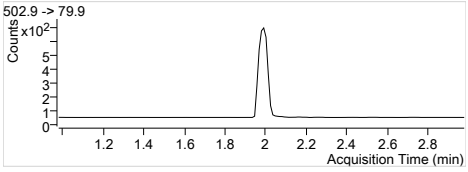

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 113.07 µg/L
Area ratio: 0.33034
Sample type: CC



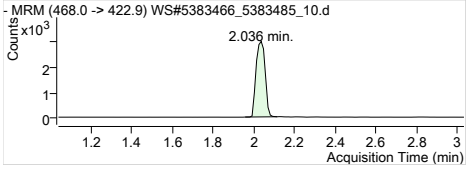



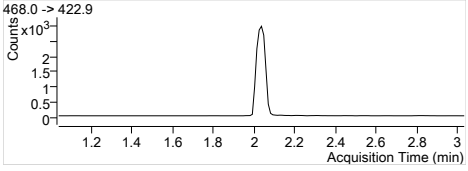

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 108.34 µg/L
Area ratio: 0.34008
Sample type: CC



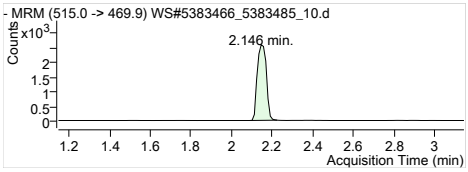



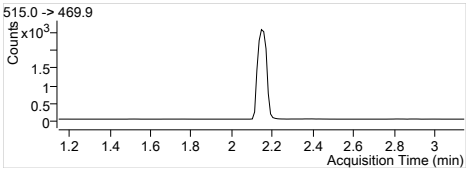

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.990 (1.979)
Calc. conc. 110.01 µg/L
Area ratio: 0.07593
Sample type: CC



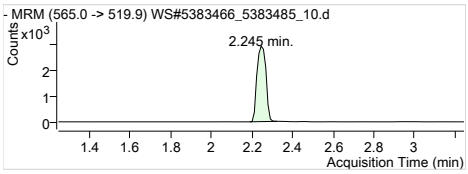



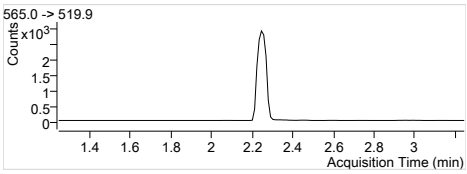

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 111.70 µg/L
Area ratio: 0.34547
Sample type: CC



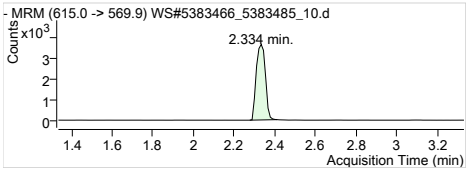



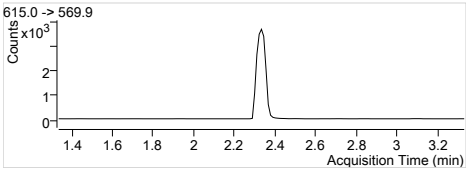

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 113.54 µg/L
Area ratio: 0.22784
Sample type: CC



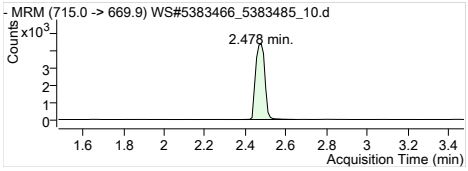



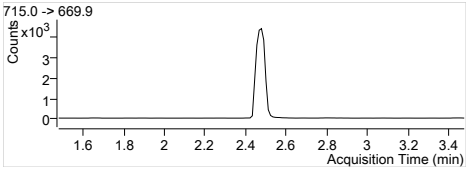

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 104.90 µg/L
Area ratio: 0.25373
Sample type: CC



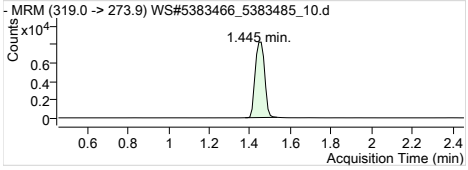



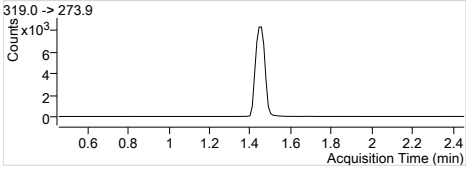

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 100.57 µg/L
Area ratio: 0.32375
Sample type: CC



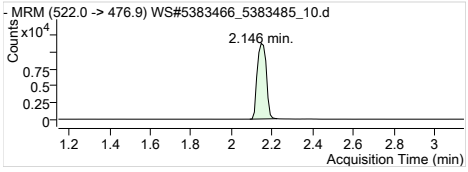



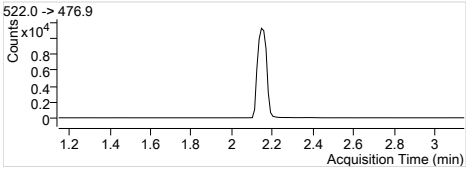

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 108.48 µg/L
Area ratio: 0.39790
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.445 (1.456)
Calc. conc. 93.20 µg/L
Area ratio: 0
Sample type: CC



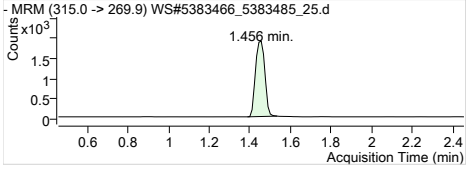

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 97.29 µg/L
Area ratio: 0
Sample type: CC

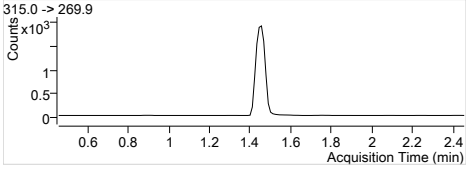
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_25.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/06 8:05:24 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

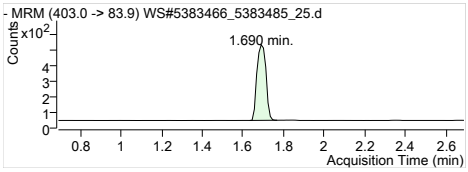
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6023 | 1.46 | 1 µg/L | | |
| MPFHxS | 1496 | 1.69 | 1 µg/L | | |
| MPFHpA | 8389 | 1.71 | 1 µg/L | | |
| MPFOA | 8761 | 1.89 | 1 µg/L | | |
| MPFOS | 1951 | 1.99 | 1 µg/L | | |
| MPFNA | 8720 | 2.04 | 1 µg/L | | |
| MPFDA | 6932 | 2.15 | 1 µg/L | | |
| MPFUnA | 8831 | 2.25 | 1 µg/L | | |
| MPFDoA | 10652 | 2.33 | 1 µg/L | | |
| MPFTeDA | 13187 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 26693 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 36124 | 2.15 | 1 µg/L | | |

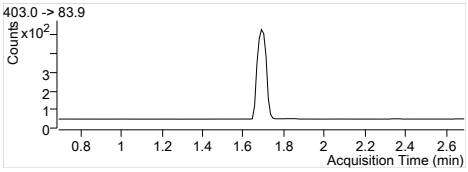
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 7974 | 1.11 | 12.50 | 12.21 µg/L | 97.66 |
| PFHxA 1 | 28486 | 1.46 | 12.50 | 12.00 µg/L | 95.96 |
| PFHxS 1 | 7934 | 1.69 | 12.50 | 12.11 µg/L | 96.89 |
| PFHpA 1 | 38973 | 1.71 | 12.50 | 11.21 µg/L | 89.71 |
| PFOA 1 | 43942 | 1.89 | 12.50 | 11.93 µg/L | 95.45 |
| PFOS 1 | 7815 | 1.98 | 12.50 | 11.69 µg/L | 93.48 |
| PFNA 1 | 37389 | 2.04 | 12.50 | 11.54 µg/L | 92.29 |
| PFDA 1 | 38777 | 2.15 | 12.50 | 11.93 µg/L | 95.48 |
| PFUnA 1 | 43664 | 2.25 | 12.50 | 11.67 µg/L | 93.38 |
| PFDoA 1 | 56352 | 2.33 | 12.50 | 12.99 µg/L | 103.94 |
| PFTrDA 1 | 62695 | 2.41 | 12.50 | 11.52 µg/L | 92.12 |
| PFTeDA 1 | 54785 | 2.48 | 12.50 | 12.09 µg/L | 96.69 |
| 13C2-PFHxA | 6023 | 1.46 | 100.00 | 95.24 µg/L | 95.24 |
| 18O2-PFHxS | 1496 | 1.69 | 100.00 | 96.45 µg/L | 96.45 |
| 13C4-PFHpA | 8389 | 1.71 | 100.00 | 107.57 µg/L | 107.57 |
| 13C4-PFOA | 8761 | 1.89 | 100.00 | 104.56 µg/L | 104.56 |
| 13C4-PFOS | 1951 | 1.99 | 100.00 | 105.89 µg/L | 105.89 |
| 13C5-PFNA | 8646 | 2.04 | 100.00 | 104.73 µg/L | 104.73 |
| 13C2-PFDA | 6832 | 2.15 | 100.00 | 94.25 µg/L | 94.25 |
| 13C2-PFUnA | 8831 | 2.25 | 100.00 | 101.07 µg/L | 101.07 |
| 13C2-PFDoA | 10652 | 2.33 | 100.00 | 91.60 µg/L | 91.60 |
| 13C2-PFTeDA | 13522 | 2.48 | 100.00 | 102.05 µg/L | 102.05 |
| 13C6-PFHxA | 26693 | 1.46 | 100.00 | 93.89 µg/L | 93.89 |
| 13C9-PFDA | 36124 | 2.15 | 100.00 | 100.98 µg/L | 100.98 |



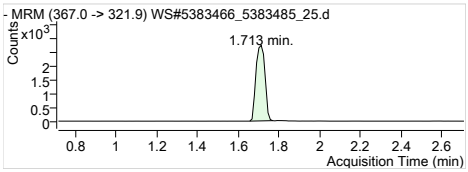



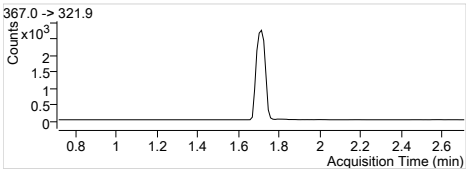

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



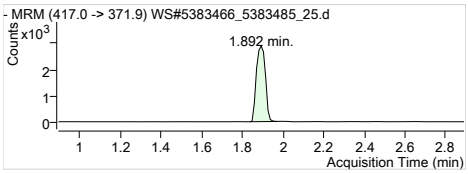



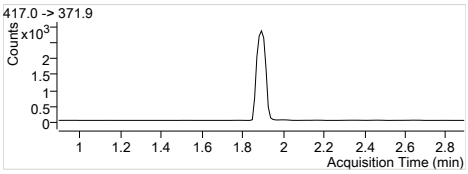

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: CC



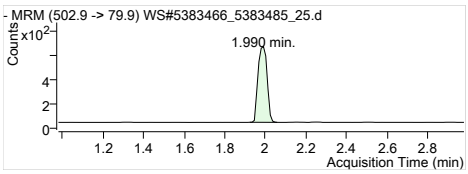



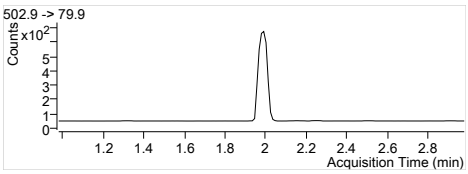

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: CC



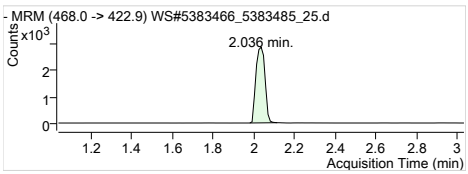



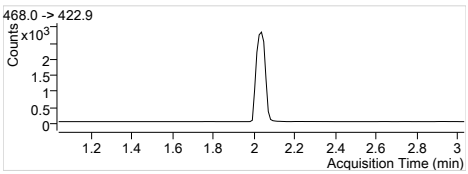

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: CC



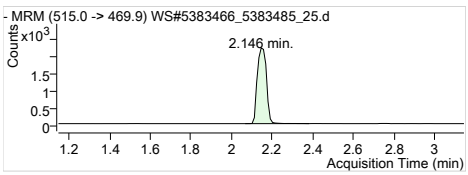



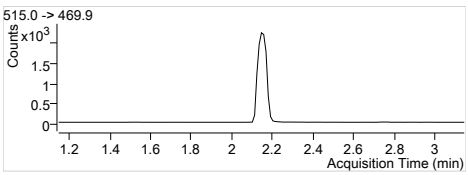

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: CC



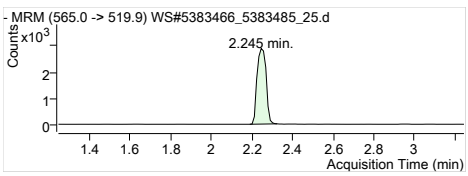



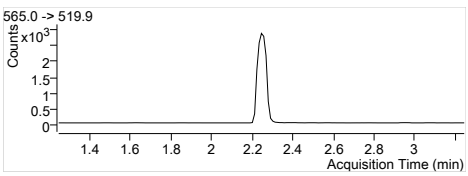

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: CC



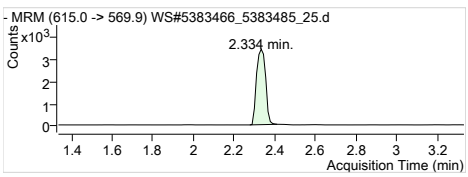



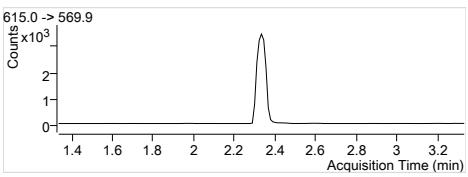

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



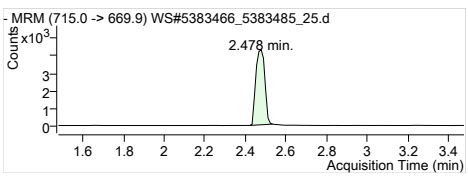



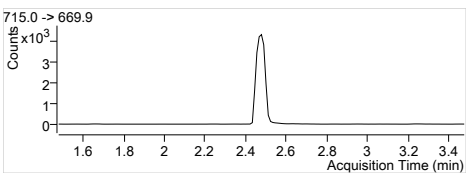

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: CC



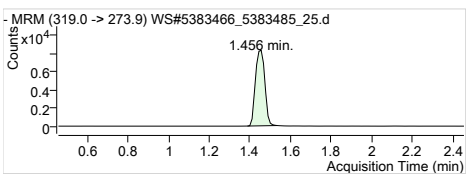



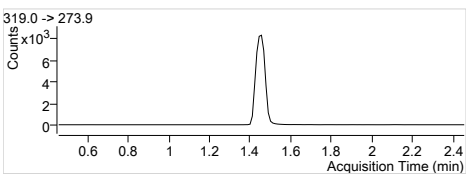

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: CC



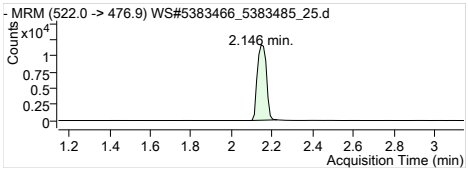



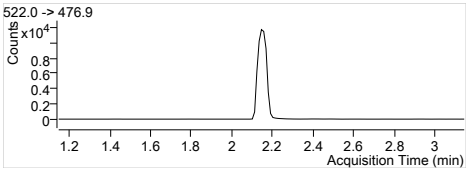

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: CC



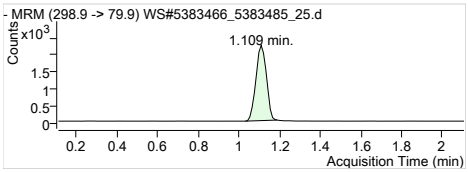



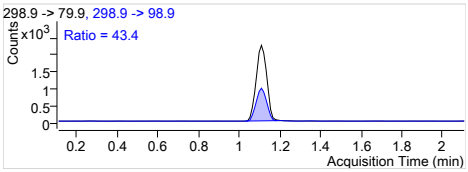

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: CC



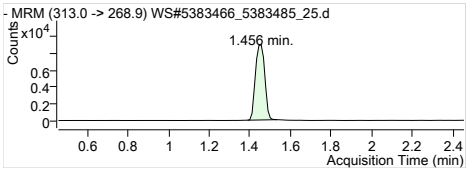



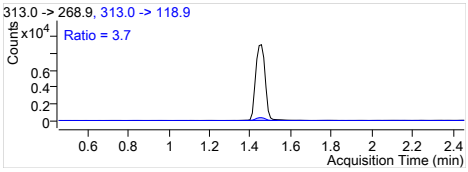

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



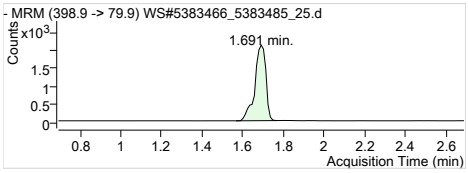



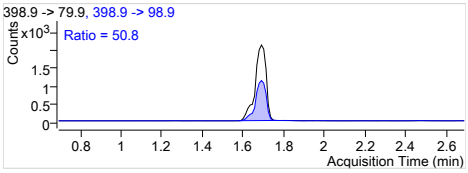

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 12.21 µg/L
Area ratio: 5.33021
Sample type: CC



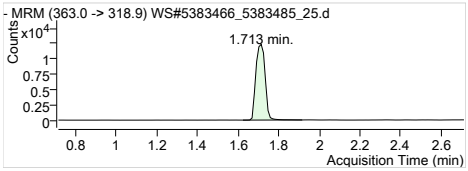



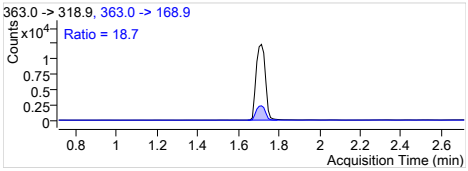

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 12.00 µg/L
Area ratio: 4.72954
Sample type: CC



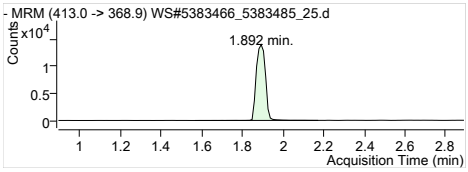



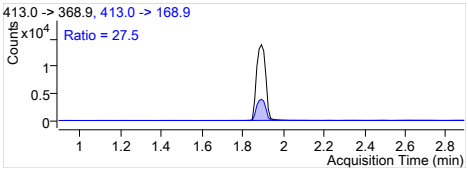

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.11 µg/L
Area ratio: 5.30348
Sample type: CC



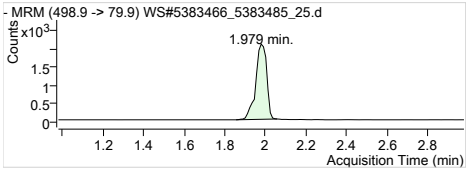



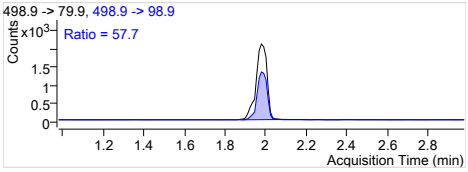

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 11.21 µg/L
Area ratio: 4.64573
Sample type: CC



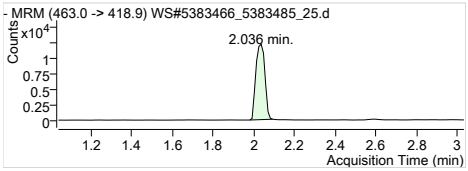



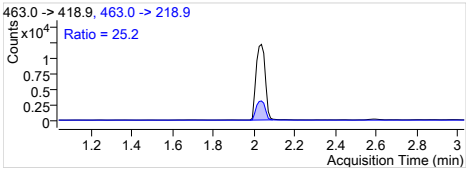

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 11.93 µg/L
Area ratio: 5.01564
Sample type: CC



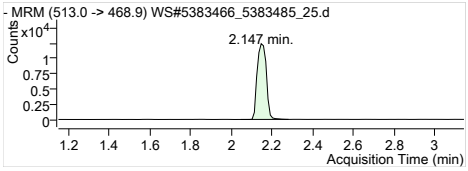



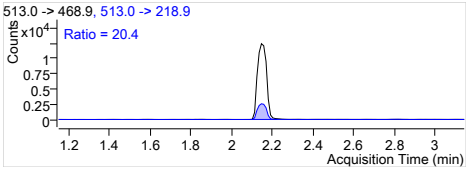

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 11.69 µg/L
Area ratio: 4.00564
Sample type: CC



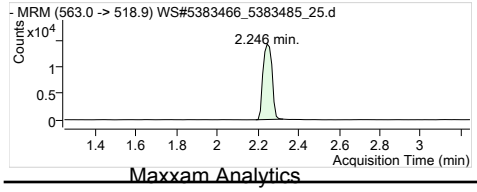



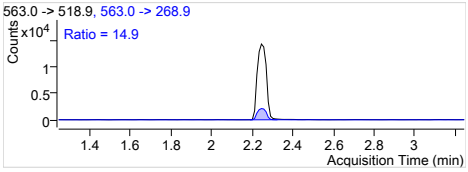

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 11.54 µg/L
Area ratio: 4.28773
Sample type: CC



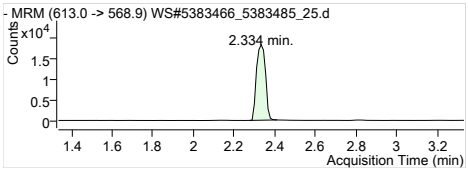



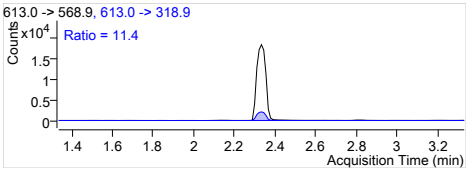

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.147)
Calc. conc. 11.93 µg/L
Area ratio: 5.59391
Sample type: CC



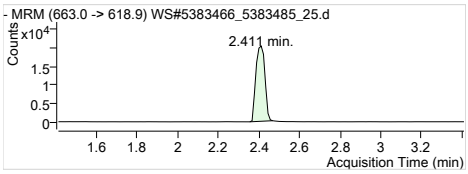



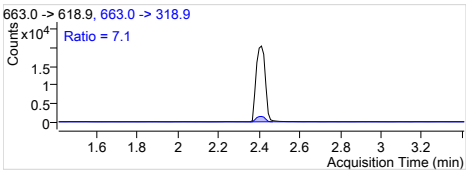

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 11.67 µg/L
Area ratio: 4.94440
Sample type: CC



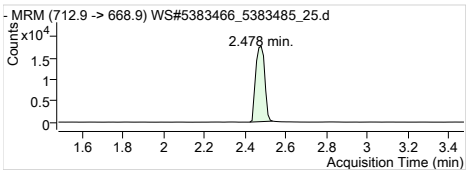



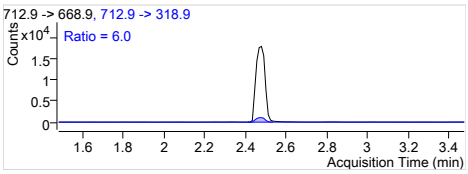

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 12.99 µg/L
Area ratio: 5.29027
Sample type: CC



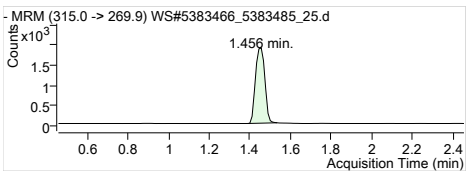



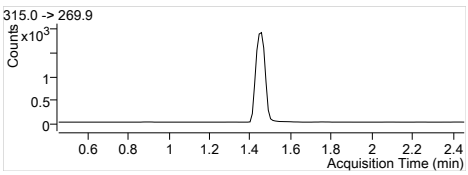

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.411 (2.411)
Calc. conc. 11.52 µg/L
Area ratio: 4.75430
Sample type: CC



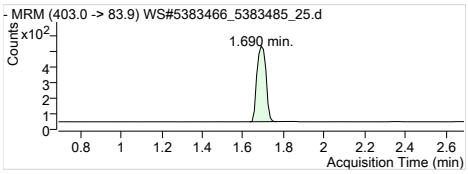



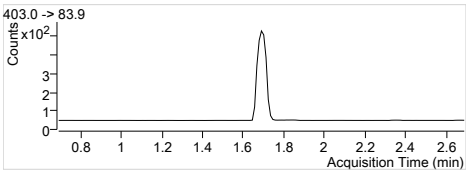

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 12.09 µg/L
Area ratio: 4.15447
Sample type: CC



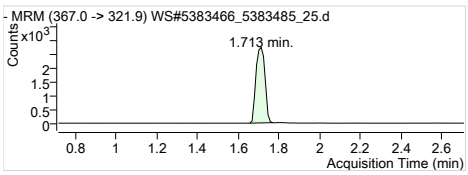



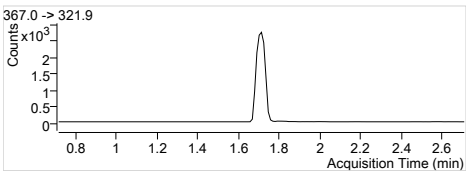

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 95.24 µg/L
Area ratio: 0.22564
Sample type: CC



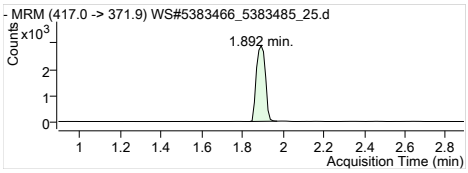



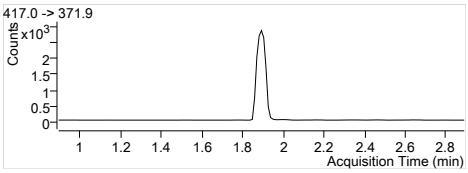

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 96.45 µg/L
Area ratio: 0.05604
Sample type: CC



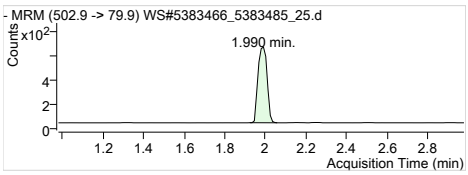



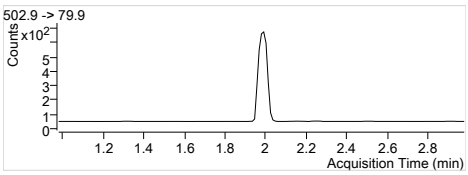

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 107.57 µg/L
Area ratio: 0.31428
Sample type: CC



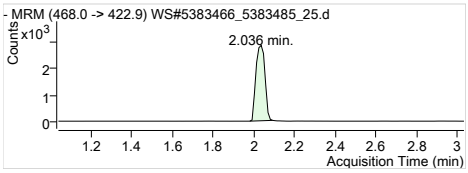



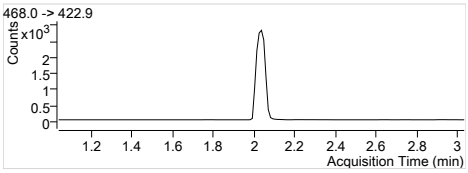

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 104.56 µg/L
Area ratio: 0.32821
Sample type: CC



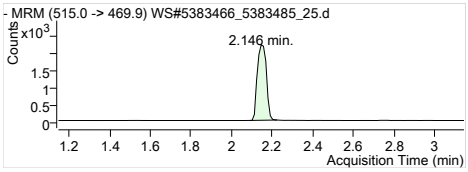



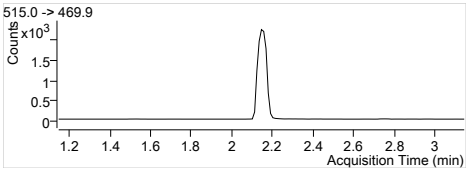

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.990 (1.979)
Calc. conc. 105.89 µg/L
Area ratio: 0.07309
Sample type: CC



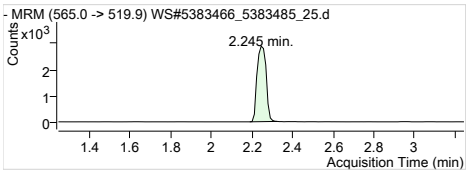



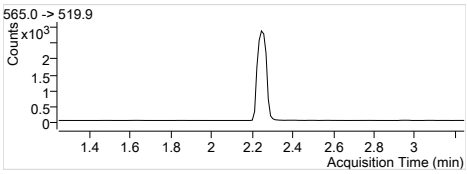

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 104.73 µg/L
Area ratio: 0.32391
Sample type: CC



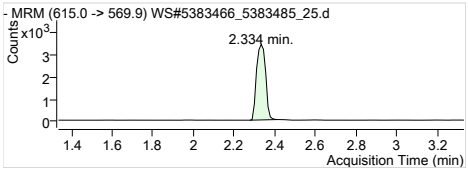



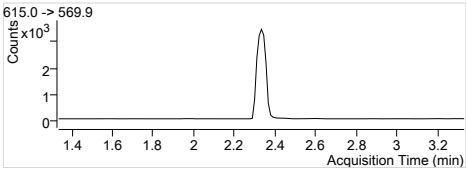

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 94.25 µg/L
Area ratio: 0.18913
Sample type: CC



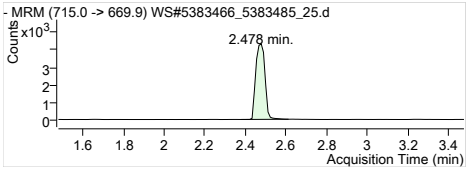



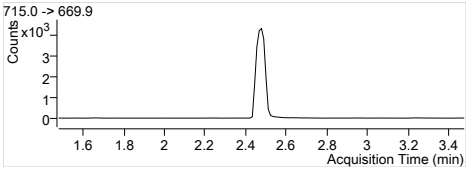

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 101.07 µg/L
Area ratio: 0.24446
Sample type: CC



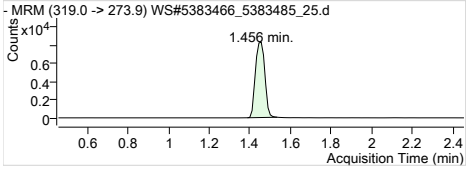



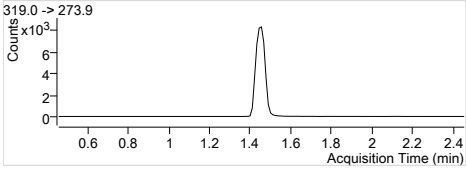

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 91.60 µg/L
Area ratio: 0.29487
Sample type: CC



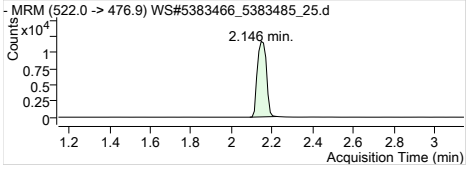



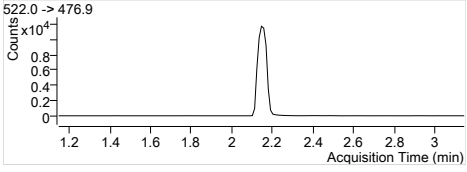

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 102.05 µg/L
Area ratio: 0.37432
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 93.89 µg/L
Area ratio: 0
Sample type: CC



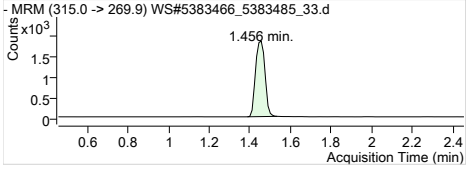

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 100.98 µg/L
Area ratio: 0
Sample type: CC

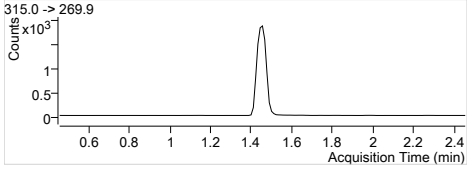
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485\QuantResults\PFC_Water_Low_180206_WS#5383466_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_33.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/06 8:44:52 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

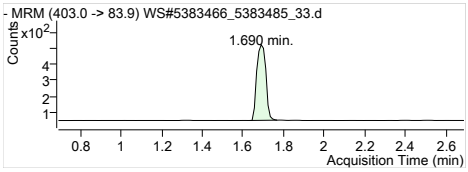
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5952 | 1.46 | 1 µg/L | | |
| MPFHxS | 1479 | 1.69 | 1 µg/L | | |
| MPFHpA | 8195 | 1.71 | 1 µg/L | | |
| MPFOA | 8316 | 1.89 | 1 µg/L | | |
| MPFOS | 1991 | 1.99 | 1 µg/L | | |
| MPFNA | 8403 | 2.04 | 1 µg/L | | |
| MPFDA | 7326 | 2.15 | 1 µg/L | | |
| MPFUnA | 8523 | 2.25 | 1 µg/L | | |
| MPFDoA | 11402 | 2.33 | 1 µg/L | | |
| MPFTeDA | 12531 | 2.48 | 1 µg/L | | |
| 13C6-PFHxA IS | 27441 | 1.46 | 1 µg/L | | |
| 13C9-PFDA IS | 35024 | 2.15 | 1 µg/L | | |

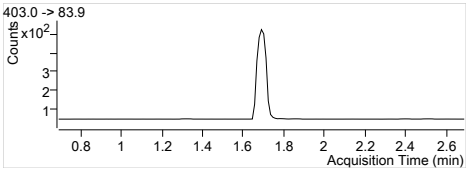
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 7494 | 1.11 | 12.50 | 11.61 µg/L | 92.89 |
| PFHxA 1 | 28156 | 1.46 | 12.50 | 12.00 µg/L | 95.98 |
| PFHxS 1 | 7812 | 1.69 | 12.50 | 12.06 µg/L | 96.51 |
| PFHpA 1 | 37324 | 1.71 | 12.50 | 11.00 µg/L | 87.98 |
| PFOA 1 | 41978 | 1.89 | 12.50 | 12.01 µg/L | 96.06 |
| PFOS 1 | 8158 | 1.98 | 12.50 | 11.95 µg/L | 95.61 |
| PFNA 1 | 38160 | 2.04 | 12.50 | 12.21 µg/L | 97.69 |
| PFDA 1 | 39337 | 2.15 | 12.50 | 11.46 µg/L | 91.68 |
| PFUnA 1 | 41560 | 2.25 | 12.50 | 11.51 µg/L | 92.09 |
| PFDoA 1 | 54433 | 2.33 | 12.50 | 11.74 µg/L | 93.90 |
| PFTrDA 1 | 61489 | 2.41 | 12.50 | 11.88 µg/L | 95.07 |
| PFTeDA 1 | 54112 | 2.48 | 12.50 | 12.56 µg/L | 100.48 |
| 13C2-PFHxA | 5952 | 1.46 | 100.00 | 91.55 µg/L | 91.55 |
| 18O2-PFHxS | 1479 | 1.69 | 100.00 | 92.75 µg/L | 92.75 |
| 13C4-PFHpA | 8195 | 1.71 | 100.00 | 102.22 µg/L | 102.22 |
| 13C4-PFOA | 8316 | 1.89 | 100.00 | 96.54 µg/L | 96.54 |
| 13C4-PFOS | 1991 | 1.99 | 100.00 | 105.12 µg/L | 105.12 |
| 13C5-PFNA | 8349 | 2.04 | 100.00 | 98.37 µg/L | 98.37 |
| 13C2-PFDA | 7211 | 2.15 | 100.00 | 102.60 µg/L | 102.60 |
| 13C2-PFUnA | 8523 | 2.25 | 100.00 | 100.61 µg/L | 100.61 |
| 13C2-PFDoA | 11402 | 2.33 | 100.00 | 101.13 µg/L | 101.13 |
| 13C2-PFTeDA | 12767 | 2.48 | 100.00 | 99.38 µg/L | 99.38 |
| 13C6-PFHxA | 27441 | 1.46 | 100.00 | 96.52 µg/L | 96.52 |
| 13C9-PFDA | 35024 | 2.15 | 100.00 | 97.90 µg/L | 97.90 |



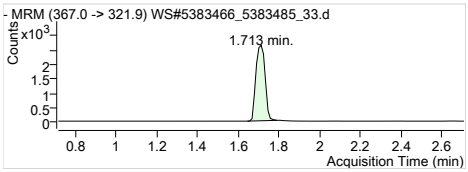



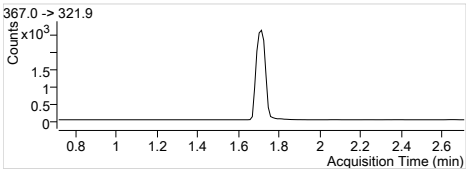

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.456 (1.456) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



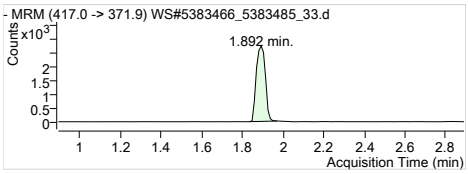



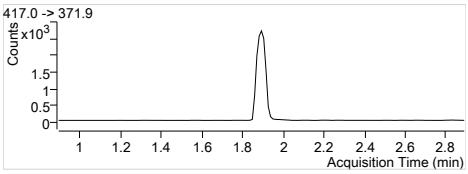

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: CC



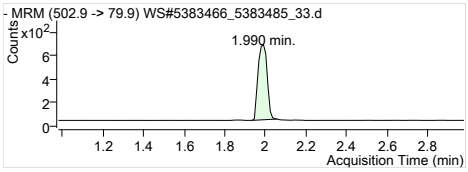



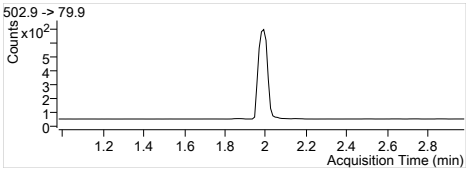

**MPFHpA** Internal Standard
RT (Exp. RT): 1.713 (1.713)
Concentration: 1 µg/L
Sample type: CC



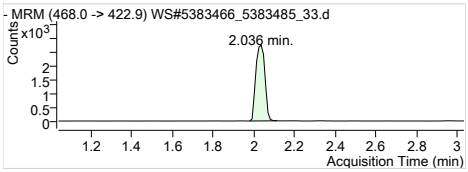



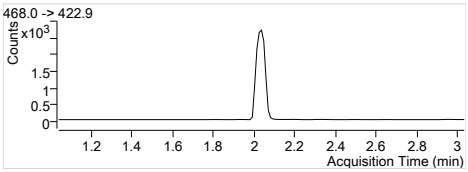

**MPFOA** Internal Standard
RT (Exp. RT): 1.892 (1.892)
Concentration: 1 µg/L
Sample type: CC



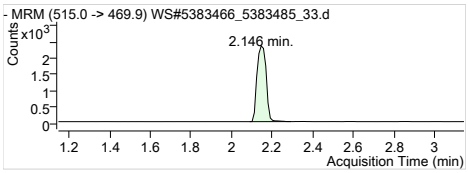



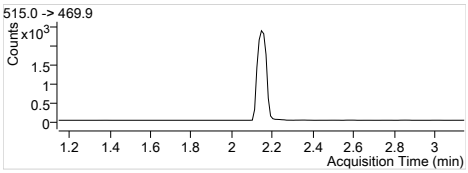

**MPFOS** Internal Standard
RT (Exp. RT): 1.990 (1.979)
Concentration: 1 µg/L
Sample type: CC



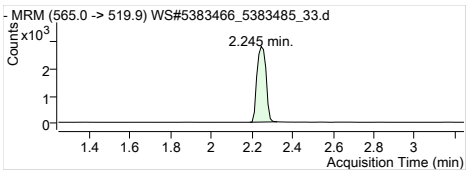



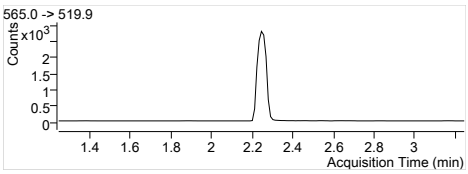

**MPFNA** Internal Standard
RT (Exp. RT): 2.036 (2.036)
Concentration: 1 µg/L
Sample type: CC



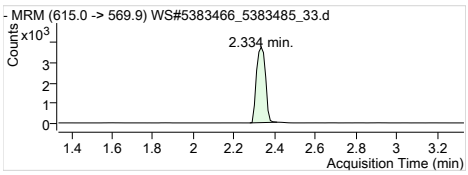



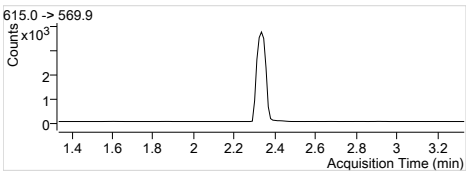

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



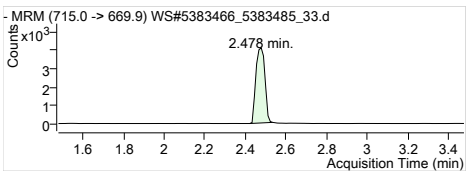



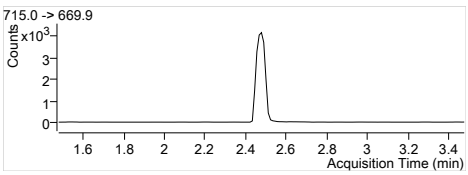

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: CC



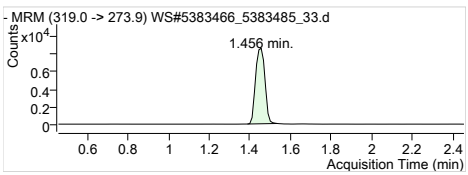



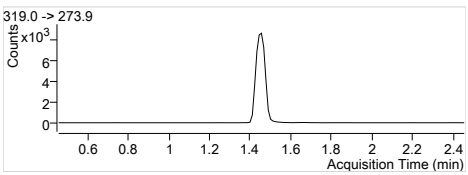

**MPFDoA** Internal Standard
RT (Exp. RT): 2.334 (2.334)
Concentration: 1 µg/L
Sample type: CC



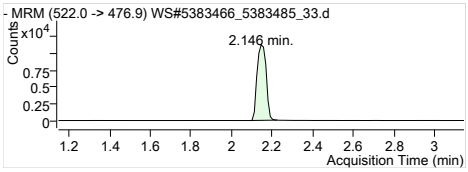



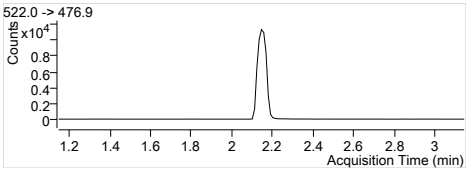

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.478 (2.478)
Concentration: 1 µg/L
Sample type: CC



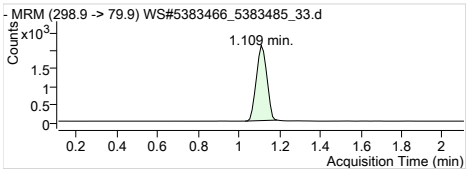



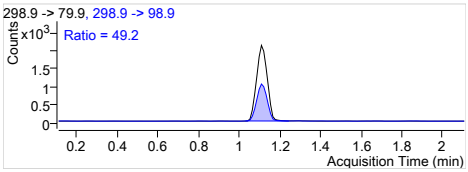

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.456 (1.456)
Concentration: 1 µg/L
Sample type: CC



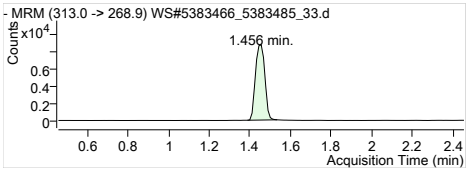



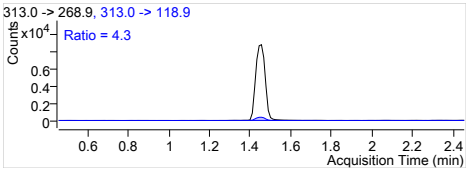

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



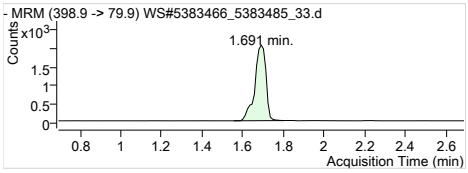



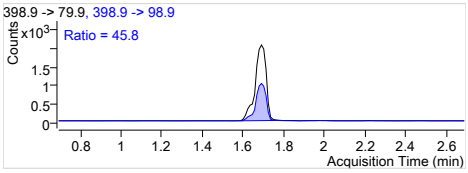

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.109 (1.109)
Calc. conc. 11.61 µg/L
Area ratio: 5.06694
Sample type: CC



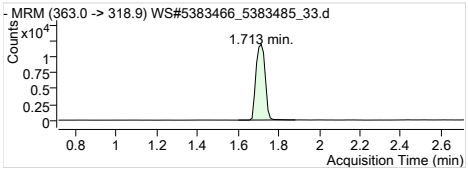



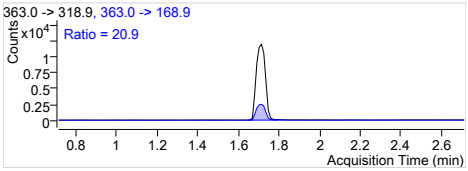

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 12.00 µg/L
Area ratio: 4.73051
Sample type: CC



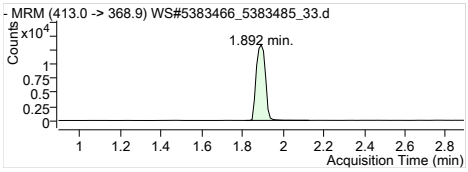



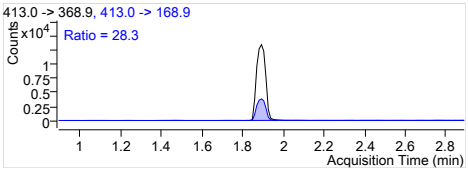

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.06 µg/L
Area ratio: 5.28195
Sample type: CC



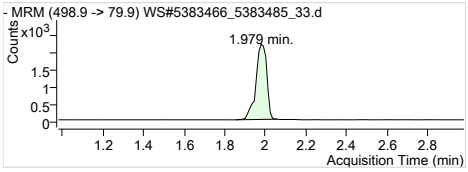



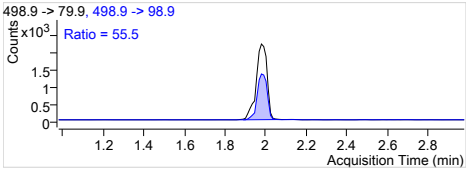

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.713 (1.713)
Calc. conc. 11.00 µg/L
Area ratio: 4.55448
Sample type: CC



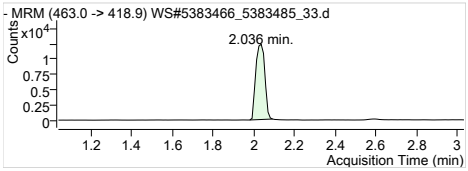



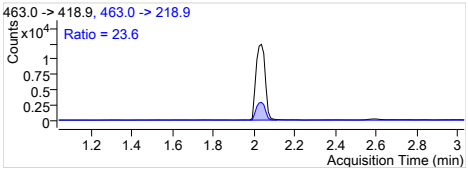

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.892 (1.892)
Calc. conc. 12.01 µg/L
Area ratio: 5.04786
Sample type: CC



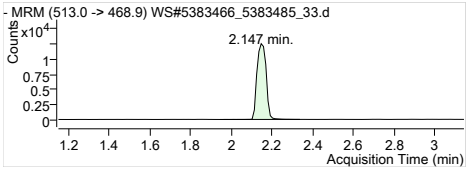



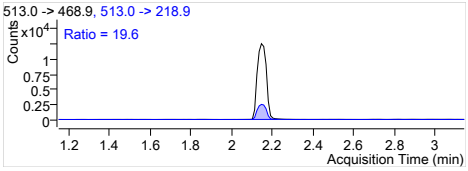

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 11.95 µg/L
Area ratio: 4.09744
Sample type: CC



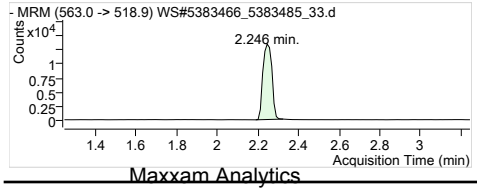



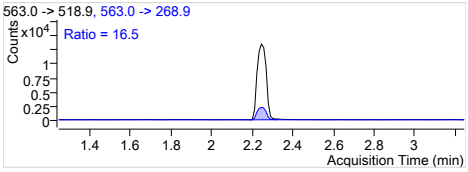

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.036 (2.036)
Calc. conc. 12.21 µg/L
Area ratio: 4.54124
Sample type: CC



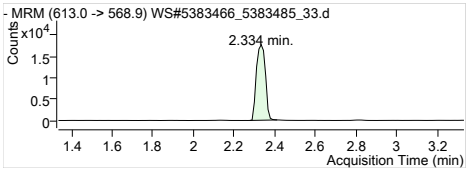



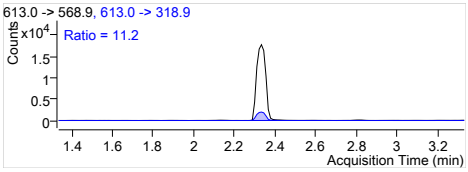

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.147)
Calc. conc. 11.46 µg/L
Area ratio: 5.36951
Sample type: CC



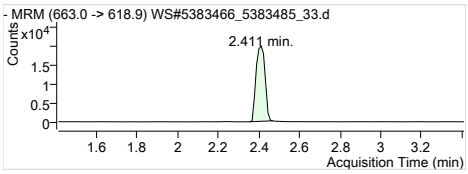



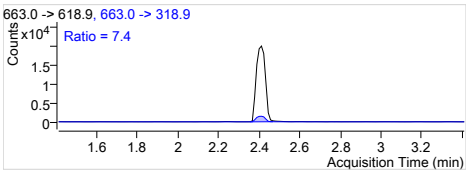

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 11.51 µg/L
Area ratio: 4.87622
Sample type: CC



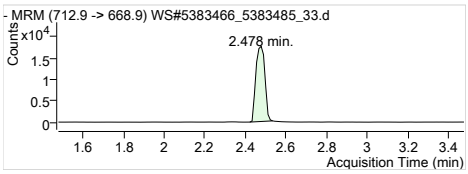



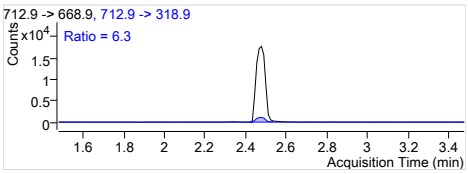

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.334 (2.334) |
| Calc. conc. | 11.74 µg/L |
| Area ratio: | 4.77399 |
| Sample type: | CC |



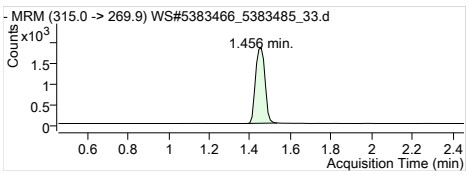



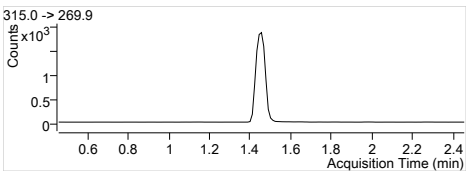

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.411 (2.411) |
| Calc. conc. | 11.88 µg/L |
| Area ratio: | 4.90695 |
| Sample type: | CC |



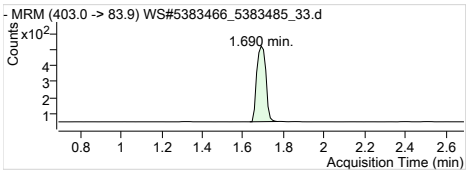



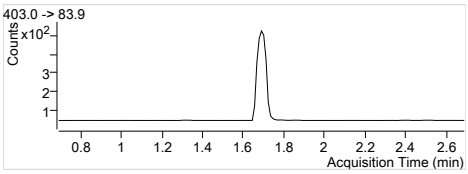

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.478 (2.478) |
| Calc. conc. | 12.56 µg/L |
| Area ratio: | 4.31825 |
| Sample type: | CC |



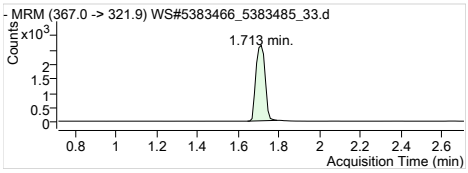



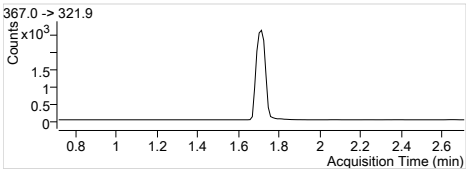

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.456 (1.456) |
| Calc. conc. | 91.55 µg/L |
| Area ratio: | 0.21690 |
| Sample type: | CC |



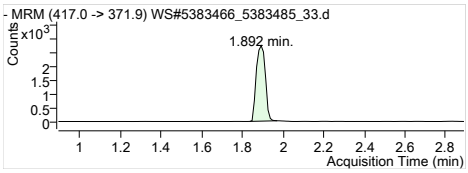



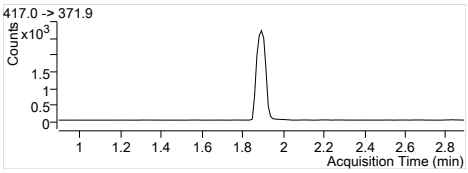

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.690 (1.690) |
| Calc. conc. | 92.75 µg/L |
| Area ratio: | 0.05390 |
| Sample type: | CC |



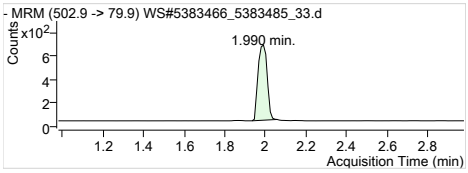



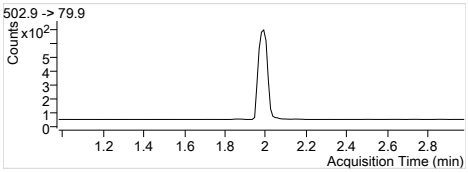

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.713 (1.713) |
| Calc. conc. | 102.22 µg/L |
| Area ratio: | 0.29864 |
| Sample type: | CC |



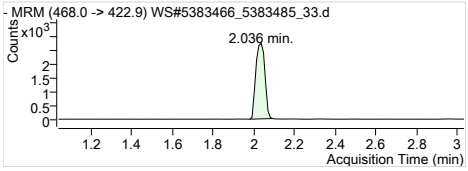



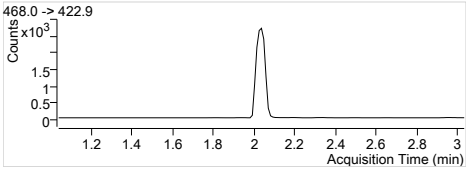

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.892 (1.892) |
| Calc. conc. | 96.54 µg/L |
| Area ratio: | 0.30305 |
| Sample type: | CC |



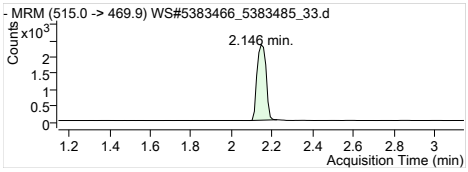



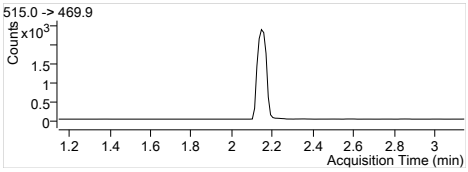

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 1.990 (1.979) |
| Calc. conc. | 105.12 µg/L |
| Area ratio: | 0.07256 |
| Sample type: | CC |



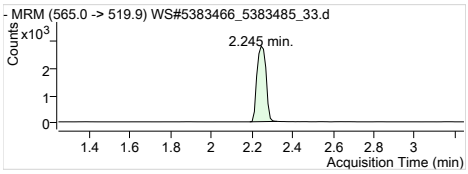



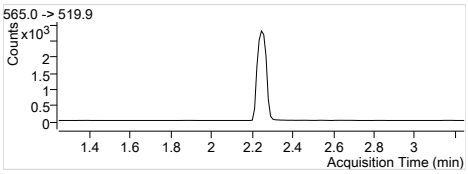

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.036 (2.036) |
| Calc. conc. | 98.37 µg/L |
| Area ratio: | 0.30425 |
| Sample type: | CC |



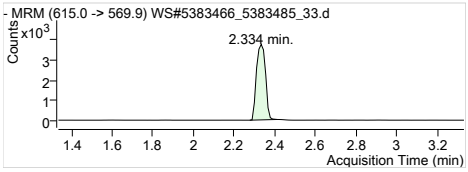



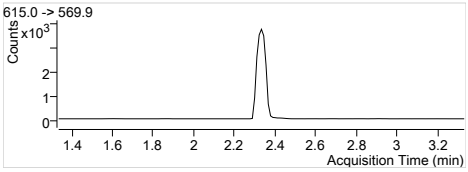

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 102.60 µg/L
Area ratio: 0.20589
Sample type: CC



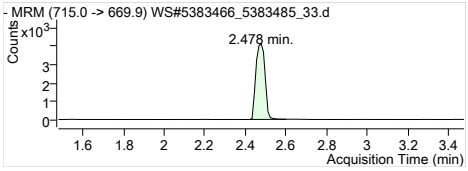



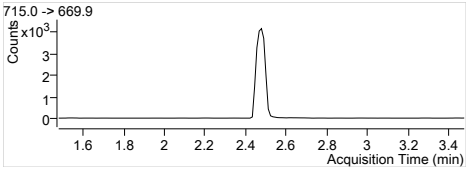

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 100.61 µg/L
Area ratio: 0.24335
Sample type: CC



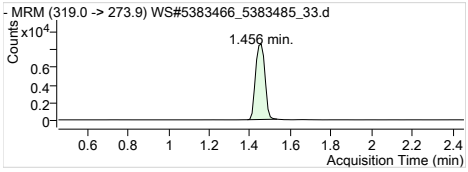



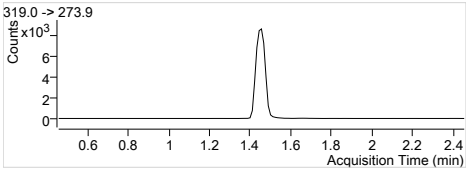

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.334 (2.334)
Calc. conc. 101.13 µg/L
Area ratio: 0.32555
Sample type: CC



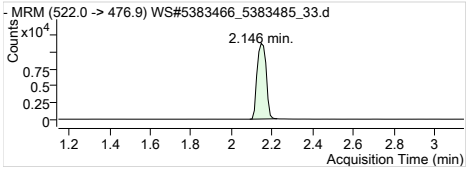



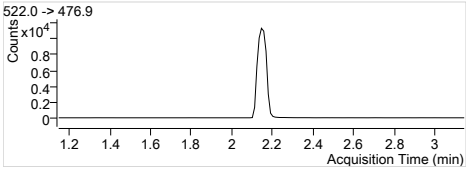

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.478 (2.478)
Calc. conc. 99.38 µg/L
Area ratio: 0.36452
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.456 (1.456)
Calc. conc. 96.52 µg/L
Area ratio: 0
Sample type: CC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 97.90 µg/L
Area ratio: 0
Sample type: CC

# Quantitation Results

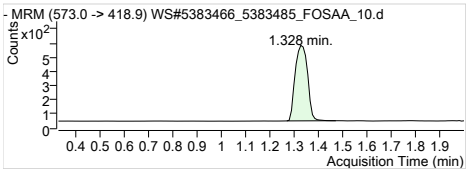
Agilent Technologies

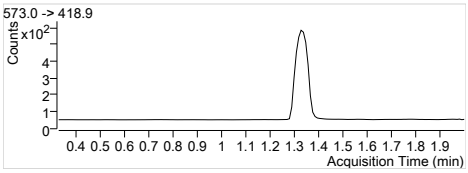
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A2 |
| **Acq. Date** | 2018/02/06 12:47:23 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

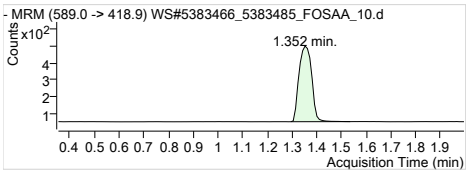
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1894 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1604 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 25890 | 0.96 | 1 µg/L | | |

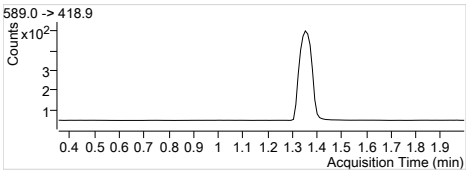
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 559 | 1.33 | 0.83 | 0.84 µg/L | 101.80 |
| EtFOSAA 1 | 528 | 1.35 | 0.83 | 0.93 µg/L | 112.21 |
| D3-MeFOSAA | 1894 | 1.33 | 100.00 | 111.37 µg/L | 111.37 |
| D5-EtFOSAA | 1604 | 1.35 | 100.00 | 109.47 µg/L | 109.47 |
| 13C9-PFDA | 25738 | 0.96 | 100.00 | 91.30 µg/L | 91.30 |



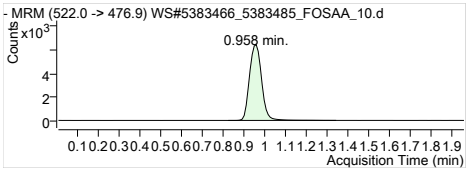



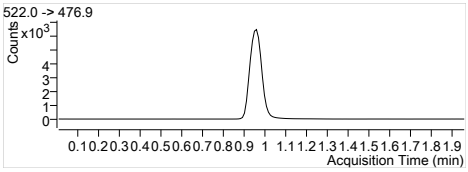

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: CC



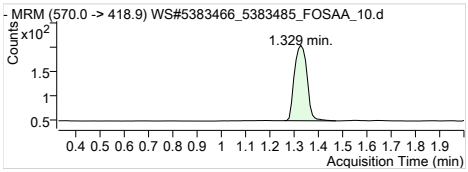



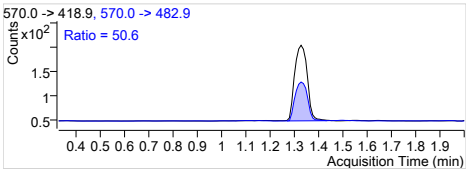

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: CC



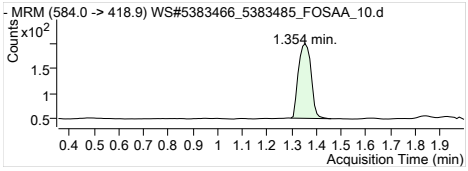



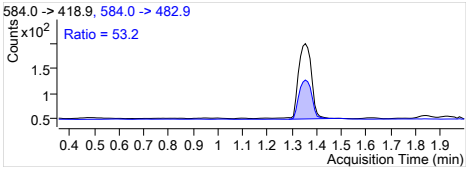

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.958 (0.958)
Concentration: 1 µg/L
Sample type: CC



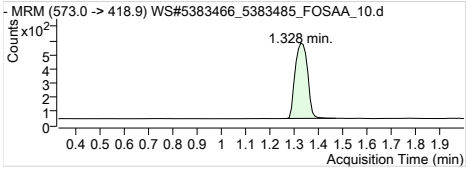



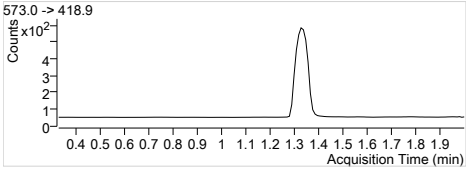

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 0.84 µg/L
Area ratio: 0.29514
Sample type: CC



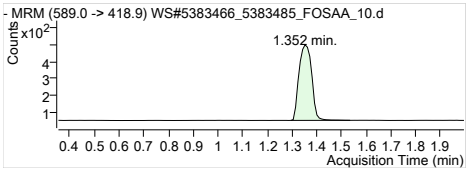



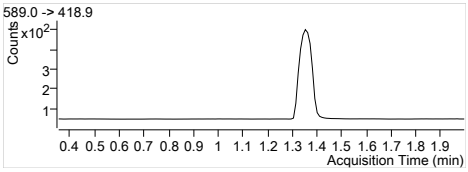

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 0.93 µg/L
Area ratio: 0.32918
Sample type: CC



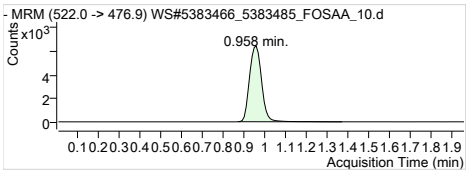



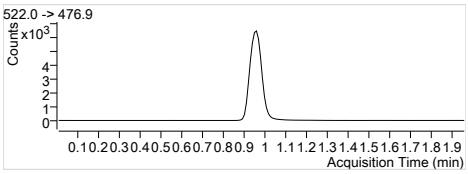

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 111.37 µg/L
Area ratio: 0.07316
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 109.47 µg/L |
| Area ratio: | 0.06195 |
| Sample type: | CC |



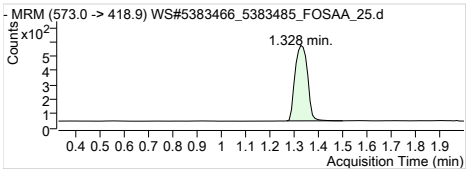

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.958 (0.958) |
| Calc. conc. | 91.30 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

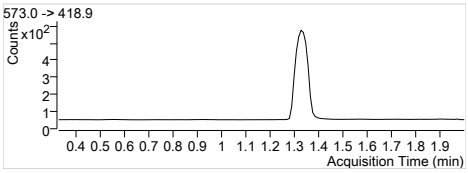
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_25.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/06 1:23:33 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

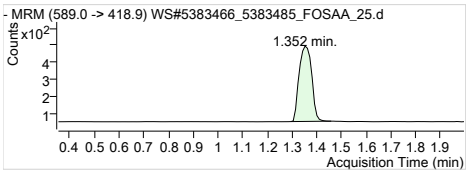
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1876 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1574 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 28320 | 0.95 | 1 µg/L | | |

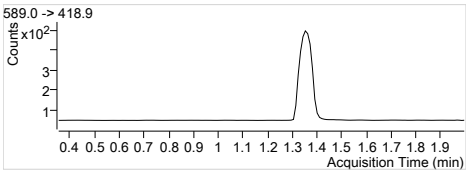
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 7752 | 1.33 | 12.50 | 11.44 µg/L | 91.49 |
| EtFOSAA 1 | 7641 | 1.35 | 12.50 | 11.53 µg/L | 92.25 |
| D3-MeFOSAA | 1876 | 1.33 | 100.00 | 100.84 µg/L | 100.84 |
| D5-EtFOSAA | 1574 | 1.35 | 100.00 | 98.20 µg/L | 98.20 |
| 13C9-PFDA | 28134 | 0.95 | 100.00 | 99.80 µg/L | 99.80 |



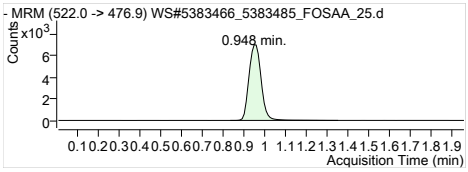



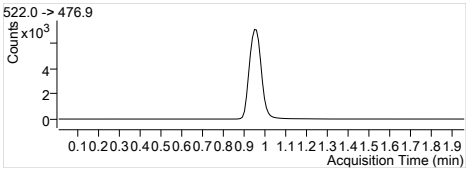

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: CC



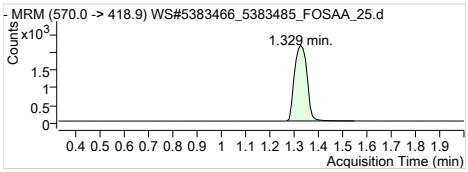



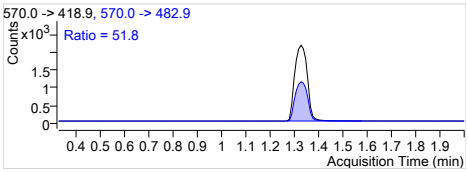

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: CC



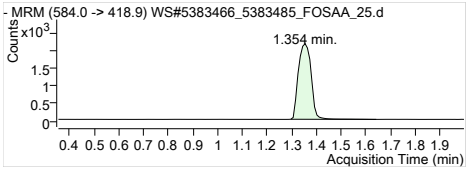



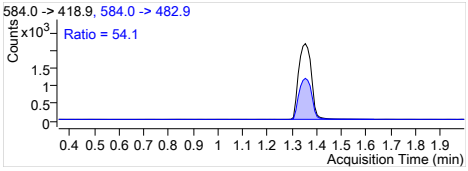

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.948 (0.958)
Concentration: 1 µg/L
Sample type: CC



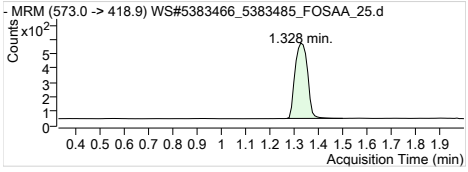



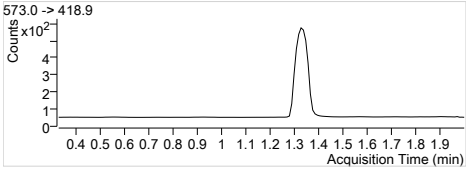

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 11.44 µg/L
Area ratio: 4.13220
Sample type: CC



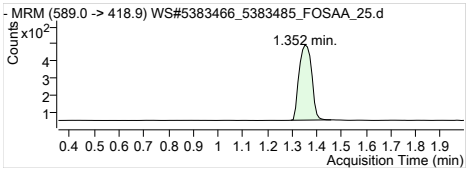



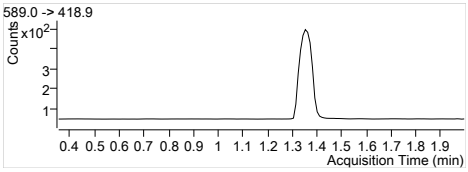

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 11.53 µg/L
Area ratio: 4.85451
Sample type: CC



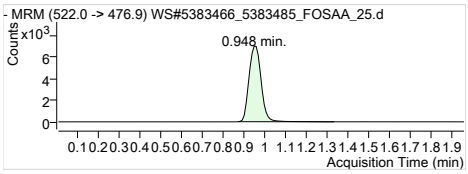



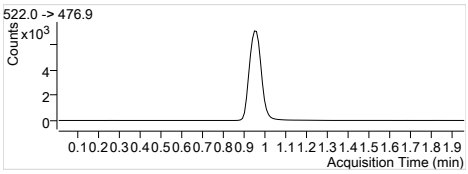

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 100.84 µg/L
Area ratio: 0.06624
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 98.20 µg/L |
| Area ratio: | 0.05558 |
| Sample type: | CC |



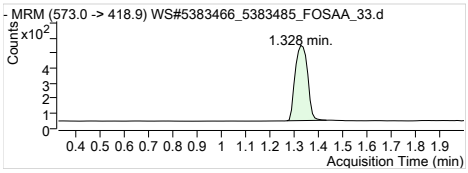

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.948 (0.958) |
| Calc. conc. | 99.80 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

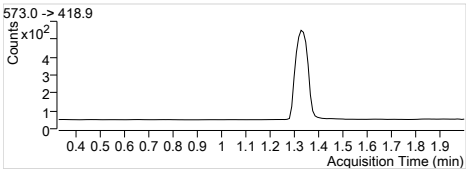
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_33.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/06 1:42:50 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

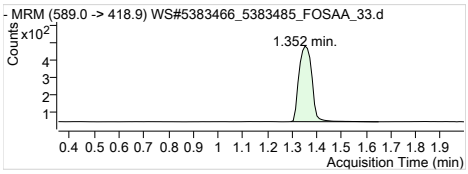
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1776 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1575 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 28229 | 0.96 | 1 µg/L | | |

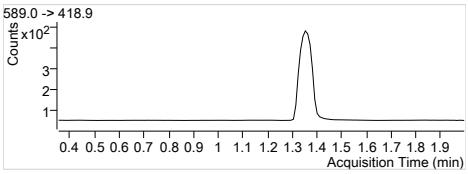
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 7618 | 1.33 | 12.50 | 11.87 µg/L | 94.96 |
| EtFOSAA 1 | 7636 | 1.35 | 12.50 | 11.52 µg/L | 92.13 |
| D3-MeFOSAA | 1776 | 1.33 | 100.00 | 95.77 µg/L | 95.77 |
| D5-EtFOSAA | 1575 | 1.35 | 100.00 | 98.58 µg/L | 98.58 |
| 13C9-PFDA | 28351 | 0.96 | 100.00 | 100.57 µg/L | 100.57 |



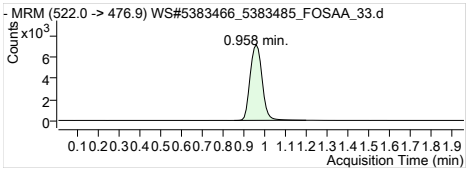



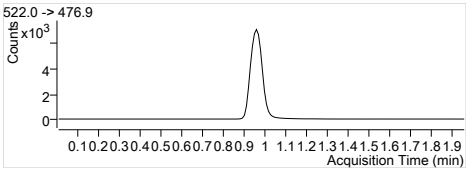

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: CC



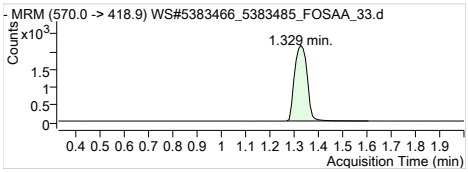



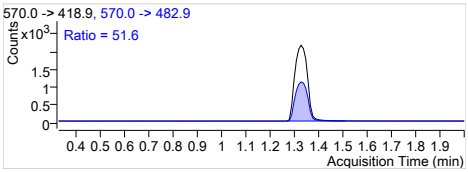

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: CC



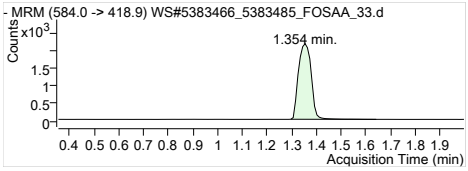



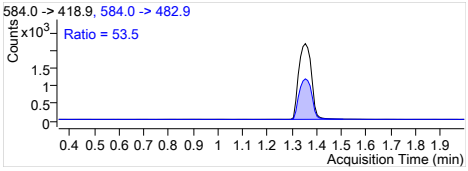

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.958 (0.958)
Concentration: 1 µg/L
Sample type: CC



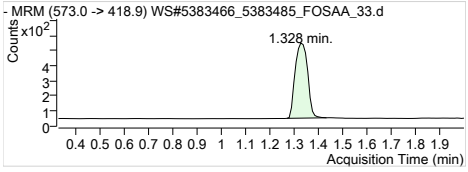



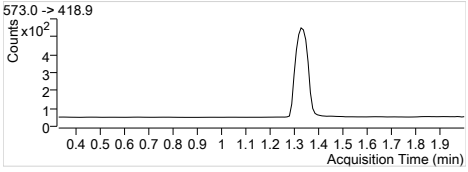

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 11.87 µg/L
Area ratio: 4.28941
Sample type: CC



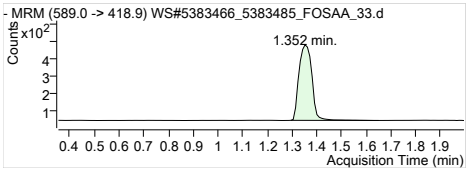



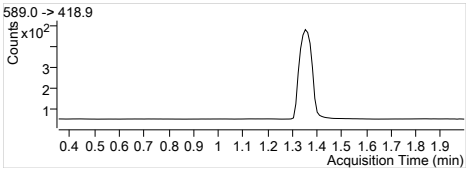

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 11.52 µg/L
Area ratio: 4.84825
Sample type: CC



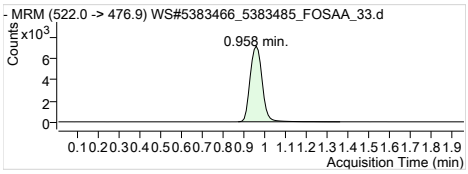



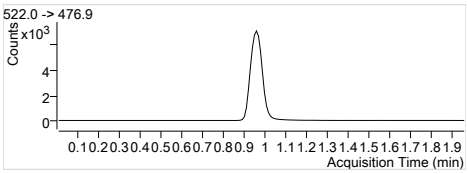

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 95.77 µg/L
Area ratio: 0.06291
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 98.58 µg/L |
| Area ratio: | 0.05579 |
| Sample type: | CC |



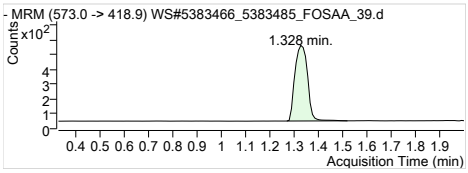

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.958 (0.958) |
| Calc. conc. | 100.57 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

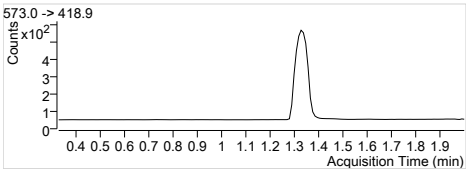
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_39.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/06 2:52:44 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

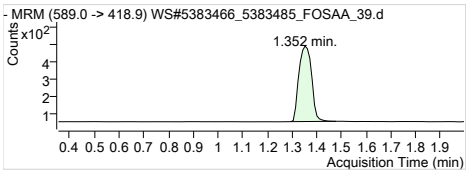
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1857 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1565 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 28622 | 0.95 | 1 µg/L | | |

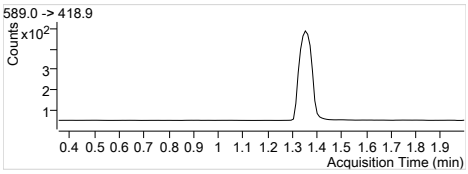
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 7748 | 1.33 | 12.50 | 11.55 µg/L | 92.38 |
| EtFOSAA 1 | 7645 | 1.35 | 12.50 | 11.60 µg/L | 92.82 |
| D3-MeFOSAA | 1857 | 1.33 | 100.00 | 98.77 µg/L | 98.77 |
| D5-EtFOSAA | 1565 | 1.35 | 100.00 | 96.61 µg/L | 96.61 |
| 13C9-PFDA | 28872 | 0.95 | 100.00 | 102.42 µg/L | 102.42 |



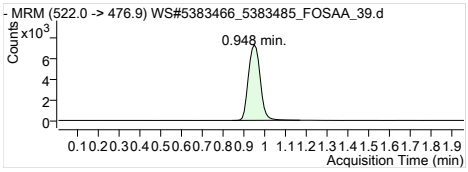



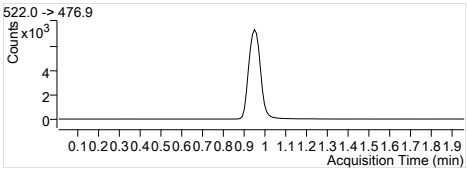

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: CC



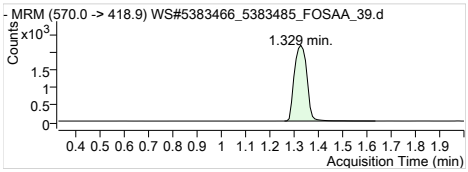



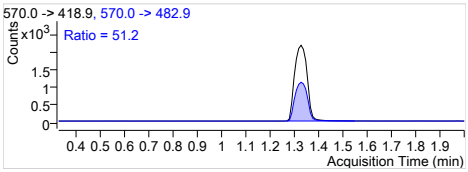

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: CC



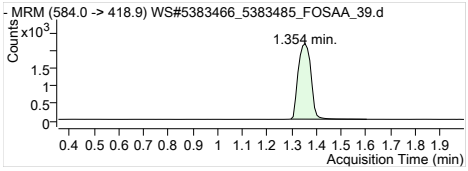



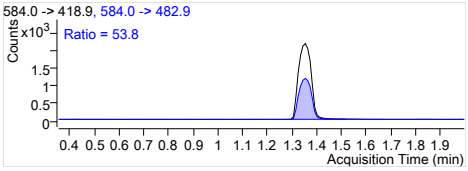

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.948 (0.958)
Concentration: 1 µg/L
Sample type: CC



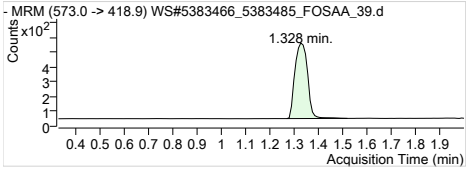



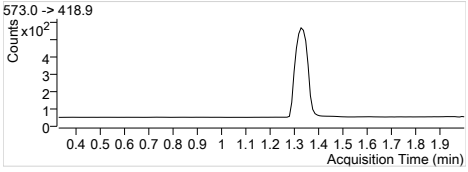

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 11.55 µg/L
Area ratio: 4.17232
Sample type: CC



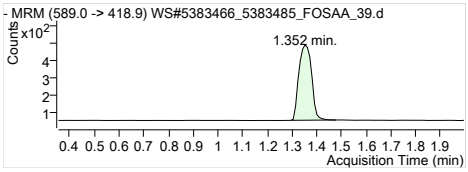



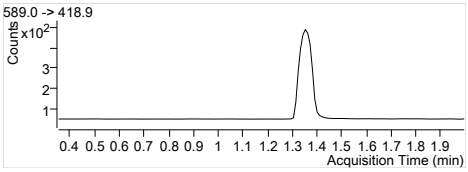

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 11.60 µg/L
Area ratio: 4.88498
Sample type: CC



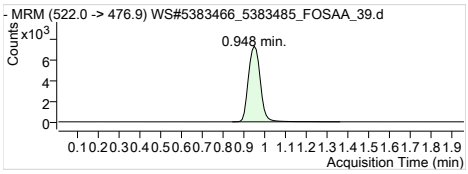



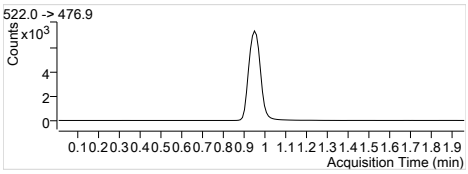

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 98.77 µg/L
Area ratio: 0.06488
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 96.61 µg/L |
| Area ratio: | 0.05468 |
| Sample type: | CC |



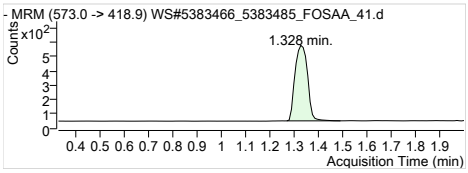

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.948 (0.958) |
| Calc. conc. | 102.42 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

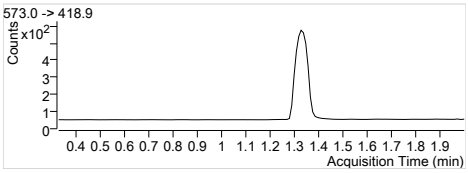
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180206\WS#5383466_5383485_FOSAA\QuantResults\PFC_Water_Low_180205_WS#5383466_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5383466_5383485_FOSAA_41.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/06 2:57:34 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

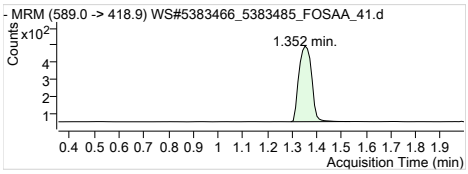
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1885 | 1.33 | 1 µg/L | | |
| D5-EtFOSAA IS | 1595 | 1.35 | 1 µg/L | | |
| 13C9-PFDA IS | 29001 | 0.95 | 1 µg/L | | |

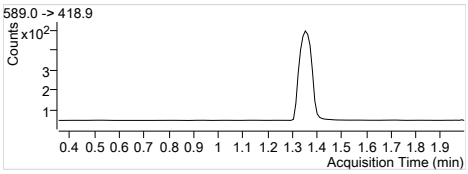
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 7711 | 1.33 | 12.50 | 11.32 µg/L | 90.58 |
| EtFOSAA 1 | 7693 | 1.35 | 12.50 | 11.46 µg/L | 91.66 |
| D3-MeFOSAA | 1885 | 1.33 | 100.00 | 98.95 µg/L | 98.95 |
| D5-EtFOSAA | 1595 | 1.35 | 100.00 | 97.18 µg/L | 97.18 |
| 13C9-PFDA | 29023 | 0.95 | 100.00 | 102.95 µg/L | 102.95 |



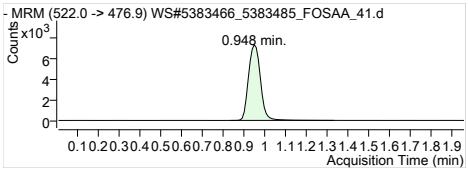



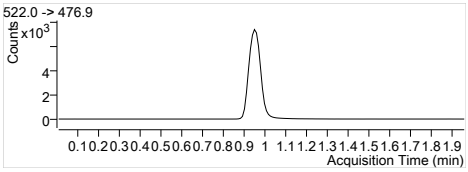

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.328 (1.328)
Concentration: 1 µg/L
Sample type: CC



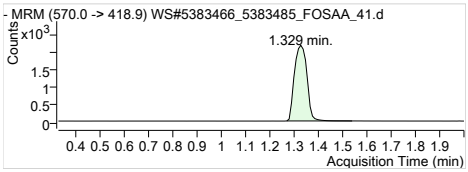



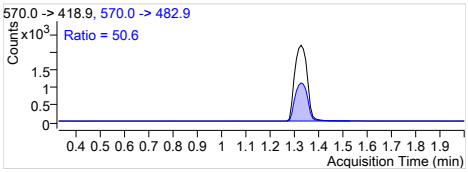

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.352 (1.352)
Concentration: 1 µg/L
Sample type: CC



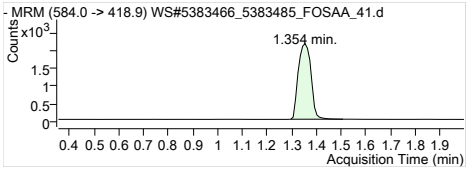



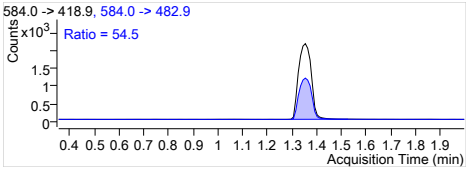

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.948 (0.958)
Concentration: 1 µg/L
Sample type: CC



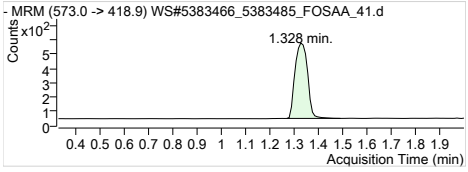



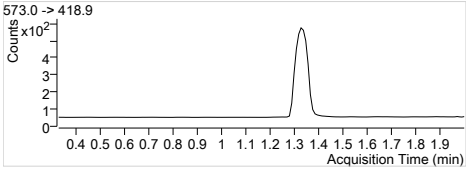

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.329 (1.329)
Calc. conc. 11.32 µg/L
Area ratio: 4.09072
Sample type: CC



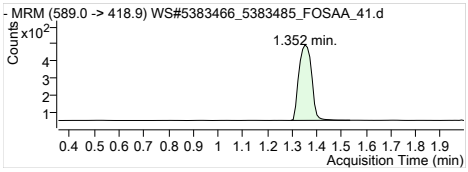



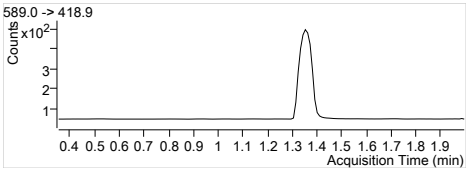

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.354 (1.354)
Calc. conc. 11.46 µg/L
Area ratio: 4.82320
Sample type: CC



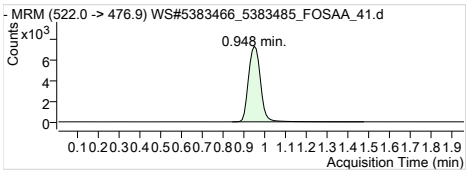



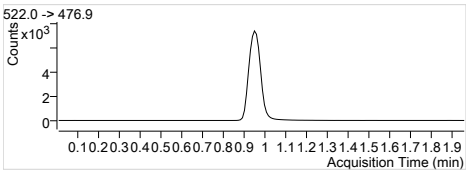

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.328 (1.328)
Calc. conc. 98.95 µg/L
Area ratio: 0.06500
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.352 (1.352) |
| Calc. conc. | 97.18 µg/L |
| Area ratio: | 0.05500 |
| Sample type: | CC |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.948 (0.958) |
| Calc. conc. | 102.95 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

# DoD Projects - Internal Data Validation Checklist

Run date: 2018/02/08

Worksheet # (s): 5386102

Analysis: PFOSALCM-W

| | Primary review by the analyst - 1st 100 % analysis review | 1st 100% review yes | no | n/a | *2nd 100% review |
|---|---|---|---|---|---|
| 1 | Sample analyses meet hold time criteria | ✓ | | | ✓ |
| 2 | Analysis set-up meets method criteria | ✓ | | | ✓ |
| 3 | Tuning and correct calibration used - criteria meets method criteria | ✓ | | | ✓ |
| 4 | SQC/Control Charts updated, analysis in statistical/method control | ✓ | | | ✓ |
| 5 | Internal area counts checked (if applicable) | ✓ | | | ✓ |
| 6 | LCS, SRM are within acceptance criteria | ✓ | | | ✓ |
| 7 | Surrogate Recovery(s) is within acceptance criteria | | ✓ | | ✓ |
| 8 | Method Blank meets acceptance criteria | ✓ | | | ✓ |
| 9 | Matrix Spike recovery(s) meets acceptance criteria | | ✓ | | ✓ |
| 10 | Duplicate precision meets acceptance criteria | ✓ | | | ✓ |
| 11 | QC is documented on the run logs | ✓ | | | ✓ |
| 12 | Runs checked for carryover | ✓ | | | ✓ |
| 13 | Prep log / worksheet(s) are present, signed / dated by a prep / instrument analysts | ✓ | | | ✓ |
| 14 | Initial weights, splits, impringer volumes (where applicable) are documented | ✓ | | | ✓ |
| 15 | Standards and reagents traceable to Certificates of Analysis | ✓ | | | ✓ |
| 16 | Samples above calibration range diluted and reanalyzed | | | ✓ | ✓ |
| 17 | Dilution factors (where justified) have been checked for correctness and entered | ✓ | | | ✓ |
| 18 | Analytical observations/anomalies documented in LIMS | | | ✓ | ✓ |
| 19 | Random calculation checked and in correct units | ✓ | | | ✓ |
| 20 | If corrective actions were applied they are documented, initialed & dated | | | ✓ | ✓ |
| 21 | Manual integration – before & after data with a reason included, initialed & dated | | | ✓ | ✓ |
| 22 | Transferred data is validated in LIMS for correctness | ✓ | | | ✓ |
| 23 | Data package assembled (where required) | ✓ | | | ✓ |

Reviewed by: [illegible] Date: 2018/02/09

Comments:

| | Secondary Supervisor/Qualified Data Review Staff - 2nd 100% verification review | yes | no | n/a |
|---|---|---|---|---|
| 1 | Repeats documented and referenced | ✓ | | |
| 2 | Method and sample deviations noted, anomalies described (if applicable) | | | ✓ |
| 3 | Data and QC validated in LIMS | ✓ | | |
| 4 | Random calculation checked | ✓ | | |
| 5 | Benchsheet (s) signed and dated | ✓ | | |
| 6 | Data Package (if required) checked for completeness | ✓ | | |

Reviewed by: Sm Date: 20 18/02/16

Comments: Samples FZJ934 reworked for PFOSA due to low recoveries of extracted IS. Sample FZA802 reworked for all parameters due to low recoveries of extracted IS.

*Note: 2nd 100% verification review documented by secondary qualified data review

Primary and Secondary Internal Data Review Check must be performed by a different person

# Worksheet Data Validation Checklist - Extractable Organics

Worksheet # 5386102 Testcode: PFOS4LCM-W

| Sample Preparation | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Samples extracted within hold time | ✓ | | |
| 2 | Client sample ID verified against Lab ID (waters & oils) | ✓ | | |
| 3 | Parameter list and Client comments reviewed, (Spiking solutions matched to parameter list) | ✓ | | |
| 4 | Height of sediment or if sample was decanted, recorded on worksheet | ✓ | | |
| 5 | Method required QC processed with samples, maximum batch size = 20 client samples. | ✓ | | |
| 6 | Sample, duplicate, matrix spike appear similar, initial sample as well as final extract | ✓ | | |
| 7 | Sample weight or initial volume and extract final volume, aliquot factor clearly recorded. | ✓ | | |
| 8 | If performed any additional dilution clearly recorded | | | ✓ |
| 9 | Matrix spike / Duplicate performed on IOL samples if present | | | ✓ |
| 10 | Spiking solutions valid (haven't expired), ID and volume used clearly identified on worksheet | ✓ | | |
| 11 | Spiking process witnessed and signed off | ✓ | | |
| 12 | Extraction type recorded (N3A2B = neutral, 3 x acidic, 2 x basic) | | | ✓ |
| 13 | Sample prep deviations documented within CompliantPro as a Policy Deviation | | | ✓ |
| 14 | Job Remarks reviewed on 2nd page of worksheet. | ✓ | | |
| 15 | Worksheet and reagent tracking record completed and authorized. | ✓ | | |

Reviewed by: DM3 Date: 2018/02/06

Comments:

| Worksheet Approval | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Verified the position of the vials in autosampler against sequence list; signed off sequence list | | | (✓) |
| 2 | Calibration and CCV standards valid ( haven't expired) | | | |
| 3 | Initial calibration curve and DFTPP tune (if applicable) acceptable | | | |
| 4 | Continuing and Final CCV and DFTPP tune (if applicable) acceptable | | | |
| 5 | System performance check acceptable (if applicable) | | | |
| 6 | Internal standard responses acceptable | | | |
| 7 | Method blank meets acceptance criteria | | | |
| 8 | Lab Control Samples recoveries meets acceptance criteria | | | |
| 9 | Duplicate RPD meets acceptance criteria | | | |
| 10 | Matrix spike recoveries meets acceptance criteria | | | |
| 11 | Surrogate recoveries meets acceptance criteria | | | |
| 12 | Appropriate control charts updated | | | |
| 13 | Samples above calibration range diluted and reanalyzed | | | |
| 14 | Dilutions clearly documented on tracking record, inst file and verified during data upload | | | |
| 15 | Samples following high level samples checked for carryover. | | | |
| 16 | Mass spectra ion ratios acceptable for positive results, hardcopy in file. | | | |
| 17 | Analytical observations / anomalies documented | | | |
| 18 | DQW comments entered in LIMS, hardcopy in file | | | |
| 19 | Sample Prep section (above) reviewed and verified. | ✓ | | |
| 20 | WS Approval performed in LIMS | | | |

Reviewed by: Date:

Comments:

| Worksheet Validation | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Calibration, QC and sample results reviewed and determined acceptable | | | |
| 2 | Manual integrations verified | | | |
| 3 | Random calculation checked | | | |
| 4 | Data and QC validated in LIMS | | | |
| 5 | Comments reviewed for appropriateness | | | |
| 6 | Reworks / relogs documented in file | | | |
| 7 | Worksheet signed and dated, | | | |
| 8 | Worksheet approved and validated within LIMS | | | |

Reviewed by: Date:

Comments:

**WS# : 5386102**



Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Tuesday, February 06, 2018

Assigned to : Daniella McLean

Test Code : PFOSALCM-W

Instrument Id:

Test Description : PFOS and PFOA in water by LC-MS/MS

| | Job Number | Sample Number | D | Sample ID | F (centrifuged if sediments) | % Moisture | Wt or Vol | Final Vol (mL) | DF or AF | # Cont | Expiry Date | Test DeadLine | Criteria | Extract Date | Analysis Date (YYYY/MM/DD) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,5 | | MTRX SPK | 0 | PFOS FZH347-01 | * | <0.1 | 125 | 3 | 1X | | | | | 2018/02/06 | 28 |
| 5,6 | | MTRX SPK | 1 | PFOS FZH347-01 | * | <0.1 | 125 | 3 | 1X | | | | | 2018/02/06 | 28 |
| 5,3 | | SPIKE | | PFOS | | 0 | 125 | 3 | 1X | | | | | 2018/02/06 | 33 |
| 5,1 | | BLANK | | | | 0 | 125 | 3 | 1X | | | | | 2018/02/06 | 32 |
| 5,8 | B818419 | *FZA801-01R | | FB-OLD-012318-3 | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/07 23:00 | DOD | 2018/01/31 | 29 |
| 5,10 | B818419 | *FZA802-01R | | EB-WC-012318-2 | * | <0.1 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/07 23:00 | DOD | 2018/01/31 | 27 |
| 5,12 | B818419 | *FZA803-01R | | EB-GW-012318-2 | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/07 23:00 | DOD | 2018/01/31 | 32 |
| 5,14 | B818419 | *FZA804-01R | | FB-OLD-012318-4 | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/07 23:00 | DOD | 2018/01/31 | 29 |
| 5,16 | B818419 | *FZA805-01R | | EB-DPT-012318-2 | | 0 | 120 | 3 | 1X | 2 | 2018/02/06 | 2018/02/07 23:00 | DOD | 2018/01/31 | 35 |
| 5,18 | B818419 | *FZA806-01R | | OLD-02-09A-0118 | * | <0.1 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/07 23:00 | DOD | 2018/01/31 | 25 |
| 5,20 | B819794 | *FZH328-01R | | [redacted] | * | <0.1 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/01/31 | 29 |
| 5,22 | B819794 | *FZH329-01R | | [redacted] | * | <0.1 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/01/31 | 29 |
| 5,24 | B819794 | *FZH330-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/01/31 | 28 |
| 6,1 | B819794 | *FZH335-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/01/31 | 29 |
| 6,3 | B819794 | *FZH344-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/02/05 | 33 |
| 6,5 | B819794 | *FZH345-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/02/05 | 31 |
| 6,7 | B819794 | *FZH346-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/02/05 | 27 |
| 6,9 | B819794 | *FZH347-01R | | [redacted] | * | <0.1 | 125 | 3 | 1X | 6 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/02/05 | 29 |
| 6,11 | B819794 | *FZH348-01R | | [redacted] | * | <0.1 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/02/05 | 27 |
| 6,14 | B820260 | *FZJ934-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 23:00 | DOD | 2018/02/06 | 28 |

2018/02/06 DM3

Remarks:

Samples extracted by: Daniella McLean DM3 2018/02/06

Instrumentation performed by: DZ Date: 2018/02/07

Calculations performed by: Date: 2018/02/09

Validated by: SZ Date: 2018/02/16

| Job No. | Rep / Client Name / Remarks | Contact | Client Tier | National |
|---|---|---|---|---|
| GB818419 | SP8 Earth Toxics Inc | Rick Carr | Tier 5 (Enviro.) | AECOM |
| | NREG. PFOSALCM-W MS/MSD required on FZA786 Level IV Package and TetraTech EDD required Project #: JM11 NTC Orlando | | | |
| GB819794 | [redacted] | | | |
| GB820260 | | | | |

| Job | Sample | Lab Comments |
|---|---|---|
| | MTRX SPK | |
| | MTRX SPK | |
| | SPIKE | |
| | BLANK | |
| B818419 | FZA801-01R | |
| B818419 | FZA802-01R | Sample was clogged; only 90mL of sample passed thru SPE. |
| B818419 | FZA803-01R | |
| B818419 | FZA804-01R | |
| B818419 | FZA805-01R | |
| B818419 | FZA806-01R | |
| B819794 | FZH328-01R | |
| B819794 | FZH329-01R | |
| B819794 | FZH330-01R | |
| B819794 | FZH335-01R | |
| B819794 | FZH344-01R | |
| B819794 | FZH345-01R | |
| B819794 | FZH346-01R | |
| B819794 | FZH347-01R | |
| B819794 | FZH348-01R | |
| B820260 | FZJ934-01R | |

S1 25
S2 50
S3 150
} SK-7377

S4 37.5
S5 75
S6 125
} I-5297

ICV 62.5 - I-5299

IB 2850µL MeOH + 150µL IS NPB 20181102/06



Folder: 20180207 20181101/09

Worksheet Reagent Tracking Record  Worksheet # 5386102

| Surrogate/Spike solutions | √ | Solution ID # | Conc. | Volume (µL) Blk-Spk Solid | Blk-Spk Liquid | MS Solid | MS Liquid | Samples Solid | Samples Liquid |
|---|---|---|---|---|---|---|---|---|---|
| DGT Spike | | | 100 ug/mL | 60 | 30 | 60 | 30 | NA | NA |
| Diquat Dibromide | | | 50 ug/mL | NA | 350 | NA | 350 | NA | NA |
| Explosives Spiking solution A | | | 20 ug/mL | 250 | 100 | 250 | 100 | NA | NA |
| Explosives Spiking solution B | | | 20/80 ug/mL | 250 | 100 | 250 | 100 | NA | NA |
| Formaldehyde Spike | | | 100 ug/mL | 25 | 25 | 25 | 25 | NA | NA |
| Glyphosate Spike | | | 25 ug/mL | 500 | 20 | 500 | 20 | NA | NA |
| Nonylphenol Ethoxylate Spike | | | 100 ug/mL | 100 | 100 | 100 | 100 | NA | NA |
| Nonylphenol Spike | | | 10 ug/mL | 100 | 100 | 100 | 100 | NA | NA |
| Paraquat Cl Tetrahydrate | | | 20 ug/mL | NA | 125 | NA | 125 | NA | NA |
| Perchlorate Standard Spike | | | 10 ng/mL | NA | 100 | NA | 100 | NA | NA |
| Perchlorate Standard Spike | | | 500 ng/mL | 40 | NA | 40 | NA | NA | NA |
| Perchlorate O-18 Internal Standard | | | 0.10 ng/uL | 20 | 20 | 20 | 20 | 20 | 20 |
| Morpholine Second Source Working Std | | | 2500 ug/L | NA | 80 | NA | 80 | NA | NA |
| Morpholine-D8 Internal Standard | | | 10 ug/mL | NA | 50 | NA | 50 | NA | 50 |
| Sterll Second Source Spiking Solution | | | NA | 20 | NA | 20 | NA | NA | NA |
| Sterllants Comp. IS Working Solution | | | 3 ug/mL | 50 | NA | 50 | NA | 50 | NA |
| Comp. PFC Working Solution A | ✓ | I-5299 (1/3) KM | 1ug/mL | 75 | 21 (62.5) | 75 | 21 (62.5) | NA | NA |
| PFC Internal Standard Solution | ✓ | SI-6763 (3/4) KM | 50/125 ng/mL | 200 | 100 (150) | 200 | 100 (150) | 200 | 100/(150) |
| PFC Injection IS | ✓ | SI-6716 (4/4) KM | 400 ng/mL | 20 | 20 | 20 | 20 | 20 | 20 |
| ICV | ✓ | I-5299 (1/3) | 1ug/mL | | 62.5 | | | | |

| Solvent/Reagent | √ | Lot No. | Date Opened | Solvent/Reagent | √ | Lot No. | Date Opened/ Prepared |
|---|---|---|---|---|---|---|---|
| DCM | | | | 50% NaOH | | | |
| Ottawa Sand | | | | o-Phosphoric Acid | | | |
| Methanol | ✓ | SHB375782 | 2018/02/06 | Borax | | | |
| 2-Propanol (IPA) | | | | Calcium Chloride | | | |
| Acetonitrile | | | | EDTA | | | |
| Sodium Sulfate | | | | Phosphate Buffer | | | |
| 70:30 Methanol: Water | | | | Sodium Thiosulphate | | | |
| 60:40 Water: Methanol | ✓ | PRLRE-108-341 | | DNPH | | | |
| DCM:Ethyl Ether (75:25) | | | | FMOC | | | |
| Hexane:IPA (98:2) | | | | 5M Acetate Buffer | ✓ | PRLRE-108-340 | |
| 2% Formic Acid | ✓ | PRLRE-105-342 | | 0.2% $NH_4OH$ | | | |
| 0.2% Formic Acid 2018/02/06 | ~~✓~~ | ~~PRLRE-108~~ DM3 | | Leachate Fluid | | | |
| 0.05M KOH | | | | Reagent Water | ✓ | 57297 | 2018/02/06 |
| 0.05M HCl | | | | | | | |
| | | | | | | | |
| | | | | | | | |

*Spiked by: DM3
Spike Date: 2018/02/06
Spike Syringe/Pipette ID#: G243906
Int. Std Syringe/Pipette ID#: M410117
*Spiking Witnessed by: KM
Final pH:

| Equipment & ID | √ | Equipment | ID# | √ | Equipment | Lot # |
|---|---|---|---|---|---|---|
| Pipettor M39732F | ✓ | SPE Cartridge | 007437274A | ✓ | QC Balance ID | |
| B | ✓ | Filter | | | Thermometer ID &Temp | |
| Dispenser | | Centrifuge | 42148683 | ✓ | | |
| | | Sonicator | | | | |

Bottle Tracking
Bottle# 18587
Cap# 18422
Systems plus Lot#: 17-12-11

Comments: envi CARB Lot # 928061V
250mL cylinder # 3026

Worksheet Number: **5386102**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | Units | MTRX SPK | DL | MTRX SPK Dup1 | DL | SPIKE | DL |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | ug/L | 108.15371 | 0.02 | 98.76866 | 0.02 | 107.55127 | 0.02 |
| 8:2 Fluorotelomer sulfonate | ug/L | 105.22500 | 0.02 | 87.06656 | 0.02 | 107.51525 | 0.02 |
| N-ethylperfluorooctane sulfonamide | ug/L | 99.03512 | 0.02 | 90.45965 | 0.02 | 98.39542 | 0.02 |
| EtFOSAA | ug/L | 95.33636 | 0.02 | 104.42130 | 0.02 | 98.09913 | 0.02 |
| N-ethylperfluorooctane sulfonamidoe | ug/L | 93.35678 | 0.02 | 87.61801 | 0.02 | 113.89912 | 0.02 |
| N-methylperfluorooctane sulfonamide | ug/L | 83.28742 | 0.02 | 103.22239 | 0.02 | 101.35606 | 0.02 |
| MeFOSAA | ug/L | 101.77684 | 0.02 | 99.96694 | 0.02 | 97.78099 | 0.02 |
| N-methylperfluorooctanesulfonamidol | ug/L | 100.31349 | 0.02 | 87.25771 | 0.02 | 104.99119 | 0.02 |
| Perfluorobutanoic acid | ug/L | 68.82NC | 0.02 | 95.70794NC | 0.02 | 101.84148 | 0.02 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 112.38543 | 0.02 | 100.61221 | 0.02 | 117.02416 | 0.02 |
| Perfluorodecane Sulfonate | ug/L | 99.05686 | 0.02 | 97.41994 | 0.02 | 111.92506 | 0.02 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 98.26438 | 0.02 | 98.22745 | 0.02 | 98.49369 | 0.02 |
| Perfluoroheptane sulfonate | ug/L | 107.96692 | 0.02 | 107.59832 | 0.02 | 104.67055 | 0.02 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 95.72692 | 0.02 | 98.65000 | 0.02 | 97.41181 | 0.02 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 104.43760 | 0.02 | 91.37334 | 0.02 | 109.54785 | 0.02 |
| Perfluorononanoic Acid (PFNA) | ug/L | 95.03221 | 0.02 | 104.41951 | 0.02 | 106.04654 | 0.02 |
| Perfluorooctane Sulfonamide (PFOSA) | ug/L | 98.86020 | 0.02 | 93.35572 | 0.02 | 103.38504 | 0.02 |
| Perfluoropentanoic Acid (PFPeA) | ug/L | 93.15375 | 0.02 | 94.26917 | 0.02 | 102.52511 | 0.02 |
| Perfluorotetradecanoic Acid | ug/L | 154.666 | 0.02 | 105.22039 | 0.02 | 101.94241 | 0.02 |
| Perfluorotridecanoic Acid | ug/L | 158.270 | 0.02 | 111.95131 | 0.02 | 104.27929 | 0.02 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 98.09203 | 0.02 | 101.30229 | 0.02 | 96.89275 | 0.02 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 98.00575 | 0.02 | 100.23781 | 0.02 | 110.64655 | 0.02 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 105.64335 | 0.02 | 92.84556 | 0.02 | 113.24662 | 0.02 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 92.42467 | 0.02 | 96.20753 | 0.02 | 105.00987 | 0.02 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 91.13972 | 0.02 | 86.94286 | 0.02 | 103.05140 | 0.02 |
| 13C2-6:2 Fluorotelomer sulfonate | ug/L | 68.9613668 | | 67.8108940 | | 71.6481589 | |
| 13C2-8:2 Fluorotelomer sulfonate | ug/L | 71.1750825 | | 82.3529917 | | 67.0587668 | |
| 13C2-perfluorotetradecanoic acid | ug/L | 42.8361 | | 66.0475217 | | 63.4891895 | |
| 13C4-Perfluorobutanoic acid | ug/L | 83.2946400 | | 80.6195048 | | 79.9415155 | |
| D3-MeFOSAA | ug/L | 77.9996210 | | 76.4240017 | | 68.4101942 | |
| D5-EtFOSAA | ug/L | 81.5928407 | | 74.8411869 | | 68.7955679 | |
| N-methyl-d3-perfluorooctane sulfona | ug/L | N/A******* | | N/A******* | | N/A******* | |
| N-ethyl-d5-perfluorooctane sulfonam | ug/L | N/A******* | | N/A******* | | N/A******* | |
| 13C2-Perfluorodecanoic acid | ug/L | 79.6210853 | | 77.0055925 | | 63.7128328 | |
| 13C2-Perfluorododecanoic acid | ug/L | 69.8211258 | | 75.2559436 | | 58.6480479 | |
| 13C2-Perfluorohexanoic acid | ug/L | 84.4328542 | | 84.3499986 | | 76.9358520 | |
| 13C2-Perfluoroundecanoic acid | ug/L | 73.6835901 | | 75.1233196 | | 66.2959591 | |
| 13C4-Perfluoroheptanoic acid | ug/L | 82.0386836 | | 84.3916216 | | 75.5507180 | |
| 13C5-Perfluorononanoic acid | ug/L | 85.5040146 | | 75.1054366 | | 71.6273865 | |
| 13C4-Perfluorooctanoic acid | ug/L | 84.5625375 | | 81.2206057 | | 70.6755999 | |
| 13C4-Perfluorooctanesulfonate | ug/L | 85.5073478 | | 90.6554285 | | 70.6584673 | |
| 13C5-Perfluoropentanoic acid | ug/L | 90.5477492 | | 90.4640261 | | 77.2837511 | |
| 13C8-Perfluorooctane Sulfonamide | ug/L | 51.7356547 | | 58.6377082 | | 49.6039380 | |
| 18O2-Perfluorohexanesulfonate | ug/L | 84.5611238 | | 102.604631 | | 73.2621991 | |

Worksheet Number: **5386102**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | BLANK | DL | B818419 FZA801 | DL | B818419 FZA802 | DL | B818419 FZA803 |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| 8:2 Fluorotelomer sulfonate | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| N-ethylperfluorooctane sulfonamide | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| EtFOSAA | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| N-ethylperfluorooctane sulfonamidoe | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| N-methylperfluorooctane sulfonamide | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| MeFOSAA | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| N-methylperfluorooctanesulfonamidol | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluorobutanoic acid | 0 | 0.02 | 0 | 0.02 | N/A******* | 0.02 | 0 |
| Perfluorobutane Sulfonate (PFBS) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorodecane Sulfonate | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluoroheptanoic Acid (PFHpA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluoroheptane sulfonate | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorohexane Sulfonate (PFHxS) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorononanoic Acid (PFNA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorooctane Sulfonamide (PFOSA) | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluoropentanoic Acid (PFPeA) | 0 | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluorotetradecanoic Acid | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorotridecanoic Acid | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluoroundecanoic Acid (PFUnA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorodecanoic Acid (PFDA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorododecanoic Acid (PFDoA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorooctane Sulfonate (PFOS) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| 13C2-6:2 Fluorotelomer sulfonate | 65.6847542 | | N/A******* | | !! 36.5120 | | N/A******* |
| 13C2-8:2 Fluorotelomer sulfonate | 67.7970914 | | N/A******* | | !! 36.4839 | | N/A******* |
| 13C2-perfluorotetradecanoic acid | 53.8165347 | | 68.7721796 | | !! 33.1980 | | 62.0041684 |
| 13C4-Perfluorobutanoic acid | 75.1169245 | | N/A******* | | !! 45.1864 | | N/A******* |
| D3-MeFOSAA | 60.8161991 | | 74.6832419 | | !! 39.8715 | | 68.9618290 |
| D5-EtFOSAA | 58.7596527 | | 70.3220055 | | !! 38.7706 | | 64.3642347 |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | | N/A******* | | !! 26.9898 | | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | | N/A******* | | !! 25.3911 | | N/A******* |
| 13C2-Perfluorodecanoic acid | 58.4992490 | | 78.2132194 | | !! 41.9528 | | 73.3646314 |
| 13C2-Perfluorododecanoic acid | 58.3595831 | | 71.6939140 | | !! 39.2231 | | 68.6477042 |
| 13C2-Perfluorohexanoic acid | 71.2243373 | | 89.8935351 | | 49.6414834 | | 75.5855252 |
| 13C2-Perfluoroundecanoic acid | 61.7128372 | | 70.4119226 | | !! 43.2761 | | 76.8137756 |
| 13C4-Perfluoroheptanoic acid | 67.3128091 | | 91.1361061 | | !! 47.3920 | | 70.5279209 |
| 13C5-Perfluorononanoic acid | 63.4244159 | | 84.0412188 | | !! 12.7327 | | 75.3138869 |
| 13C4-Perfluorooctanoic acid | 64.7447075 | | 84.6514064 | | !! 25.4249 | | 80.3492784 |
| 13C4-Perfluorooctanesulfonate | 74.1314703 | | 73.1027902 | | !! 30.7815 | | 73.0334465 |
| 13C5-Perfluoropentanoic acid | 77.7306686 | | N/A******* | | !! 47.0771 | | N/A******* |
| 13C8-Perfluorooctane Sulfonamide | !! 44.6478 | | N/A******* | | !! 26.3583 | | N/A******* |
| 18O2-Perfluorohexanesulfonate | 72.0248675 | | 85.2267364 | | 50.8223270 | | 76.2273773 |

Worksheet Number: **5386102**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | DL | B818419 FZA804 | DL | B818419 FZA805 | DL | B818419 FZA806 | DL |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| 8:2 Fluorotelomer sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| N-ethylperfluorooctane sulfonamide | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| EtFOSAA | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| N-ethylperfluorooctane sulfonamidoe | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| N-methylperfluorooctane sulfonamide | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| MeFOSAA | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| N-methylperfluorooctanesulfonamidol | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| Perfluorobutanoic acid | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorobutane Sulfonate (PFBS) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorodecane Sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| Perfluoroheptanoic Acid (PFHpA) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluoroheptane sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| Perfluorohexanoic Acid (PFHxA) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorohexane Sulfonate (PFHxS) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorononanoic Acid (PFNA) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorooctane Sulfonamide (PFOSA) | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| Perfluoropentanoic Acid (PFPeA) | 0.02 | N/A******* | 0.02 | N/A******* | 0.021 | N/A******* | 0.02 |
| Perfluorotetradecanoic Acid | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorotridecanoic Acid | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluoroundecanoic Acid (PFUnA) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorodecanoic Acid (PFDA) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorododecanoic Acid (PFDoA) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| Perfluorooctane Sulfonate (PFOS) | 0.02 | 0 | 0.02 | 0 | 0.021 | 0 | 0.02 |
| 13C2-6:2 Fluorotelomer sulfonate | | N/A******* | | N/A******* | | N/A******* | |
| 13C2-8:2 Fluorotelomer sulfonate | | N/A******* | | N/A******* | | N/A******* | |
| 13C2-perfluorotetradecanoic acid | | 65.1107643 | | 63.8042546 | | 63.2599500 | |
| 13C4-Perfluorobutanoic acid | | N/A******* | | N/A******* | | N/A******* | |
| D3-MeFOSAA | | 62.5297766 | | 79.7525963 | | 72.9527681 | |
| D5-EtFOSAA | | 62.8210790 | | 77.5283919 | | 72.4039477 | |
| N-methyl-d3-perfluorooctane sulfona | | N/A******* | | N/A******* | | N/A******* | |
| N-ethyl-d5-perfluorooctane sulfonam | | N/A******* | | N/A******* | | N/A******* | |
| 13C2-Perfluorodecanoic acid | | 71.6273041 | | 74.5336956 | | 64.4915902 | |
| 13C2-Perfluorododecanoic acid | | 68.2987872 | | 71.6636355 | | 61.8666515 | |
| 13C2-Perfluorohexanoic acid | | 74.9423693 | | 78.9856587 | | 79.0768120 | |
| 13C2-Perfluoroundecanoic acid | | 67.2387275 | | 73.6624333 | | 68.0480823 | |
| 13C4-Perfluoroheptanoic acid | | 71.9233144 | | 83.4077403 | | 71.5851695 | |
| 13C5-Perfluorononanoic acid | | 71.4496653 | | 78.9271859 | | 78.0173095 | |
| 13C4-Perfluorooctanoic acid | | 70.4543610 | | 80.9202477 | | 69.1029365 | |
| 13C4-Perfluorooctanesulfonate | | 74.3789575 | | 79.7149216 | | 85.5302278 | |
| 13C5-Perfluoropentanoic acid | | N/A******* | | N/A******* | | N/A******* | |
| 13C8-Perfluorooctane Sulfonamide | | N/A******* | | N/A******* | | N/A******* | |
| 18O2-Perfluorohexanesulfonate | | 81.3970501 | | 84.9029632 | | 85.3024362 | |

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | B819794 FZH328 | DL | B819794 FZH329 | DL | B819794 FZH330 | DL | B819794 FZH335 |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| 8:2 Fluorotelomer sulfonate | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| N-ethylperfluorooctane sulfonamide | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| EtFOSAA | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| N-ethylperfluorooctane sulfonamidoe | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| N-methylperfluorooctane sulfonamide | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| MeFOSAA | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| N-methylperfluorooctanesulfonamidol | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluorobutanoic acid | 0.20338904 | 0.02 | 0 | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluorobutane Sulfonate (PFBS) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorodecane Sulfonate | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluoroheptanoic Acid (PFHpA) | 0.01521830 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluoroheptane sulfonate | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | 0.01675640 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorohexane Sulfonate (PFHxS) | 0.01105225 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorononanoic Acid (PFNA) | 0.01251015 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorooctane Sulfonamide (PFOSA) | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluoropentanoic Acid (PFPeA) | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* |
| Perfluorotetradecanoic Acid | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorotridecanoic Acid | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluoroundecanoic Acid (PFUnA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorodecanoic Acid (PFDA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluorododecanoic Acid (PFDoA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.03051730 | 0.02 | 0.02421777 | 0.02 | 0 | 0.02 | 0 |
| Perfluorooctane Sulfonate (PFOS) | 0.11228609 | 0.02 | 0.01980499 | 0.02 | 0 | 0.02 | 0 |
| 13C2-6:2 Fluorotelomer sulfonate | N/A******* | | N/A******* | | N/A******* | | N/A******* |
| 13C2-8:2 Fluorotelomer sulfonate | N/A******* | | N/A******* | | N/A******* | | N/A******* |
| 13C2-perfluorotetradecanoic acid | 69.3238825 | | 73.1791544 | | 72.2186854 | | 80.5329504 |
| 13C4-Perfluorobutanoic acid | N/A******* | | N/A******* | | N/A******* | | N/A******* |
| D3-MeFOSAA | 68.1789647 | | 84.8842256 | | 89.5181511 | | 88.5315272 |
| D5-EtFOSAA | 68.1285820 | | 81.9677088 | | 86.4902034 | | 89.6064453 |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | | N/A******* | | N/A******* | | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | | N/A******* | | N/A******* | | N/A******* |
| 13C2-Perfluorodecanoic acid | 85.2662479 | | 81.8715336 | | 89.1963263 | | 97.3521106 |
| 13C2-Perfluorododecanoic acid | 75.2444161 | | 78.6059749 | | 76.6205993 | | 86.1558264 |
| 13C2-Perfluorohexanoic acid | 86.9107761 | | 86.0640809 | | 96.6662949 | | 103.074728 |
| 13C2-Perfluoroundecanoic acid | 78.5645985 | | 81.4177000 | | 89.7516126 | | 101.636981 |
| 13C4-Perfluoroheptanoic acid | 89.0740404 | | 86.0220603 | | 94.1360707 | | 97.7206945 |
| 13C5-Perfluorononanoic acid | 81.6591979 | | 89.9121539 | | 98.6014041 | | 95.1522073 |
| 13C4-Perfluorooctanoic acid | 86.8717496 | | 87.4723603 | | 87.5751390 | | 102.573025 |
| 13C4-Perfluorooctanesulfonate | 89.3562435 | | 94.9509994 | | 93.4441346 | | 103.195959 |
| 13C5-Perfluoropentanoic acid | N/A******* | | 92.9505695 | | 97.8079154 | | N/A******* |
| 13C8-Perfluorooctane Sulfonamide | N/A******* | | 78.9004503 | | 64.2276292 | | N/A******* |
| 18O2-Perfluorohexanesulfonate | 89.0931969 | | 101.473836 | | 100.667364 | | 100.286521 |

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | DL | B819794 FZH344 | DL | B819794 FZH345 | DL | B819794 FZH346 | DL |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| 8:2 Fluorotelomer sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| N-ethylperfluorooctane sulfonamide | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| EtFOSAA | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| N-ethylperfluorooctane sulfonamidoe | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| N-methylperfluorooctane sulfonamide | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| MeFOSAA | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| N-methylperfluorooctanesulfonamidol | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| Perfluorobutanoic acid | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| Perfluorobutane Sulfonate (PFBS) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluorodecane Sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| Perfluoroheptanoic Acid (PFHpA) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluoroheptane sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| Perfluorohexanoic Acid (PFHxA) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluorohexane Sulfonate (PFHxS) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluorononanoic Acid (PFNA) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluorooctane Sulfonamide (PFOSA) | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| Perfluoropentanoic Acid (PFPeA) | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 |
| Perfluorotetradecanoic Acid | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluorotridecanoic Acid | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluoroundecanoic Acid (PFUnA) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluorodecanoic Acid (PFDA) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluorododecanoic Acid (PFDoA) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| Perfluorooctane Sulfonate (PFOS) | 0.02 | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 |
| 13C2-6:2 Fluorotelomer sulfonate | | N/A******* | | N/A******* | | N/A******* | |
| 13C2-8:2 Fluorotelomer sulfonate | | N/A******* | | N/A******* | | N/A******* | |
| 13C2-perfluorotetradecanoic acid | | 77.1908524 | | 71.9470181 | | 75.3855990 | |
| 13C4-Perfluorobutanoic acid | | N/A******* | | N/A******* | | N/A******* | |
| D3-MeFOSAA | | 84.7396178 | | 73.5421858 | | 81.3894851 | |
| D5-EtFOSAA | | 86.1073348 | | 75.8329929 | | 80.2984169 | |
| N-methyl-d3-perfluorooctane sulfona | | N/A******* | | N/A******* | | N/A******* | |
| N-ethyl-d5-perfluorooctane sulfonam | | N/A******* | | N/A******* | | N/A******* | |
| 13C2-Perfluorodecanoic acid | | 99.0546764 | | 82.1760373 | | 94.9012927 | |
| 13C2-Perfluorododecanoic acid | | 84.1751686 | | 73.8662504 | | 76.5459481 | |
| 13C2-Perfluorohexanoic acid | | 103.981453 | | 89.5273662 | | 98.6190842 | |
| 13C2-Perfluoroundecanoic acid | | 90.4203887 | | 76.5271325 | | 94.6068299 | |
| 13C4-Perfluoroheptanoic acid | | 99.2321321 | | 88.3159353 | | 96.4711965 | |
| 13C5-Perfluorononanoic acid | | 96.3452767 | | 86.2244037 | | 96.3752530 | |
| 13C4-Perfluorooctanoic acid | | 98.5254289 | | 86.2726611 | | 102.455275 | |
| 13C4-Perfluorooctanesulfonate | | 100.342167 | | 86.1902780 | | 90.6185606 | |
| 13C5-Perfluoropentanoic acid | | 97.1968980 | | 91.5038071 | | 101.174284 | |
| 13C8-Perfluorooctane Sulfonamide | | 76.1132788 | | 62.8588376 | | 67.2981523 | |
| 18O2-Perfluorohexanesulfonate | | 97.7587480 | | 91.2758797 | | 97.1877814 | |

PFOS and PFOA in water by SPE/LCMS - Water
ug/L

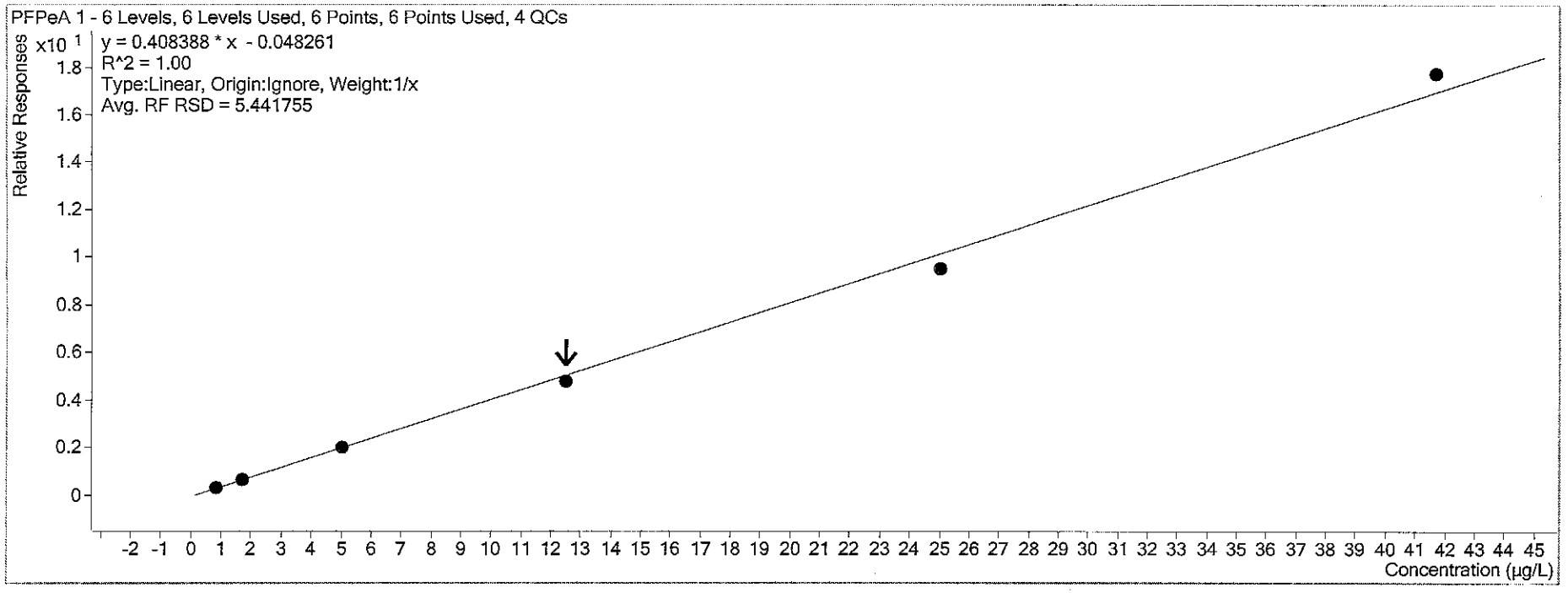
| Parameter Name | B819794 FZH347 | DL | B819794 FZH348 | DL | B820260 FZJ934 | DL | RDL |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | N/A******* | 0.02 | N/A******* | 0.02 | 0 | 0.02 | 0.02 |
| 8:2 Fluorotelomer sulfonate | N/A******* | 0.02 | N/A******* | 0.02 | 0 | 0.02 | 0.02 |
| N-ethylperfluorooctane sulfonamide | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | 0.02 |
| EtFOSAA | 0 | 0.02 | 0 | 0.02 | N/A******* | 0.02 | 0.02 |
| N-ethylperfluorooctane sulfonamidoe | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | 0.02 |
| N-methylperfluorooctane sulfonamide | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | 0.02 |
| MeFOSAA | 0 | 0.02 | 0 | 0.02 | N/A******* | 0.02 | 0.02 |
| N-methylperfluorooctanesulfonamidoi | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | 0.02 |
| Perfluorobutanoic acid | 1.32435011 | 0.02 | N/A******* | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorobutane Sulfonate (PFBS) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorodecane Sulfonate | N/A******* | 0.02 | N/A******* | 0.02 | 0 | 0.02 | 0.02 |
| Perfluoroheptanoic Acid (PFHpA) | 0.01259488 | 0.02 | 0.01117351 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluoroheptane sulfonate | N/A******* | 0.02 | N/A******* | 0.02 | N/A******* | 0.02 | 0.02 |
| Perfluorohexanoic Acid (PFHxA) | 0.01407001 | 0.02 | 0.01319642 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorohexane Sulfonate (PFHxS) | 0.00977400 | 0.02 | 0.00778421 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorononanoic Acid (PFNA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorooctane Sulfonamide (PFOSA) | N/A******* | 0.02 | N/A******* | 0.02 | 0 | 0.02 | 0.02 |
| Perfluoropentanoic Acid (PFPeA) | N/A******* | 0.02 | N/A******* | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorotetradecanoic Acid | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorotridecanoic Acid | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluoroundecanoic Acid (PFUnA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorodecanoic Acid (PFDA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorododecanoic Acid (PFDoA) | 0 | 0.02 | 0 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.03076766 | 0.02 | 0.02327353 | 0.02 | 0 | 0.02 | 0.02 |
| Perfluorooctane Sulfonate (PFOS) | 0.02087630 | 0.02 | 0.01707903 | 0.02 | 0 | 0.02 | 0.02 |
| 13C2-6:2 Fluorotelomer sulfonate | N/A******* | | N/A******* | | 83.7850573 | | |
| 13C2-8:2 Fluorotelomer sulfonate | N/A******* | | N/A******* | | 81.4629185 | | |
| 13C2-perfluorotetradecanoic acid | 65.2261649 | | 66.6786894 | | 64.7172540 | | |
| 13C4-Perfluorobutanoic acid | N/A******* | | N/A******* | | 89.2547297 | | |
| D3-MeFOSAA | 73.7337370 | | 83.8622985 | | N/A******* | | |
| D5-EtFOSAA | 71.9622175 | | 81.6914136 | | N/A******* | | |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | | N/A******* | | N/A******* | | |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | | N/A******* | | N/A******* | | |
| 13C2-Perfluorodecanoic acid | 68.0330052 | | 79.8067445 | | 67.9065261 | | |
| 13C2-Perfluorododecanoic acid | 67.6070511 | | 71.7300881 | | 63.2119014 | | |
| 13C2-Perfluorohexanoic acid | 74.8592925 | | 76.5367429 | | 86.4727994 | | |
| 13C2-Perfluoroundecanoic acid | 69.7976855 | | 75.6814541 | | 68.4996292 | | |
| 13C4-Perfluoroheptanoic acid | 69.1457833 | | 87.0723268 | | 81.1903390 | | |
| 13C5-Perfluorononanoic acid | 72.5916047 | | 82.8828909 | | 85.0057938 | | |
| 13C4-Perfluorooctanoic acid | 70.8560945 | | 82.3483394 | | 86.5523980 | | |
| 13C4-Perfluorooctanesulfonate | 77.7487498 | | 87.3949690 | | 82.5559714 | | |
| 13C5-Perfluoropentanoic acid | N/A******* | | N/A******* | | 88.3457088 | | |
| 13C8-Perfluorooctane Sulfonamide | N/A******* | | N/A******* | | 148.6323 | | |
| 18O2-Perfluorohexanesulfonate | 87.4774020 | | 82.3917817 | | 95.0887111 | | |

Worksheet Number: **5386102**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | MDL | IDL | | | | | |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0.0066 | 0 | | | | | |
| 8:2 Fluorotelomer sulfonate | 0.0066 | 0 | | | | | |
| N-ethylperfluorooctane sulfonamide | 0.01 | 0 | | | | | |
| EtFOSAA | 0.0033 | 0 | | | | | |
| N-ethylperfluorooctane sulfonamidoe | 0.0079 | 0 | | | | | |
| N-methylperfluorooctane sulfonamide | 0.013 | 0 | | | | | |
| MeFOSAA | 0.0029 | 0 | | | | | |
| N-methylperfluorooctanesulfonamidol | 0.012 | 0 | | | | | |
| Perfluorobutanoic acid | 0.0055 | 0 | | | | | |
| Perfluorobutane Sulfonate (PFBS) | 0.0054 | 0 | | | | | |
| Perfluorodecane Sulfonate | 0.006 | 0 | | | | | |
| Perfluoroheptanoic Acid (PFHpA) | 0.0074 | 0 | | | | | |
| Perfluoroheptane sulfonate | 0.008 | 0 | | | | | |
| Perfluorohexanoic Acid (PFHxA) | 0.0035 | 0 | | | | | |
| Perfluorohexane Sulfonate (PFHxS) | 0.0056 | 0 | | | | | |
| Perfluorononanoic Acid (PFNA) | 0.0087 | 0 | | | | | |
| Perfluorooctane Sulfonamide (PFOSA) | 0.0034 | 0 | | | | | |
| Perfluoropentanoic Acid (PFPeA) | 0.0075 | 0 | | | | | |
| Perfluorotetradecanoic Acid | 0.0027 | 0 | | | | | |
| Perfluorotridecanoic Acid | 0.0038 | 0 | | | | | |
| Perfluoroundecanoic Acid (PFUnA) | 0.0025 | 0 | | | | | |
| Perfluorodecanoic Acid (PFDA) | 0.0061 | 0 | | | | | |
| Perfluorododecanoic Acid (PFDoA) | 0.005 | 0 | | | | | |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.0033 | 0 | | | | | |
| Perfluorooctane Sulfonate (PFOS) | 0.006 | 0 | | | | | |
| 13C2-6:2 Fluorotelomer sulfonate | | | | | | | |
| 13C2-8:2 Fluorotelomer sulfonate | | | | | | | |
| 13C2-perfluorotetradecanoic acid | | | | | | | |
| 13C4-Perfluorobutanoic acid | | | | | | | |
| D3-MeFOSAA | | | | | | | |
| D5-EtFOSAA | | | | | | | |
| N-methyl-d3-perfluorooctane sulfona | | | | | | | |
| N-ethyl-d5-perfluorooctane sulfonam | | | | | | | |
| 13C2-Perfluorodecanoic acid | | | | | | | |
| 13C2-Perfluorododecanoic acid | | | | | | | |
| 13C2-Perfluorohexanoic acid | | | | | | | |
| 13C2-Perfluoroundecanoic acid | | | | | | | |
| 13C4-Perfluoroheptanoic acid | | | | | | | |
| 13C5-Perfluorononanoic acid | | | | | | | |
| 13C4-Perfluorooctanoic acid | | | | | | | |
| 13C4-Perfluorooctanesulfonate | | | | | | | |
| 13C5-Perfluoropentanoic acid | | | | | | | |
| 13C8-Perfluorooctane Sulfonamide | | | | | | | |
| 18O2-Perfluorohexanesulfonate | | | | | | | |




manual calculation for Spike:

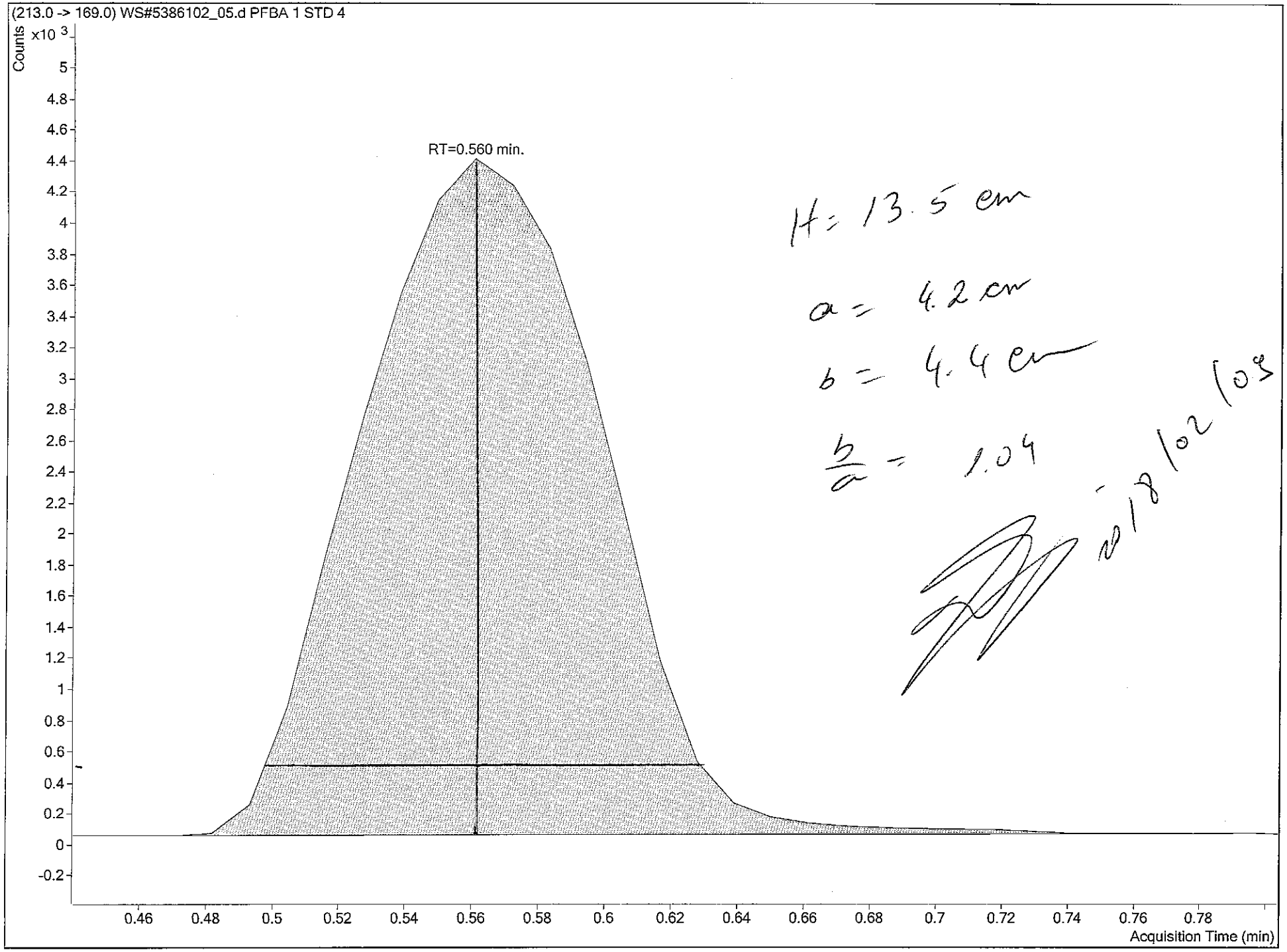
$8.6747 = 0.408388x - 0.048261$

$x = 21.359 \times 0.024$

$= 0.5126\ \mu g/L$

$\frac{0.5126}{0.5} \times 100 = 102.5\%$

2018/02/09



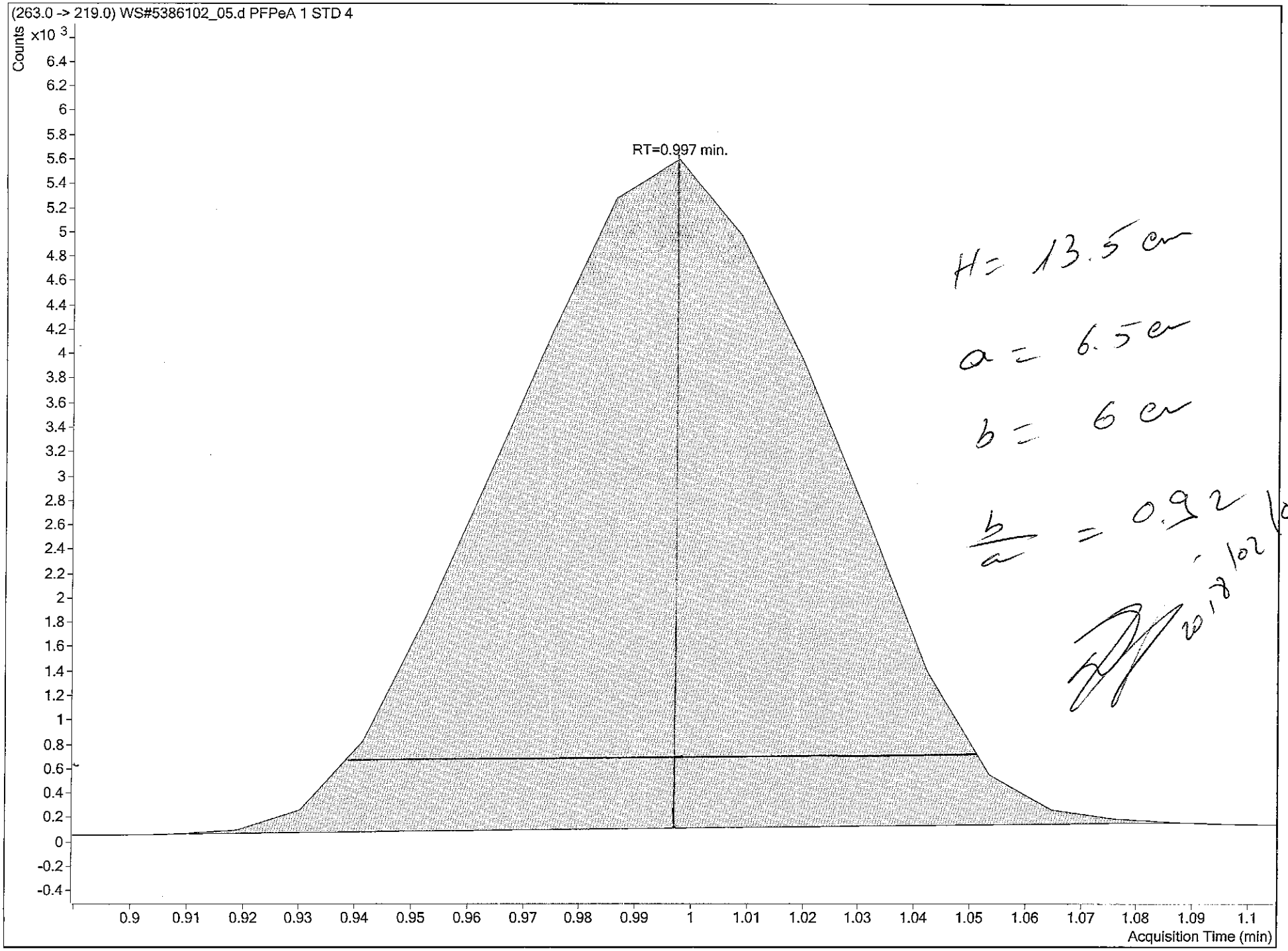

H = 13.5 cm

a = 4.2 cm

b = 4.4 cm

$\frac{b}{a}$ = 1.04

2018/02/09




H = 13.5 cm

a = 6.5 cm

b = 6 cm

$\frac{b}{a}$ = 0.92

2018/02/08

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/06

Test Code: **PFOSALCM-W**

Worksheet Number: **5386102**

| Sample Number | Parameter Code | Parameter | |
|---|---|---|---|
| FZA801-01 | ETFOSAA | EtFOSAA | * |
| FZA802-01 | MEFOSAA | MeFOSAA | * |
| FZA803-01 | PFBS | Perfluorobutane Sulfonate (PFBS) | |
| FZA804-01 | PFHPA | Perfluoroheptanoic Acid (PFHpA) | |
| FZA805-01 | PFHXA | Perfluorohexanoic Acid (PFHxA) | |
| FZA806-01 | PFHXS | Perfluorohexane Sulfonate (PFHxS) | |
| FZH328-01 | PFNA | Perfluorononanoic Acid (PFNA) | |
| FZH329-01 | PFTEDA | Perfluorotetradecanoic Acid | |
| FZH335-01 | PFTRDA | Perfluorotridecanoic Acid | |
| FZH347-01 | PFUNA | Perfluoroundecanoic Acid (PFUnA) | |
| FZH348-01 | PFDA | Perfluorodecanoic Acid (PFDA) | |
| | PFDOA | Perfluorododecanoic Acid (PFDoA) | |
| | PFOA | Perfluoro-n-Octanoic Acid (PFOA) | |
| | PFOS | Perfluorooctane Sulfonate (PFOS) | |
| FZH330-01 | NONE | NONE | |
| FZH344-01 | | | |
| FZH345-01 | | | |
| FZH346-01 | | | |
| FZJ934-01 | 6:2FTS | 6:2 Fluorotelomer sulfonate | * |
| | 8:2FTS | 8:2 Fluorotelomer sulfonate | * |
| | PFBA | Perfluorobutanoic acid | |
| | PFBS | Perfluorobutane Sulfonate (PFBS) | |
| | PFDS | Perfluorodecane Sulfonate | |
| | PFHPA | Perfluoroheptanoic Acid (PFHpA) | |
| | PFHXA | Perfluorohexanoic Acid (PFHxA) | |
| | PFHXS | Perfluorohexane Sulfonate (PFHxS) | |

* - This parameter is usually off, but will be reported for this group of samples!

Report Name: Worksheet - Parameter Lists
Report Date: 2018/02/06

Test Code: **PFOSALCM-W**
Worksheet Number: **5386102**

| Sample Number | Parameter Code | Parameter |
|---|---|---|
| | PFNA | Perfluorononanoic Acid (PFNA) |
| | PFOSA | Perfluorooctane Sulfonamide (PFOSA) |
| | PFPEA | Perfluoropentanoic Acid (PFPeA) |
| | PFTEDA | Perfluorotetradecanoic Acid |
| | PFTRDA | Perfluorotridecanoic Acid |
| | PFUNA | Perfluoroundecanoic Acid (PFUnA) |
| | PFDA | Perfluorodecanoic Acid (PFDA) |
| | PFDOA | Perfluorododecanoic Acid (PFDoA) |
| | PFOA | Perfluoro-n-Octanoic Acid (PFOA) |
| | PFOS | Perfluorooctane Sulfonate (PFOS) |

* - This parameter is usually off, but will be reported for this group of samples!

# WorkSheet 5386102 Instrument Sequences

| | | |
|---|---|---|
| 1. | 5386102:MTRX SPK | MTRX SPK |
| 2. | 5386102:MTRX SPK:D1 | MTRX SPK :D1 |
| 3. | 5386102:SPIKE | SPIKE |
| 4. | 5386102:BLANK | BLANK |
| 5. | 5386102:FZA801-01 | FB-OLD-012318-3 |
| 6. | 5386102:FZA802-01 | EB-WC-012318-2 |
| 7. | 5386102:FZA803-01 | EB-GW-012318-2 |
| 8. | 5386102:FZA804-01 | FB-OLD-012318-4 |
| 9. | 5386102:FZA805-01 | EB-DPT-012318-2 |
| 10. | 5386102:FZA806-01 | OLD-02-09A-0118 |
| 11. | 5386102:FZH328-01 | [redacted] |
| 12. | 5386102:FZH329-01 | [redacted] |
| 13. | 5386102:FZH330-01 | [redacted] |
| 14. | 5386102:FZH335-01 | [redacted] |
| 15. | 5386102:FZH344-01 | [redacted] |
| 16. | 5386102:FZH345-01 | [redacted] |
| 17. | 5386102:FZH346-01 | [redacted] |
| 18. | 5386102:FZH347-01 | [redacted] |
| 19. | 5386102:FZH348-01 | [redacted] |
| 20. | 5386102:FZJ934-01 | [redacted] |

# Worklist Report

Agilent Technologies

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180207_Low_A.wkl

Maxxam Analytics

**Operator Name:** ---
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\Data\PFC\20180207\WS#5386102
**Pre-Worklist Script:** ---
**Post-Worklist Script:** SCP_InstrumentStandby(){MH_Acq_Scripts.exe}
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** Column #198
MP A1: Solution# 280 (FSRE18)
MP B1: Methanol lot# SHBJ6339, Sigma

20180207 verified by AD 2018/02/07

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P1 | |

**Worklist Table**

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Solvent | P1-A1 | PFC_Water_Low.m | WS#5386102_01.d | Sample | | As Method | - |
| 2 | STD 1 | P1-C8 | PFC_Water_Low.m | WS#5386102_02.d | Calibration | STD 1 | As Method | - |
| 3 | STD 2 | P1-C9 | PFC_Water_Low.m | WS#5386102_03.d | Calibration | STD 2 | As Method | - |
| 4 | STD 3 | P1-D1 | PFC_Water_Low.m | WS#5386102_04.d | Calibration | STD 3 | As Method | - |
| 5 | STD 4 | P1-D2 | PFC_Water_Low.m | WS#5386102_05.d | Calibration | STD 4 | As Method | - |
| 6 | STD 5 | P1-D3 | PFC_Water_Low.m | WS#5386102_06.d | Calibration | STD 5 | As Method | - |
| 7 | STD 6 | P1-D4 | PFC_Water_Low.m | WS#5386102_07.d | Calibration | STD 6 | As Method | - |

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Maxxam Analytics

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 8 | IB | P1-D5 | PFC_Water_Low.m | WS#5386102_08.d | Sample | | As Method | - |
| 9 | ICV | P1-D6 | PFC_Water_Low.m | WS#5386102_09.d | QC | ICV | As Method | - |
| 10 | ISC | P1-C8 | PFC_Water_Low.m | WS#5386102_10.d | ConCal | STD 1 | As Method | - |
| 11 | 5386102:BLANK | P1-D7 | PFC_Water_Low.m | WS#5386102_11.d | Sample | | As Method | - |
| 12 | 5386102:SPIKE | P1-D8 | PFC_Water_Low.m | WS#5386102_12.d | QC | ICV | As Method | - |
| 13 | 5386102:MTRX SPK | P1-D9 | PFC_Water_Low.m | WS#5386102_13.d | QC | ICV | As Method | - |
| 14 | 5386102:MTRX SPK:D1 | P1-E1 | PFC_Water_Low.m | WS#5386102_14.d | Sample | | As Method | - |
| 15 | IB | P1-D5 | PFC_Water_Low.m | WS#5386102_15.d | Sample | | As Method | - |
| 16 | 5386102:FZA801-01 | P1-E2 | PFC_Water_Low.m | WS#5386102_16.d | Sample | | As Method | - |
| 17 | 5386102:FZA802-01 | P1-E3 | PFC_Water_Low.m | WS#5386102_17.d | Sample | | As Method | - |
| 18 | 5386102:FZA803-01 | P1-E4 | PFC_Water_Low.m | WS#5386102_18.d | Sample | | As Method | - |
| 19 | 5386102:FZA804-01 | P1-E5 | PFC_Water_Low.m | WS#5386102_19.d | Sample | | As Method | - |
| 20 | 5386102:FZA805-01 | P1-E6 | PFC_Water_Low.m | WS#5386102_20.d | Sample | | As Method | - |
| 21 | 5386102:FZA806-01 | P1-E7 | PFC_Water_Low.m | WS#5386102_21.d | Sample | | As Method | - |
| 22 | 5386102:FZH328-01 | P1-E8 | PFC_Water_Low.m | WS#5386102_22.d | Sample | | As Method | - |
| 23 | 5386102:FZH329-01 | P1-E9 | PFC_Water_Low.m | WS#5386102_23.d | Sample | | As Method | - |
| 24 | 5386102:FZH330-01 | P1-F1 | PFC_Water_Low.m | WS#5386102_24.d | Sample | | As Method | - |
| 25 | 5386102:FZH335-01 | P1-F2 | PFC_Water_Low.m | WS#5386102_25.d | Sample | | As Method | - |
| 26 | CCV | P1-D2 | PFC_Water_Low.m | WS#5386102_26.d | ConCal | STD 4 | As Method | - |
| 27 | 5386102:FZH344-01 | P1-F3 | PFC_Water_Low.m | WS#5386102_27.d | Sample | | As Method | - |
| 28 | 5386102:FZH345-01 | P1-F4 | PFC_Water_Low.m | WS#5386102_28.d | Sample | | As Method | - |
| 29 | 5386102:FZH346-01 | P1-F5 | PFC_Water_Low.m | WS#5386102_29.d | Sample | | As Method | - |
| 30 | 5386102:FZH347-01 | P1-F6 | PFC_Water_Low.m | WS#5386102_30.d | Sample | | As Method | - |

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# Worklist Report

Agilent Technologies

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 31 | 5386102:FZH348-01 | P1-F7 | PFC_Water_Low.m | WS#5386102_31.d | Sample | | As Method | - |
| 32 | 5386102:FZJ934-01 | P1-F8 | PFC_Water_Low.m | WS#5386102_32.d | Sample | | As Method | - |
| 33 | CCV | P1-D2 | PFC_Water_Low.m | WS#5386102_33.d | ConCal | STD 4 | As Method | - |

Maxxam Analytics

# Worklist Report

Agilent Technologies

Maxxam Analytics

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180207_Low_A_FOSAA.wkl

**Operator Name:** ---
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\Data\PFC\20180207\WS#5386102_FOSAA
**Pre-Worklist Script:** ---
**Post-Worklist Script:** SCP_InstrumentStandby(){MH_Acq_Scripts.exe}
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** Column #198
MP A1: Solution# 280 (FSRE18)
MP B2:Solution# 272 (FSRE18)

20180207 uG

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P1 | |

## Worklist Table

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Solvent | P1-A1 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_01.d | Sample | | As Method | - |
| 2 | STD 1 | P1-C8 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_02.d | Calibration | STD 1 | As Method | - |
| 3 | STD 2 | P1-C9 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_03.d | Calibration | STD 2 | As Method | - |
| 4 | STD 3 | P1-D1 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_04.d | Calibration | STD 3 | As Method | - |
| 5 | STD 4 | P1-D2 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_05.d | Calibration | STD 4 | As Method | - |
| 6 | STD 5 | P1-D3 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_06.d | Calibration | STD 5 | As Method | - |
| 7 | STD 6 | P1-D4 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_07.d | Calibration | STD 6 | As Method | - |
| 8 | IB | P1-D5 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_08.d | Sample | | As Method | - |

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# Worklist Report

Agilent Technologies

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 9 | ICV | P1-D6 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_09.d | QC | ICV | As Method | - |
| 10 | ISC | P1-C8 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_10.d | ConCal | STD 1 | As Method | - |
| 11 | 5386102:BLANK | P1-D7 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_11.d | Sample | | As Method | - |
| 12 | 5386102:SPIKE | P1-D8 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_12.d | QC | ICV | As Method | - |
| 13 | 5386102:MTRX SPK | P1-D9 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_13.d | QC | ICV | As Method | - |
| 14 | 5386102:MTRX SPK:D1 | P1-E1 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_14.d | Sample | | As Method | - |
| 15 | IB | P1-D5 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_15.d | Sample | | As Method | - |
| 16 | 5386102:FZA801-01 | P1-E2 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_16.d | Sample | | As Method | - |
| 17 | 5386102:FZA802-01 | P1-E3 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_17.d | Sample | | As Method | - |
| 18 | 5386102:FZA803-01 | P1-E4 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_18.d | Sample | | As Method | - |
| 19 | 5386102:FZA804-01 | P1-E5 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_19.d | Sample | | As Method | - |
| 20 | 5386102:FZA805-01 | P1-E6 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_20.d | Sample | | As Method | - |
| 21 | 5386102:FZA806-01 | P1-E7 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_21.d | Sample | | As Method | - |
| 22 | 5386102:FZH328-01 | P1-E8 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_22.d | Sample | | As Method | - |
| 23 | 5386102:FZH329-01 | P1-E9 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_23.d | Sample | | As Method | - |
| 24 | 5386102:FZH330-01 | P1-F1 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_24.d | Sample | | As Method | - |
| 25 | 5386102:FZH335-01 | P1-F2 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_25.d | Sample | | As Method | - |
| 26 | CCV | P1-D2 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_26.d | ConCal | STD 4 | As Method | - |
| 27 | 5386102:FZH344-01 | P1-F3 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_27.d | Sample | | As Method | - |
| 28 | 5386102:FZH345-01 | P1-F4 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_28.d | Sample | | As Method | - |
| 29 | 5386102:FZH346-01 | P1-F5 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_29.d | Sample | | As Method | - |
| 30 | 5386102:FZH347-01 | P1-F6 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_30.d | Sample | | As Method | - |
| 31 | 5386102:FZH348-01 | P1-F7 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_31.d | Sample | | As Method | - |
| 32 | 5386102:FZJ934-01 | P1-F8 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_32.d | Sample | | As Method | - |
| 33 | CCV | P1-D2 | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_33.d | ConCal | STD 4 | As Method | - |

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## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| STD 1 | - | 2018/02/08 3:11 AM | PFC_Water_Low.m | WS#5386102_02.d | P1-C8 |
| STD 2 | - | 2018/02/08 3:16 AM | PFC_Water_Low.m | WS#5386102_03.d | P1-C9 |
| STD 3 | - | 2018/02/08 3:21 AM | PFC_Water_Low.m | WS#5386102_04.d | P1-D1 |
| STD 4 | - | 2018/02/08 3:26 AM | PFC_Water_Low.m | WS#5386102_05.d | P1-D2 |
| STD 5 | - | 2018/02/08 3:31 AM | PFC_Water_Low.m | WS#5386102_06.d | P1-D3 |
| STD 6 | - | 2018/02/08 3:36 AM | PFC_Water_Low.m | WS#5386102_07.d | P1-D4 |
| IB | - | 2018/02/08 3:41 AM | PFC_Water_Low.m | WS#5386102_08.d | P1-D5 |
| ICV | - | 2018/02/08 3:46 AM | PFC_Water_Low.m | WS#5386102_09.d | P1-D6 |
| ISC | - | 2018/02/08 3:51 AM | PFC_Water_Low.m | WS#5386102_10.d | P1-C8 |
| 5386102:BLANK | - | 2018/02/08 3:56 AM | PFC_Water_Low.m | WS#5386102_11.d | P1-D7 |
| 5386102:SPIKE | - | 2018/02/08 4:01 AM | PFC_Water_Low.m | WS#5386102_12.d | P1-D8 |
| 5386102:MTRX SPK | FZH347 | 2018/02/08 4:06 AM | PFC_Water_Low.m | WS#5386102_13.d | P1-D9 |
| 5386102:MTRX SPK:D1 | FZH347 | 2018/02/08 4:11 AM | PFC_Water_Low.m | WS#5386102_14.d | P1-E1 |
| IB | - | 2018/02/08 4:15 AM | PFC_Water_Low.m | WS#5386102_15.d | P1-D5 |
| 5386102:FZA801-01 | - | 2018/02/08 4:20 AM | PFC_Water_Low.m | WS#5386102_16.d | P1-E2 |
| 5386102:FZA802-01 | Reanalyzed due to low ext IS recovery | 2018/02/08 4:25 AM | PFC_Water_Low.m | WS#5386102_17.d | P1-E3 |
| 5386102:FZA803-01 | - | 2018/02/08 4:30 AM | PFC_Water_Low.m | WS#5386102_18.d | P1-E4 |
| 5386102:FZA804-01 | - | 2018/02/08 4:35 AM | PFC_Water_Low.m | WS#5386102_19.d | P1-E5 |
| 5386102:FZA805-01 | - | 2018/02/08 4:40 AM | PFC_Water_Low.m | WS#5386102_20.d | P1-E6 |
| 5386102:FZA806-01 | - | 2018/02/08 4:45 AM | PFC_Water_Low.m | WS#5386102_21.d | P1-E7 |
| 5386102:FZH328-01 | - | 2018/02/08 4:50 AM | PFC_Water_Low.m | WS#5386102_22.d | P1-E8 |
| 5386102:FZH329-01 | - | 2018/02/08 4:55 AM | PFC_Water_Low.m | WS#5386102_23.d | P1-E9 |
| 5386102:FZH330-01 | - | 2018/02/08 5:00 AM | PFC_Water_Low.m | WS#5386102_24.d | P1-F1 |
| 5386102:FZH335-01 | - | 2018/02/08 5:05 AM | PFC_Water_Low.m | WS#5386102_25.d | P1-F2 |
| CCV | - | 2018/02/08 5:10 AM | PFC_Water_Low.m | WS#5386102_26.d | P1-D2 |
| 5386102:FZH344-01 | - | 2018/02/08 5:15 AM | PFC_Water_Low.m | WS#5386102_27.d | P1-F3 |
| 5386102:FZH345-01 | - | 2018/02/08 5:20 AM | PFC_Water_Low.m | WS#5386102_28.d | P1-F4 |
| 5386102:FZH346-01 | - | 2018/02/08 5:25 AM | PFC_Water_Low.m | WS#5386102_29.d | P1-F5 |
| 5386102:FZH347-01 | - | 2018/02/08 5:29 AM | PFC_Water_Low.m | WS#5386102_30.d | P1-F6 |
| 5386102:FZH348-01 | - | 2018/02/08 5:34 AM | PFC_Water_Low.m | WS#5386102_31.d | P1-F7 |
| 5386102:FZJ934-01 | Reinjected to check recovery | 2018/02/08 5:39 AM | PFC_Water_Low.m | WS#5386102_32.d | P1-F8 |
| CCV | - | 2018/02/08 5:44 AM | PFC_Water_Low.m | WS#5386102_33.d | P1-D2 |
| ISC | - | 2018/02/08 3:47 PM | PFC_Water_Low.m | WS#5386102_34.d | P1-C8 |

## FINAL INJECTION SEQUENCE

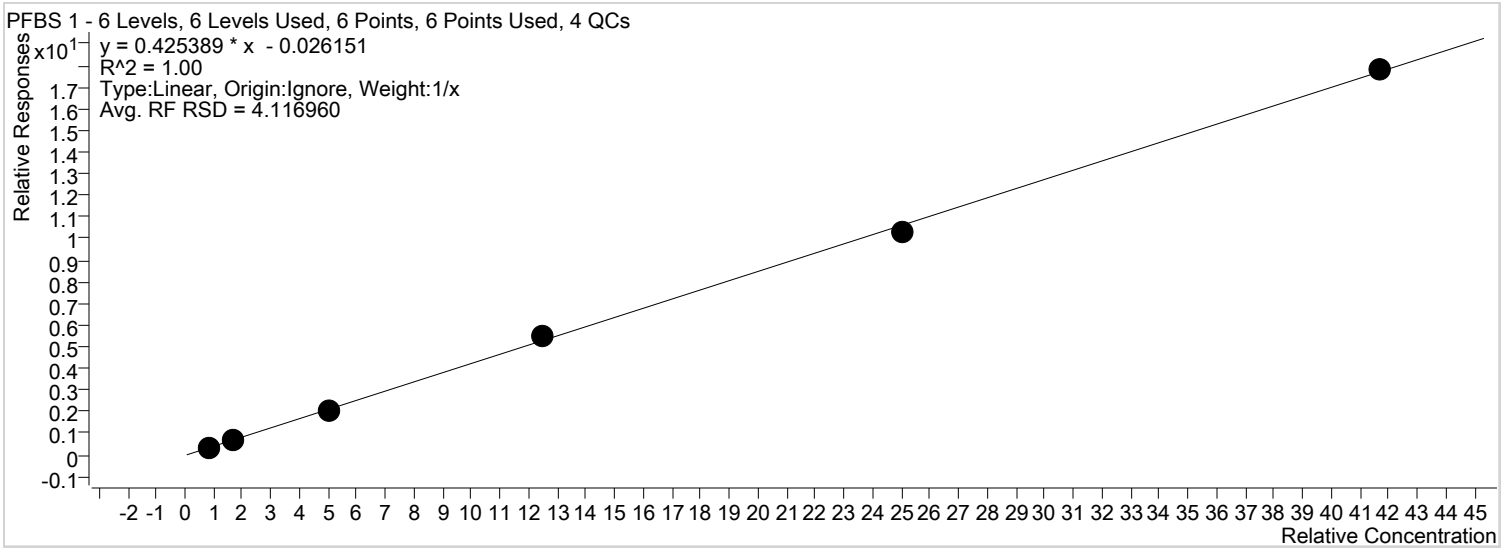
| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| IB | - | 2018/02/08 3:52 PM | PFC_Water_Low.m | WS#5386102_35.d | P1-D5 |
| 5386102:FZJ934-01 | Reinjection, reported | 2018/02/08 3:57 PM | PFC_Water_Low.m | WS#5386102_36.d | P1-F8 |
| CCV | - | 2018/02/08 4:01 PM | PFC_Water_Low.m | WS#5386102_37.d | P1-D2 |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| STD 1 | - | 2018/02/08 9:36 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_02.d | P1-C8 |
| STD 2 | - | 2018/02/08 9:38 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_03.d | P1-C9 |
| STD 3 | - | 2018/02/08 9:41 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_04.d | P1-D1 |
| STD 4 | - | 2018/02/08 9:43 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_05.d | P1-D2 |
| STD 5 | - | 2018/02/08 9:46 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_06.d | P1-D3 |
| STD 6 | - | 2018/02/08 9:48 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_07.d | P1-D4 |
| IB | - | 2018/02/08 9:50 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_08.d | P1-D5 |
| ICV | - | 2018/02/08 9:53 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_09.d | P1-D6 |
| ISC | - | 2018/02/08 9:55 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_10.d | P1-C8 |
| 5386102:BLANK | - | 2018/02/08 9:58 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_11.d | P1-D7 |
| 5386102:SPIKE | - | 2018/02/08 10:00 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_12.d | P1-D8 |
| 5386102:MTRX SPK | FZH347 | 2018/02/08 10:02 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_13.d | P1-D9 |
| 5386102:MTRX SPK:D1 | FZH347 | 2018/02/08 10:05 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_14.d | P1-E1 |
| IB | - | 2018/02/08 10:07 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_15.d | P1-D5 |
| 5386102:FZA801-01 | - | 2018/02/08 10:10 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_16.d | P1-E2 |
| 5386102:FZA802-01 | - | 2018/02/08 10:12 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_17.d | P1-E3 |
| 5386102:FZA803-01 | - | 2018/02/08 10:14 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_18.d | P1-E4 |
| 5386102:FZA804-01 | - | 2018/02/08 10:17 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_19.d | P1-E5 |
| 5386102:FZA805-01 | - | 2018/02/08 10:19 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_20.d | P1-E6 |
| 5386102:FZA806-01 | - | 2018/02/08 10:22 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_21.d | P1-E7 |
| 5386102:FZH328-01 | - | 2018/02/08 10:24 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_22.d | P1-E8 |
| 5386102:FZH329-01 | - | 2018/02/08 10:27 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_23.d | P1-E9 |
| 5386102:FZH330-01 | - | 2018/02/08 10:29 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_24.d | P1-F1 |
| 5386102:FZH335-01 | - | 2018/02/08 10:31 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_25.d | P1-F2 |
| CCV | - | 2018/02/08 10:34 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_26.d | P1-D2 |
| 5386102:FZH344-01 | - | 2018/02/08 10:36 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_27.d | P1-F3 |
| 5386102:FZH345-01 | - | 2018/02/08 10:39 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_28.d | P1-F4 |
| 5386102:FZH346-01 | - | 2018/02/08 10:41 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_29.d | P1-F5 |
| 5386102:FZH347-01 | - | 2018/02/08 10:43 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_30.d | P1-F6 |
| 5386102:FZH348-01 | - | 2018/02/08 10:46 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_31.d | P1-F7 |
| 5386102:FZJ934-01 | - | 2018/02/08 10:48 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_32.d | P1-F8 |
| CCV | - | 2018/02/08 10:51 AM | PFC_Water_Low_FOSAA.m | WS#5386102_FOSAA_33.d | P1-D2 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

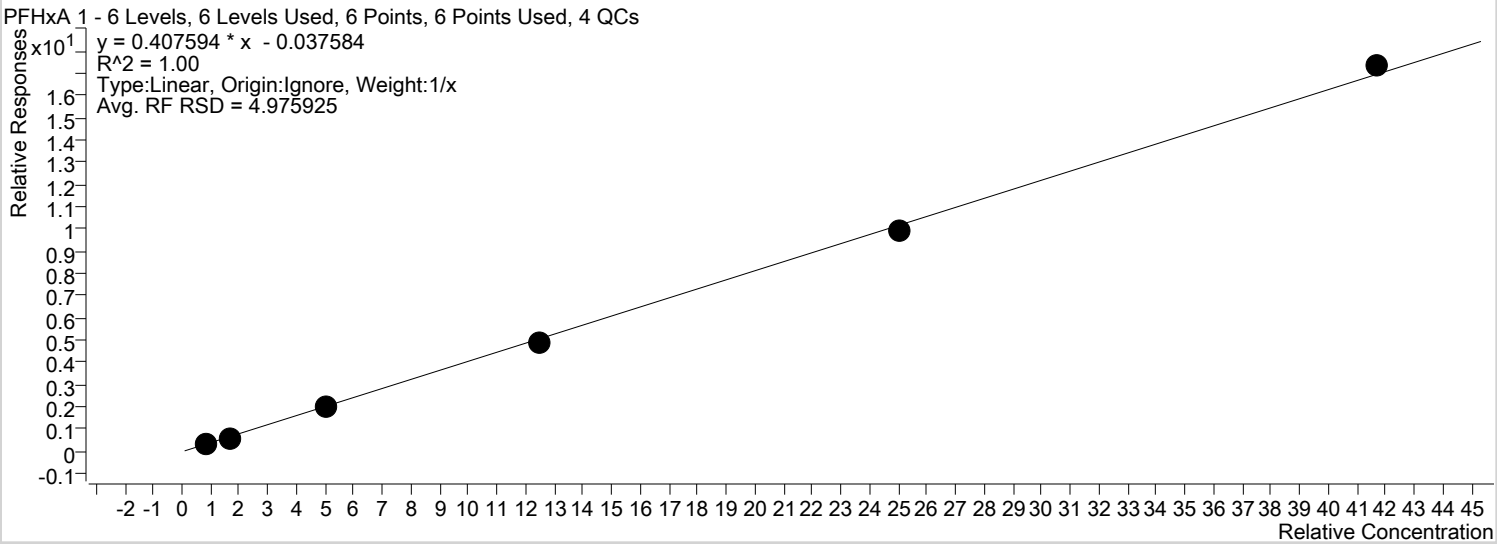
**Analyte:** PFBS 1
**Internal Standard:** MPFHxS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.85 | 497 | 0.4065 | 97 | 103.0 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.63 | 1093 | 0.3928 | 150 | 95.9 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 4.94 | 3474 | 0.4148 | 439 | 98.7 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 13.07 | 8497 | 0.4426 | 1039 | 104.5 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.32 | 16101 | 0.4128 | 837 | 97.3 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 41.92 | 28114 | 0.4270 | 125 | 100.5 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

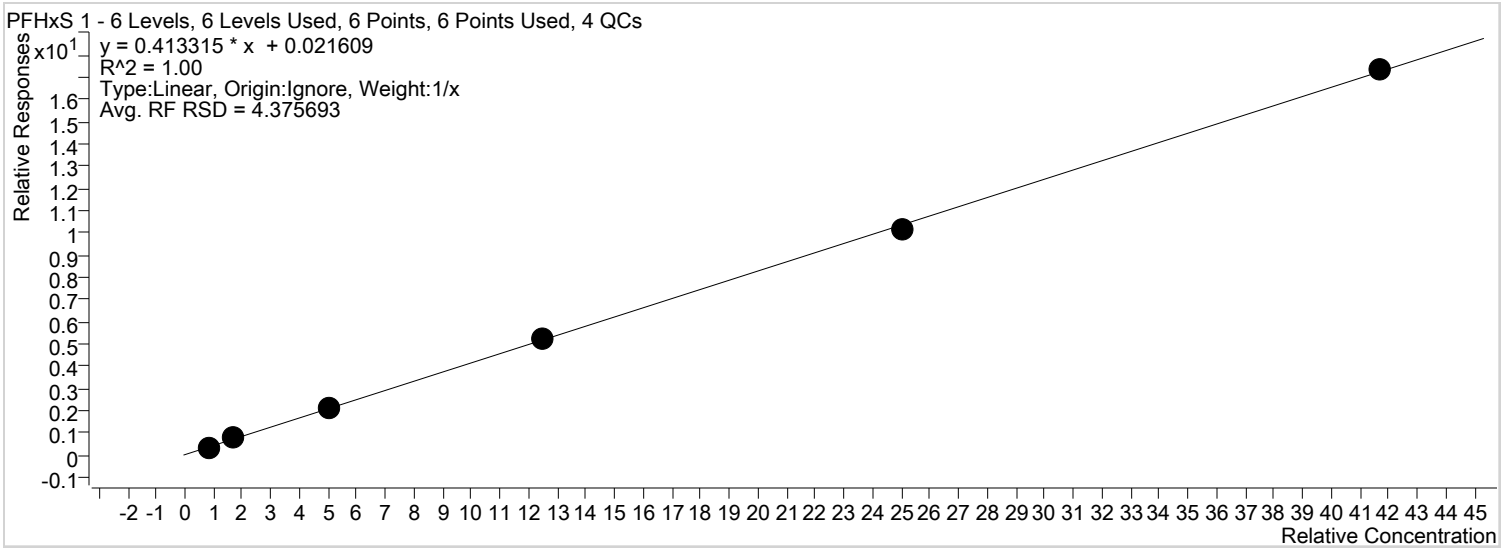
**Analyte:** PFHxA 1
**Internal Standard:** MPFHxA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.90 | 2077 | 0.3981 | 145 | 108.8 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.59 | 3838 | 0.3591 | 502 | 93.5 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 5.07 | 13004 | 0.4060 | 1085 | 101.5 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 11.97 | 29662 | 0.3874 | 1794 | 95.8 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.55 | 59203 | 0.3987 | 2807 | 98.2 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 42.64 | 103000 | 0.4159 | 5713 | 102.3 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

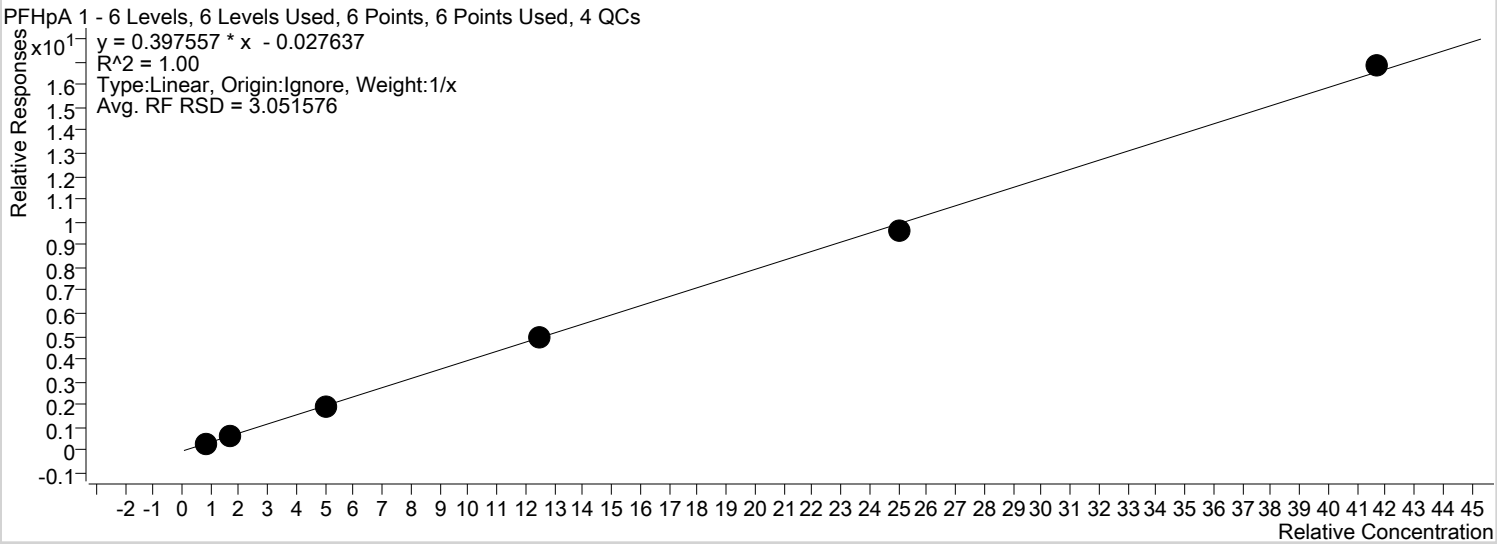
**Analyte:** PFHxS 1
**Internal Standard:** MPFHxS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.77 | 500 | 0.4090 | 121 | 92.6 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.83 | 1272 | 0.4571 | 183 | 107.5 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 4.98 | 3485 | 0.4161 | 326 | 99.6 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 12.68 | 8086 | 0.4211 | 269 | 101.5 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.55 | 15866 | 0.4068 | 634 | 98.2 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 41.91 | 27387 | 0.4159 | 785 | 100.5 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

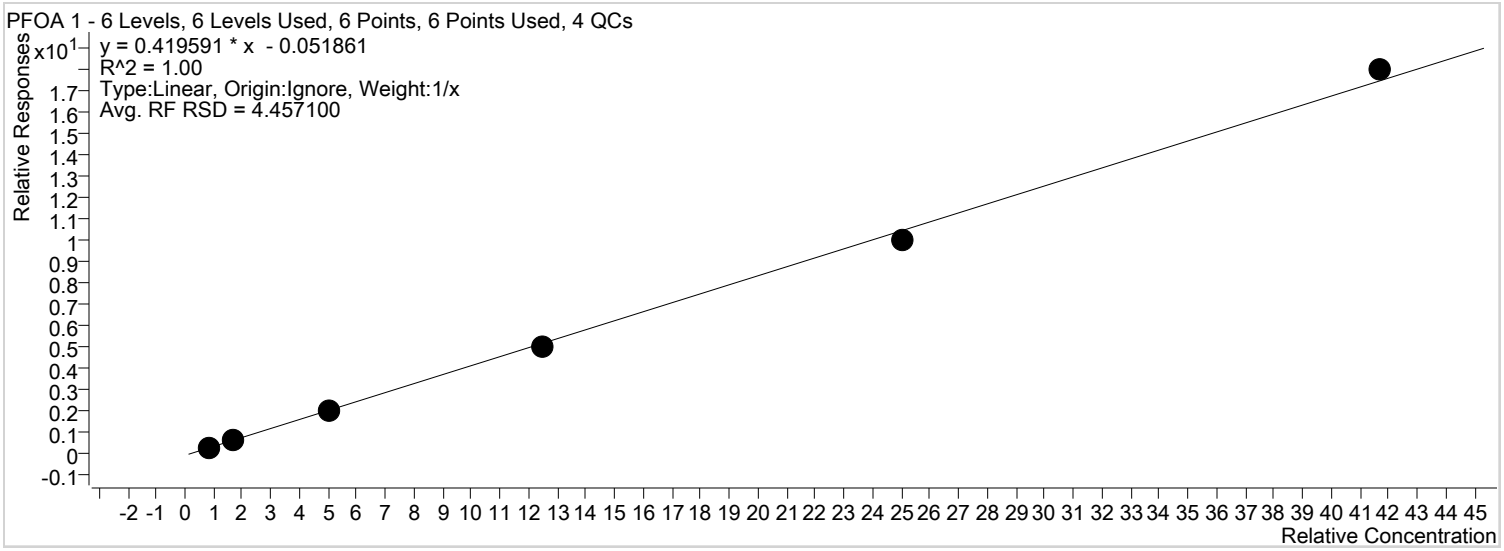
**Analyte:** PFHpA 1
**Internal Standard:** MPFHpA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.84 | 2450 | 0.3681 | 25 | 101.0 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.71 | 5287 | 0.3832 | 38 | 100.5 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 5.01 | 16931 | 0.3926 | 167 | 100.2 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 12.40 | 39741 | 0.3922 | 257 | 99.2 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.38 | 75218 | 0.3866 | 310 | 97.5 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 42.39 | 131039 | 0.4035 | 312 | 101.7 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

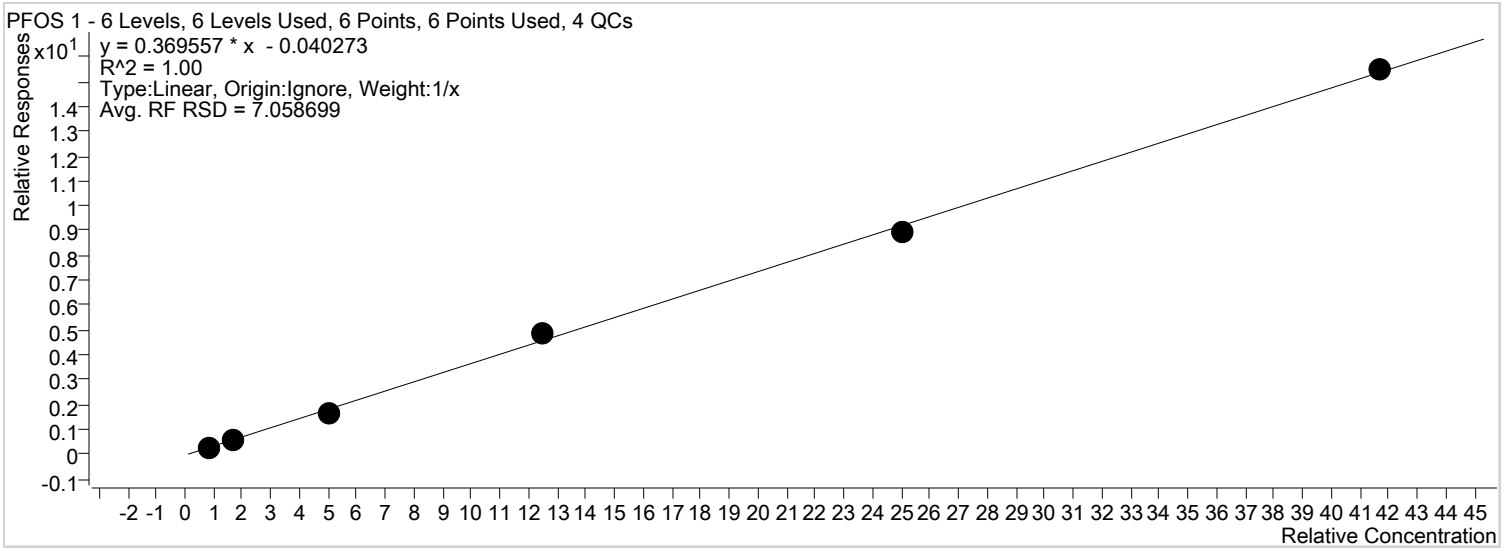
**Analyte:** PFOA 1
**Internal Standard:** MPFOA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.87 | 2739 | 0.3781 | 28 | 105.0 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.70 | 5595 | 0.3882 | 57 | 99.8 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 4.91 | 17877 | 0.4013 | 168 | 98.1 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 12.21 | 42181 | 0.4057 | 343 | 97.7 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.12 | 85357 | 0.4027 | 922 | 96.5 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 42.93 | 146836 | 0.4307 | 850 | 103.0 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

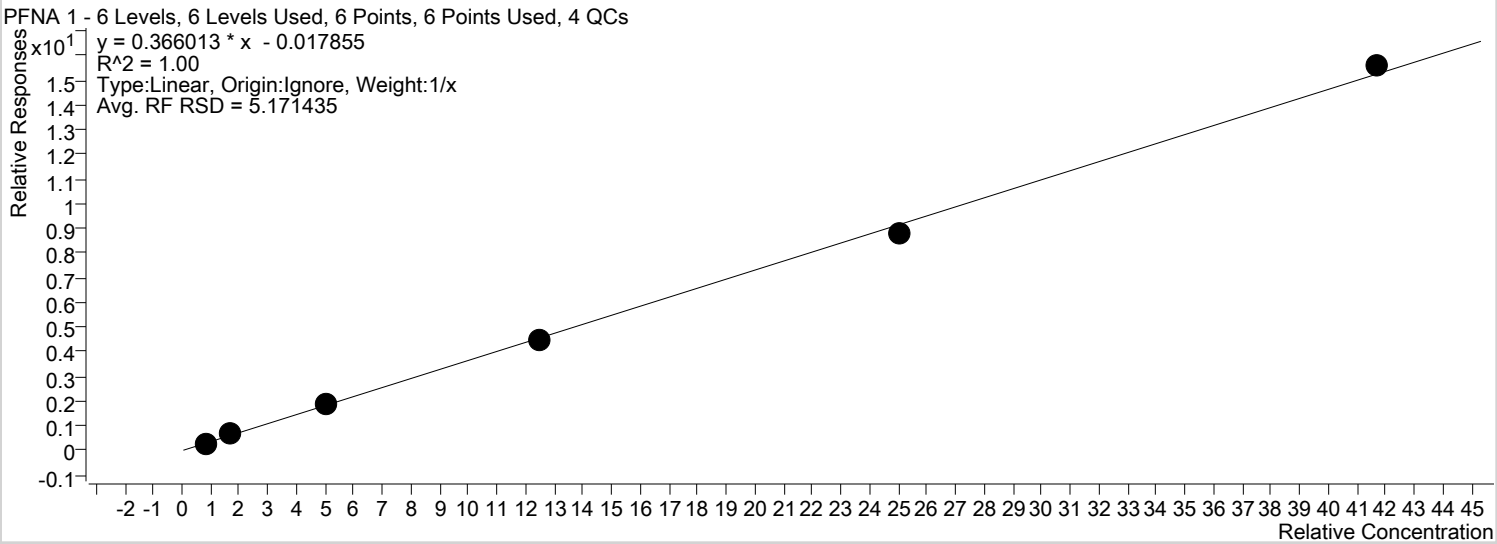
**Analyte:** PFOS 1
**Internal Standard:** MPFOS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.83 | 497 | 0.3219 | 43 | 100.2 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.76 | 1227 | 0.3600 | 164 | 103.8 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 4.59 | 3588 | 0.3315 | 201 | 91.9 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 13.29 | 8472 | 0.3897 | 245 | 106.3 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.26 | 16897 | 0.3570 | 166 | 97.0 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 41.99 | 28723 | 0.3711 | 249 | 100.7 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

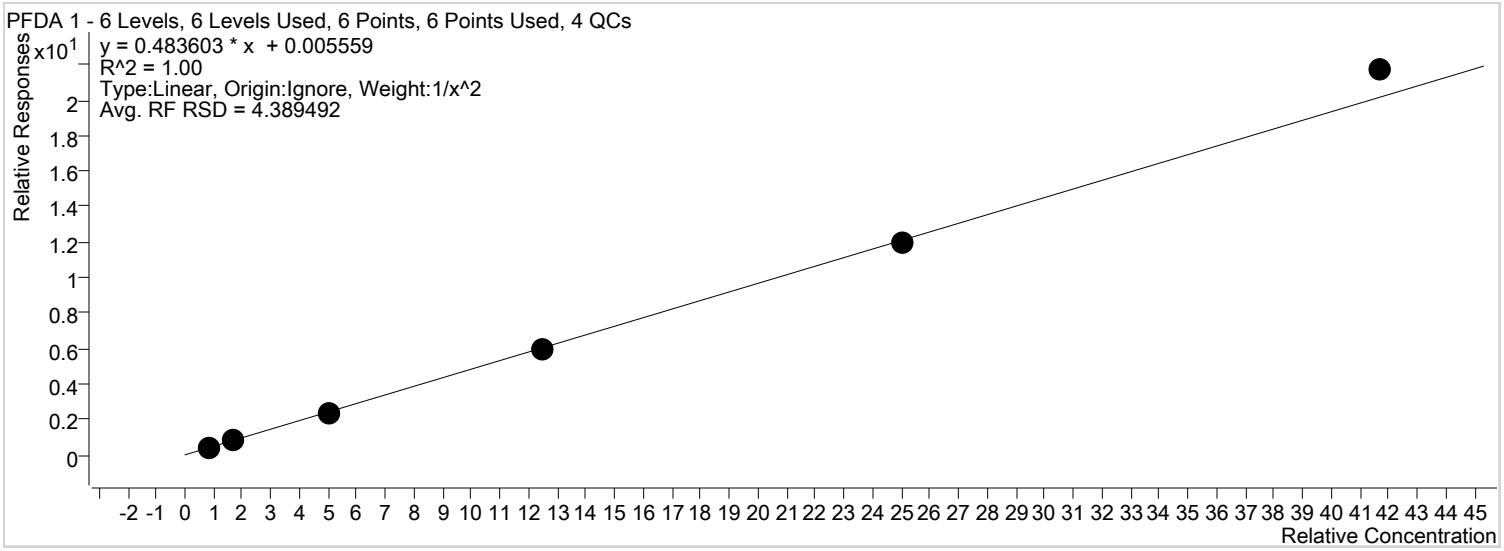
**Analyte:** PFNA 1
**Internal Standard:** MPFNA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.79 | 2263 | 0.3264 | 24 | 95.1 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.79 | 5567 | 0.3747 | 69 | 105.2 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 5.12 | 16539 | 0.3712 | 383 | 102.4 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 12.36 | 37275 | 0.3606 | 450 | 98.9 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.05 | 74127 | 0.3514 | 1100 | 96.2 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 42.62 | 128982 | 0.3737 | 3317 | 102.2 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

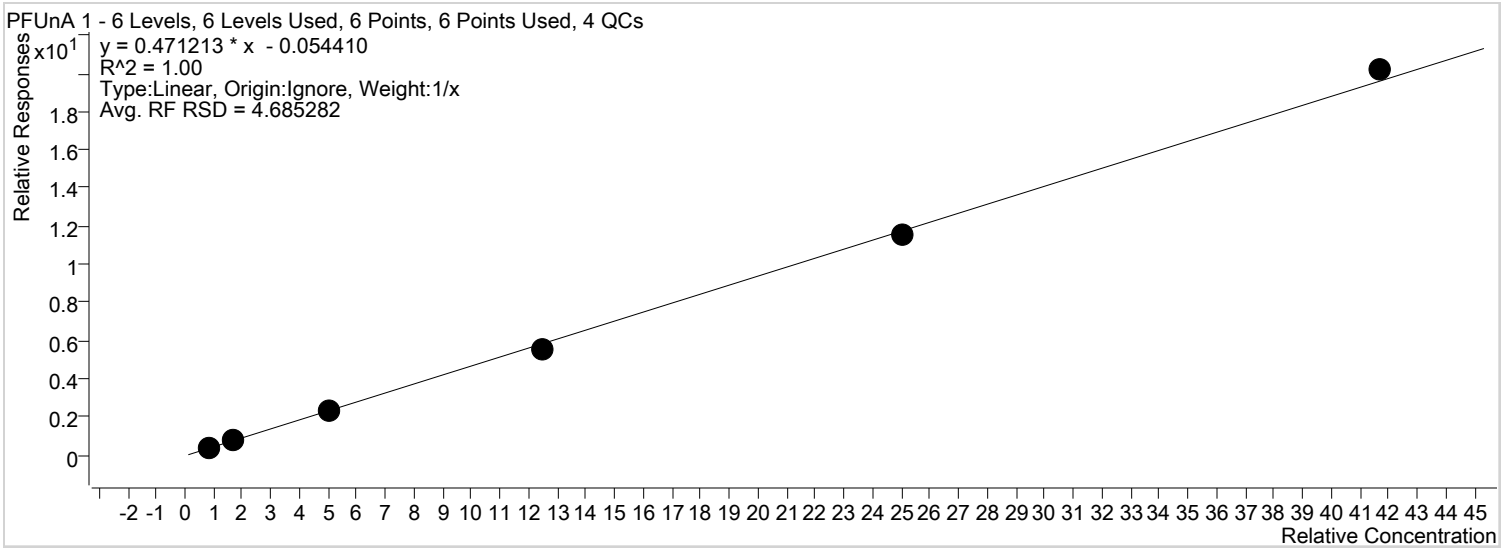
**Analyte:** PFDA 1
**Internal Standard:** MPFDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.85 | 2942 | 0.5016 | 38 | 102.3 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.64 | 5859 | 0.4699 | 49 | 96.5 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 4.80 | 17246 | 0.4654 | 191 | 96.0 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 12.35 | 42674 | 0.4781 | 616 | 98.8 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.68 | 82723 | 0.4775 | 830 | 98.7 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 44.90 | 138781 | 0.5208 | 1271 | 107.7 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

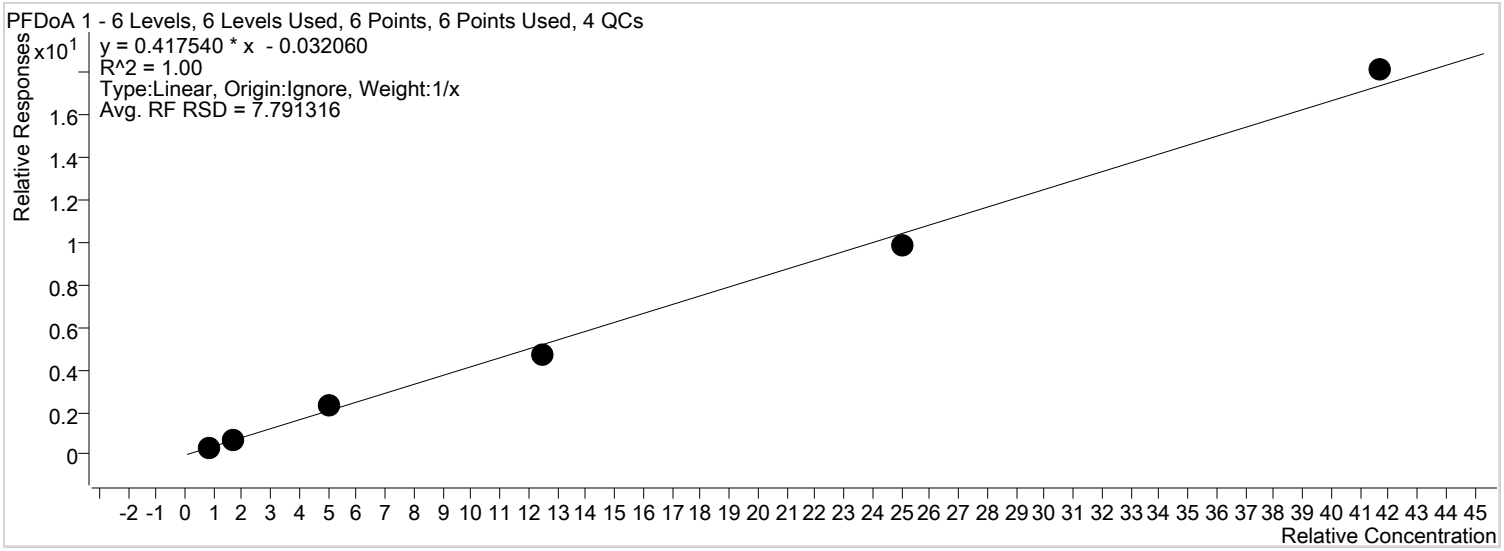
**Analyte:** PFUnA 1
**Internal Standard:** MPFUnA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.92 | 3263 | 0.4545 | 30 | 110.4 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.64 | 6188 | 0.4214 | 43 | 96.2 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 4.91 | 19018 | 0.4518 | 111 | 98.2 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 11.74 | 44484 | 0.4384 | 149 | 94.0 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.56 | 87330 | 0.4608 | 157 | 98.2 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 42.96 | 155746 | 0.4842 | 175 | 103.0 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

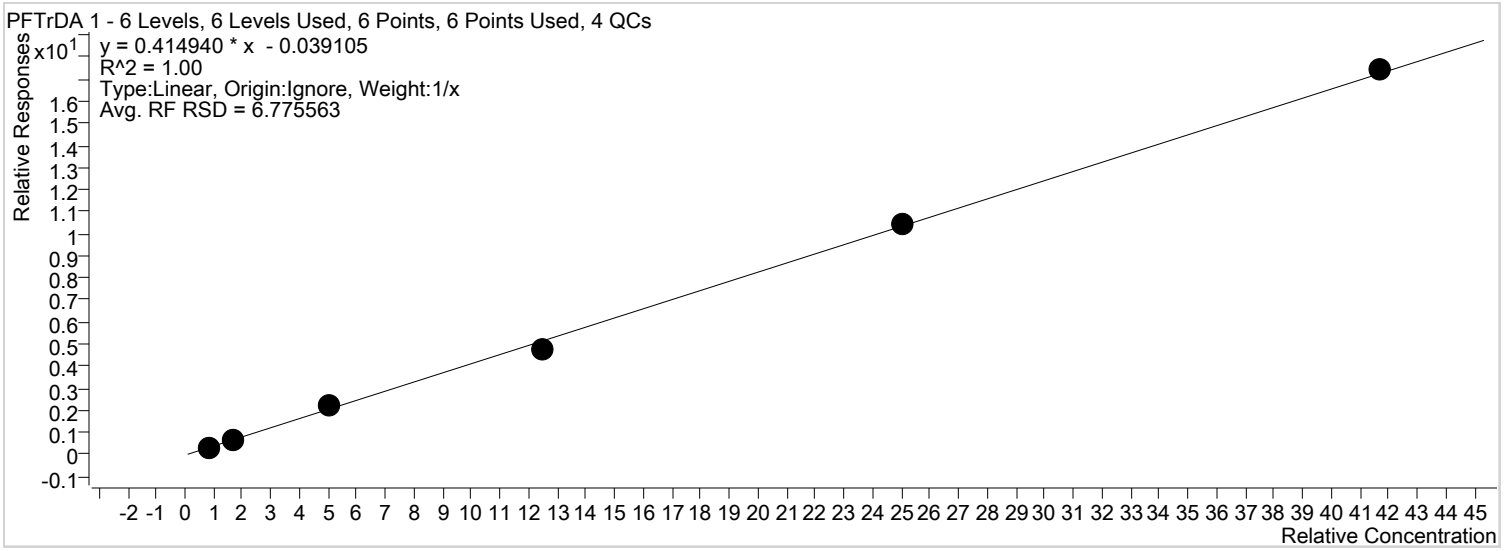
**Analyte:** PFDoA 1
**Internal Standard:** MPFDoA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.86 | 3755 | 0.3923 | 89 | 103.2 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.62 | 7818 | 0.3779 | 330 | 95.0 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 5.53 | 25147 | 0.4555 | 596 | 110.6 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 11.48 | 57101 | 0.3810 | 1427 | 91.9 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 23.73 | 108804 | 0.3951 | 2236 | 94.9 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 43.51 | 189906 | 0.4349 | 3216 | 104.3 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

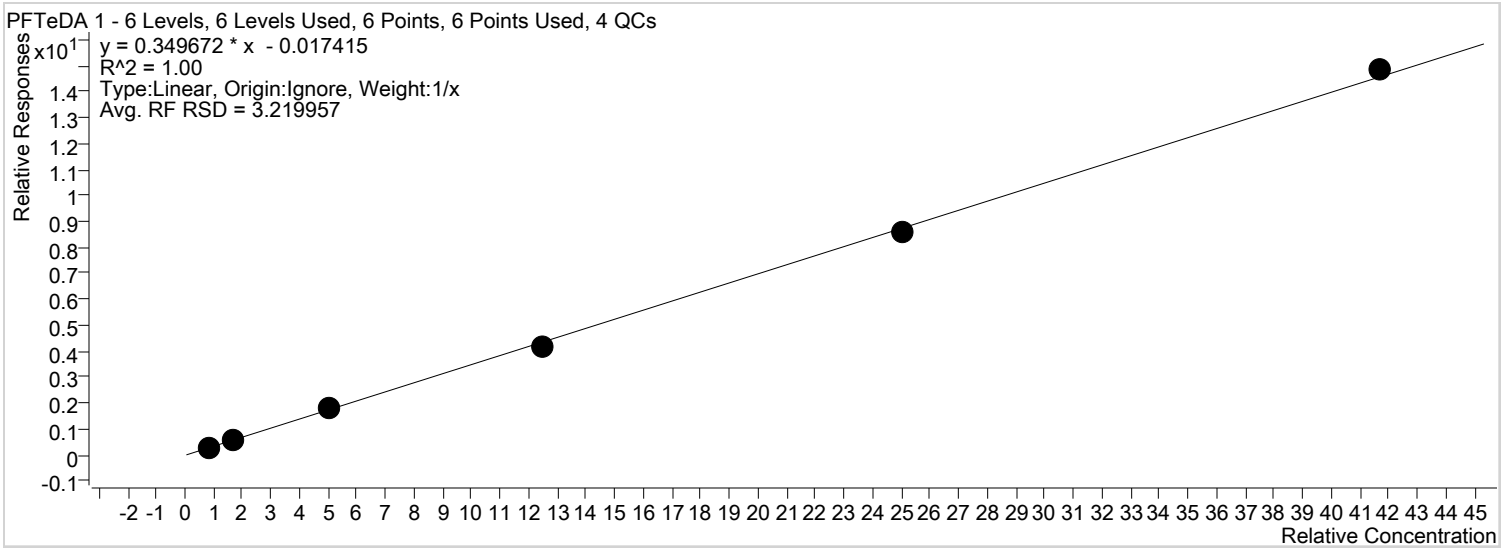
**Analyte:** PFTrDA 1
**Internal Standard:** MPFTeDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.83 | 3880 | 0.3675 | 35 | 99.9 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.68 | 8552 | 0.3863 | 73 | 98.6 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 5.37 | 28657 | 0.4377 | 178 | 107.4 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 11.53 | 62931 | 0.3795 | 200 | 92.2 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 25.22 | 124952 | 0.4170 | 220 | 100.9 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 42.11 | 216546 | 0.4181 | 253 | 101.0 |

**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics.batch.bin
**Last Calib Update** 2018/02/21 11:18:21 AM
**Instrument:** LCMS04

**Analyte:** PFTeDA 1
**Internal Standard:** MPFTeDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 3:11:49 AM | 0.83 | 0.86 | 3584 | 0.3395 | 18 | 103.1 |
| STD 2 | STD 2 | x | 2018/02/08 3:16:45 AM | 1.70 | 1.65 | 7309 | 0.3301 | 57 | 97.3 |
| STD 3 | STD 3 | x | 2018/02/08 3:21:40 AM | 5.00 | 5.16 | 23410 | 0.3575 | 121 | 103.2 |
| STD 4 | STD 4 | x | 2018/02/08 3:26:36 AM | 12.50 | 12.04 | 55599 | 0.3353 | 223 | 96.3 |
| STD 5 | STD 5 | x | 2018/02/08 3:31:32 AM | 25.00 | 24.54 | 102650 | 0.3425 | 190 | 98.2 |
| STD 6 | STD 6 | x | 2018/02/08 3:36:28 AM | 41.70 | 42.48 | 184279 | 0.3558 | 237 | 101.9 |

# By Compound Report

Agilent Technologies

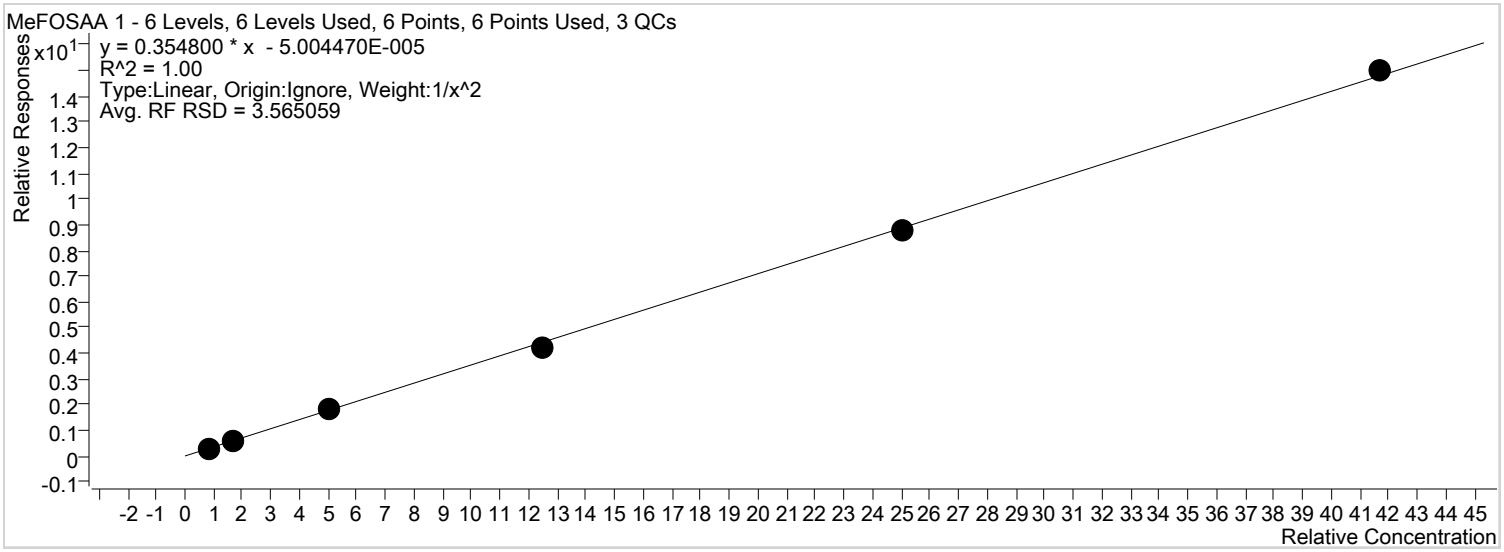
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/21 11:12:38 AM

**Instrument:** LCMS04

**Analyte:** MeFOSAA 1

**Internal Standard:** D3-MeFOSAA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 9:36:26 AM | 0.83 | 0.82 | 533 | 0.3484 | 100 | 98.2 |
| STD 2 | STD 2 | x | 2018/02/08 9:38:51 AM | 1.70 | 1.75 | 1154 | 0.3654 | 146 | 103.0 |
| STD 3 | STD 3 | x | 2018/02/08 9:41:15 AM | 5.00 | 5.21 | 3426 | 0.3698 | 138 | 104.2 |
| STD 4 | STD 4 | x | 2018/02/08 9:43:38 AM | 12.50 | 11.81 | 7653 | 0.3353 | 130 | 94.5 |
| STD 5 | STD 5 | x | 2018/02/08 9:46:01 AM | 25.00 | 24.68 | 14992 | 0.3503 | 346 | 98.7 |
| STD 6 | STD 6 | x | 2018/02/08 9:48:24 AM | 41.70 | 42.26 | 25594 | 0.3596 | 140 | 101.3 |

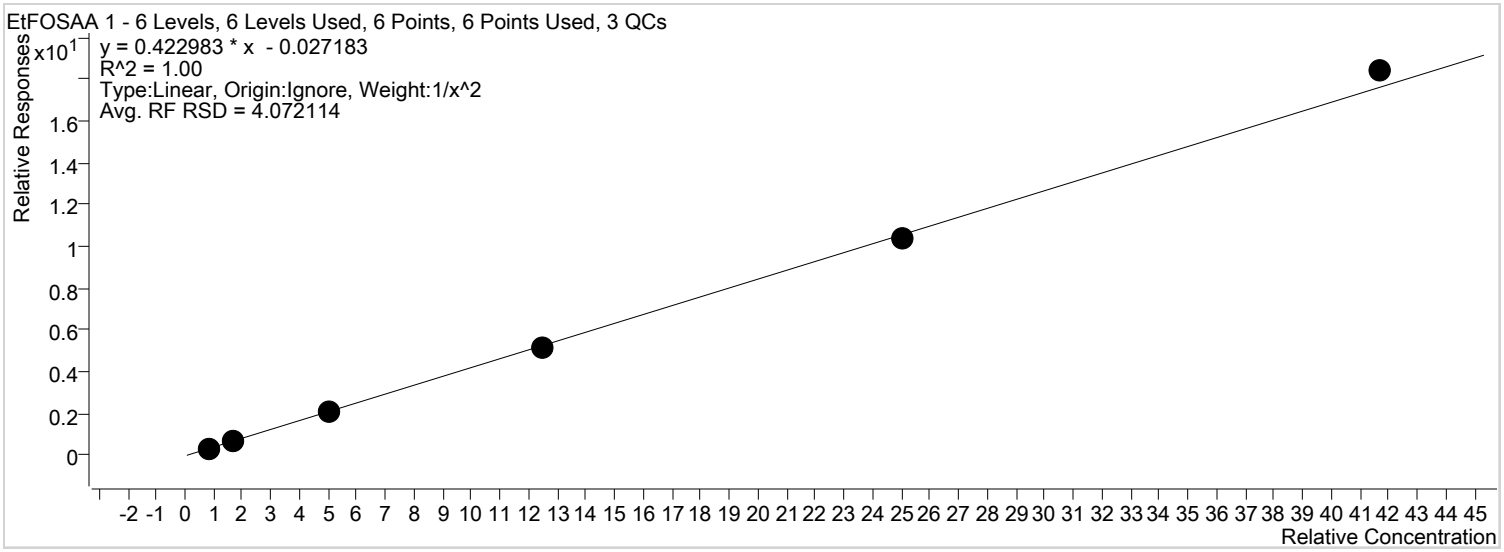
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/21 11:12:38 AM

**Instrument:** LCMS04

**Analyte:** EtFOSAA 1

**Internal Standard:** D5-EtFOSAA IS



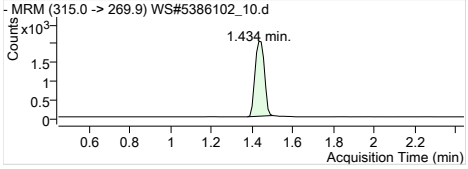

| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 9:36:26 AM | 0.83 | 0.83 | 524 | 0.3895 | 79 | 99.8 |
| STD 2 | STD 2 | x | 2018/02/08 9:38:51 AM | 1.70 | 1.71 | 1119 | 0.4101 | 137 | 100.7 |
| STD 3 | STD 3 | x | 2018/02/08 9:41:15 AM | 5.00 | 5.00 | 3469 | 0.4177 | 380 | 100.0 |
| STD 4 | STD 4 | x | 2018/02/08 9:43:38 AM | 12.50 | 12.10 | 7698 | 0.4073 | 1011 | 96.8 |
| STD 5 | STD 5 | x | 2018/02/08 9:46:01 AM | 25.00 | 24.53 | 15337 | 0.4140 | 614 | 98.1 |
| STD 6 | STD 6 | x | 2018/02/08 9:48:24 AM | 41.70 | 43.57 | 26939 | 0.4413 | 1621 | 104.5 |

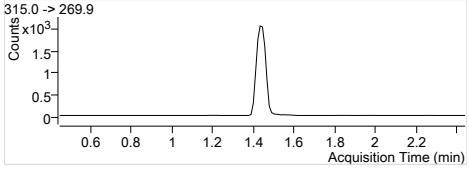
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-C8 |
| **Acq. Date** | 2018/02/08 3:51:17 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

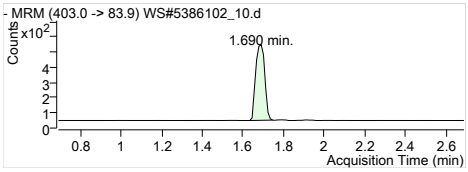
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6401 | 1.43 | 1 µg/L | | |
| MPFHxS | 1558 | 1.69 | 1 µg/L | | |
| MPFHpA | 7910 | 1.70 | 1 µg/L | | |
| MPFOA | 8320 | 1.88 | 1 µg/L | | |
| MPFOS | 1920 | 1.98 | 1 µg/L | | |
| MPFNA | 8655 | 2.02 | 1 µg/L | | |
| MPFDA | 7196 | 2.14 | 1 µg/L | | |
| MPFUnA | 8481 | 2.23 | 1 µg/L | | |
| MPFDoA | 11855 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12712 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 32150 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 41525 | 2.13 | 1 µg/L | | |

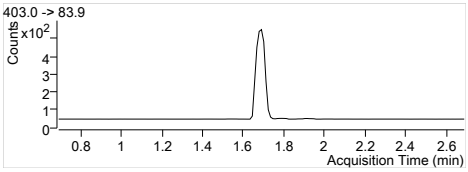
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 513 | 1.09 | 0.83 | 0.84 µg/L | 100.66 |
| PFHxA 1 | 1900 | 1.43 | 0.83 | 0.82 µg/L | 98.85 |
| PFHxS 1 | 472 | 1.69 | 0.83 | 0.68 µg/L | 82.01 |
| PFHpA 1 | 2414 | 1.70 | 0.83 | 0.84 µg/L | 100.86 |
| PFOA 1 | 2863 | 1.88 | 0.83 | 0.94 µg/L | 113.70 |
| PFOS 1 | 593 | 1.98 | 0.83 | 0.94 µg/L | 113.82 |
| PFNA 1 | 2412 | 2.03 | 0.83 | 0.81 µg/L | 97.61 |
| PFDA 1 | 2787 | 2.14 | 0.83 | 0.79 µg/L | 95.10 |
| PFUnA 1 | 2888 | 2.23 | 0.83 | 0.84 µg/L | 100.98 |
| PFDoA 1 | 3466 | 2.32 | 0.83 | 0.78 µg/L | 93.61 |
| PFTrDA 1 | 4415 | 2.40 | 0.83 | 0.93 µg/L | 112.20 |
| PFTeDA 1 | 3792 | 2.47 | 0.83 | 0.90 µg/L | 108.78 |
| 13C2-PFHxA | 6401 | 1.43 | 100.00 | 102.45 µg/L | 102.45 |
| 18O2-PFHxS | 1558 | 1.69 | 100.00 | 97.47 µg/L | 97.47 |
| 13C4-PFHpA | 7910 | 1.70 | 100.00 | 96.68 µg/L | 96.68 |
| 13C4-PFOA | 8320 | 1.88 | 100.00 | 96.39 µg/L | 96.39 |
| 13C4-PFOS | 1920 | 1.98 | 100.00 | 98.63 µg/L | 98.63 |
| 13C5-PFNA | 8656 | 2.02 | 100.00 | 100.48 µg/L | 100.48 |
| 13C2-PFDA | 6981 | 2.14 | 100.00 | 98.77 µg/L | 98.77 |
| 13C2-PFUnA | 8481 | 2.23 | 100.00 | 101.19 µg/L | 101.19 |
| 13C2-PFDoA | 11855 | 2.32 | 100.00 | 101.88 µg/L | 101.88 |
| 13C2-PFTeDA | 13021 | 2.47 | 100.00 | 98.10 µg/L | 98.10 |
| 13C6-PFHxA | 32150 | 1.43 | 100.00 | 101.35 µg/L | 101.35 |
| 13C9-PFDA | 41525 | 2.13 | 100.00 | 102.39 µg/L | 102.39 |



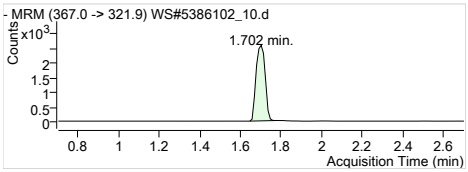



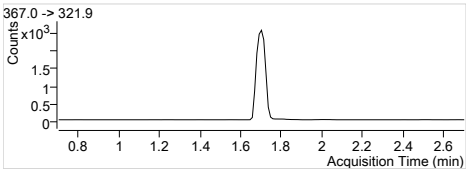

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.445) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



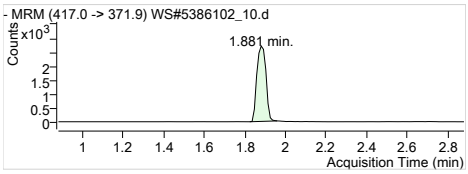



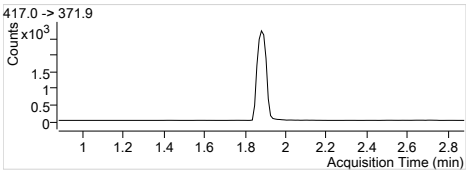

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: CC



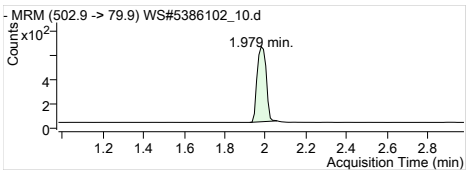



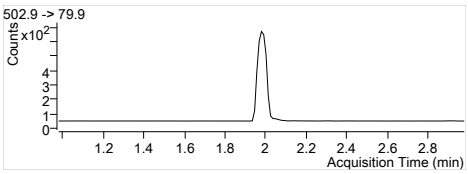

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: CC



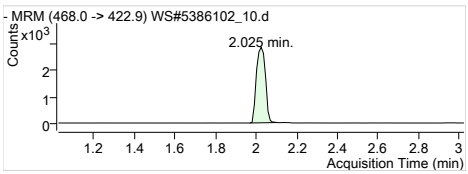



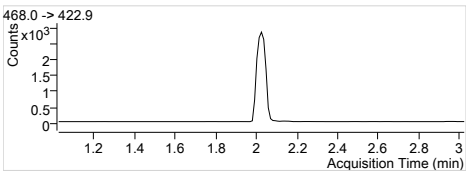

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



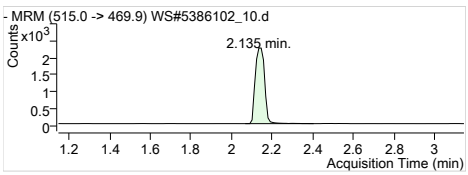



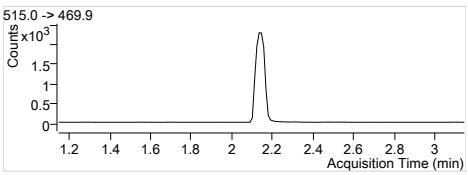

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



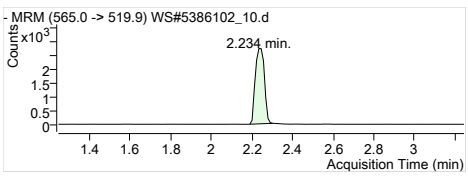



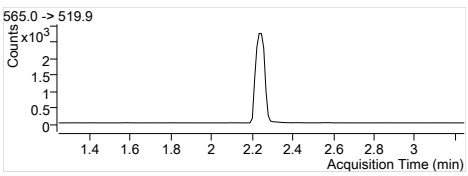

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: CC



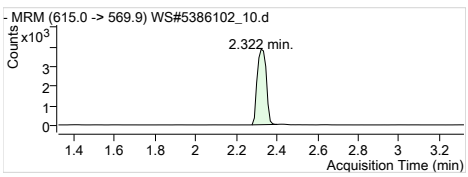



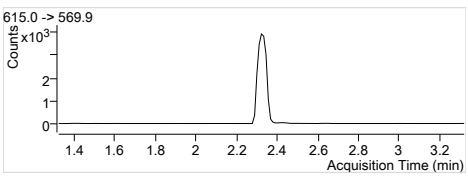

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: CC



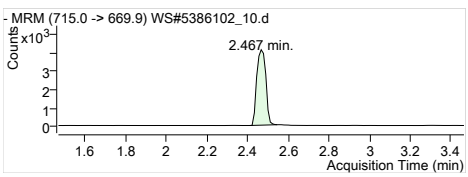



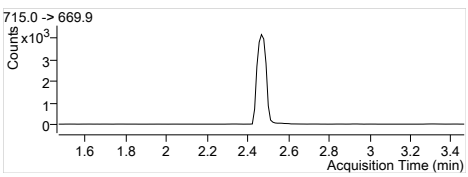

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.245)
Concentration: 1 µg/L
Sample type: CC



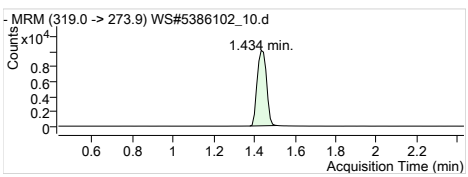



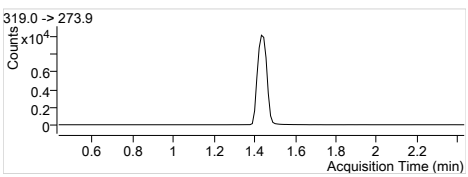

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



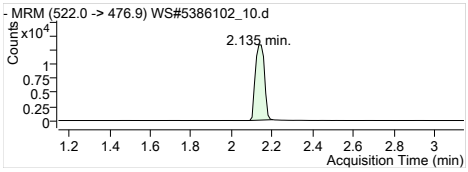



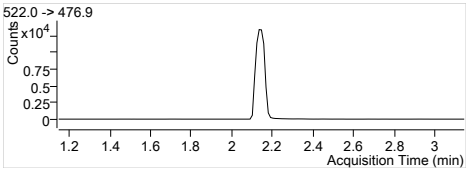

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



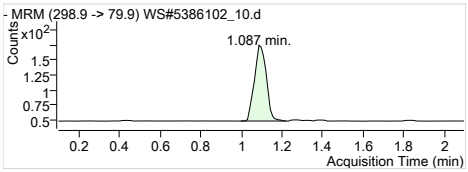



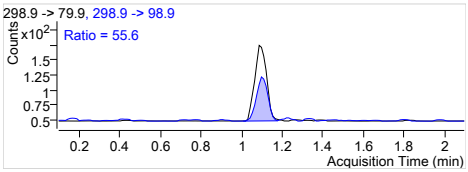

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



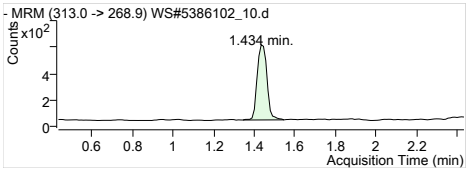



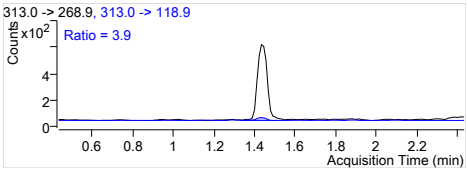

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: CC



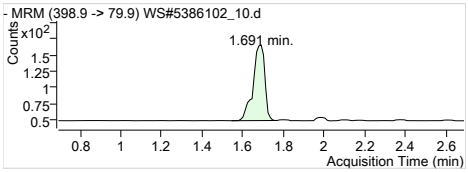



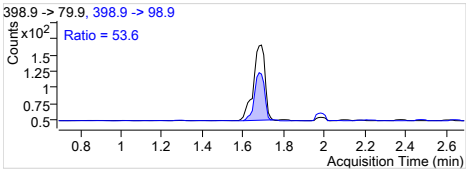

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.098)
Calc. conc. 0.84 µg/L
Area ratio: 0.32927
Sample type: CC



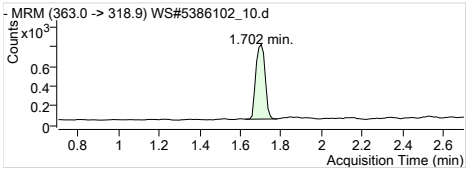



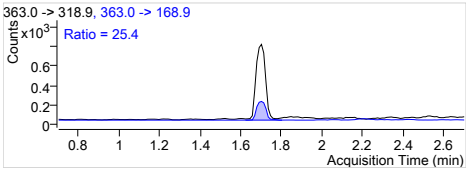

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 0.82 µg/L
Area ratio: 0.29683
Sample type: CC



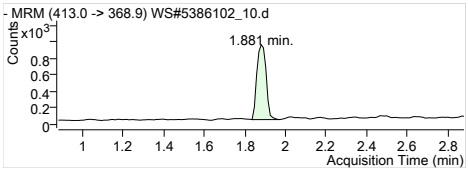



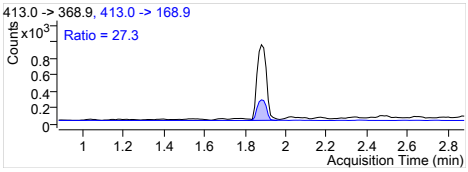

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.68 µg/L
Area ratio: 0.30295
Sample type: CC



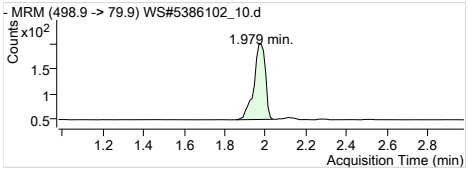



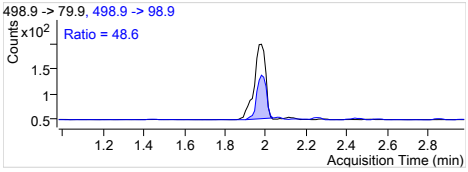

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 0.84 µg/L
Area ratio: 0.30518
Sample type: CC



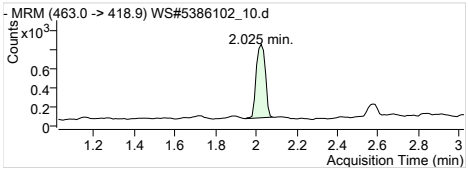



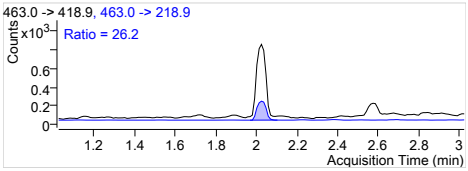

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 0.94 µg/L
Area ratio: 0.34411
Sample type: CC



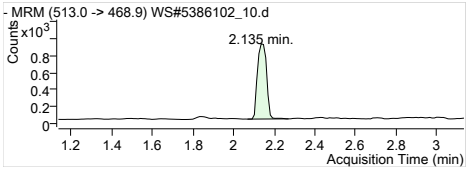



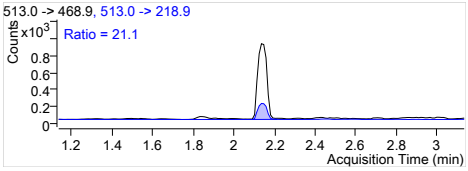

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 0.94 µg/L
Area ratio: 0.30885
Sample type: CC



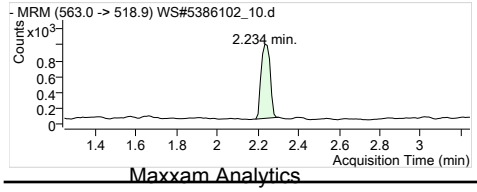



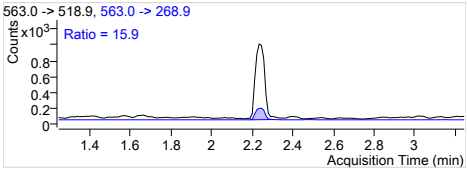

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 0.81 µg/L
Area ratio: 0.27868
Sample type: CC



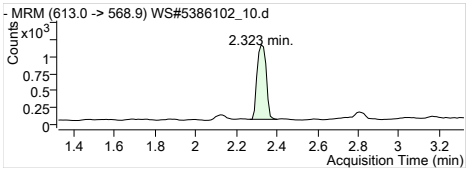



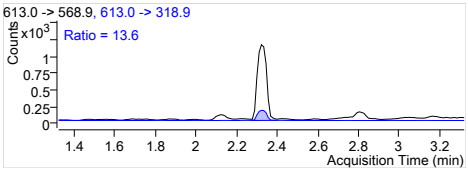

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 0.79 µg/L
Area ratio: 0.38730
Sample type: CC



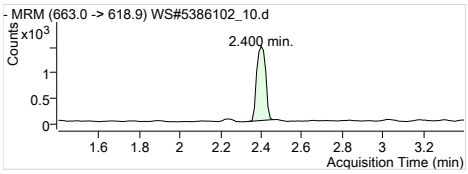



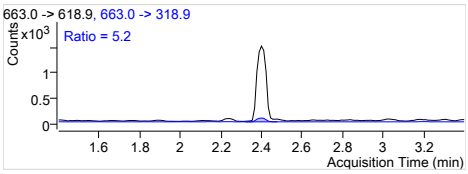

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.246)
Calc. conc. 0.84 µg/L
Area ratio: 0.34053
Sample type: CC



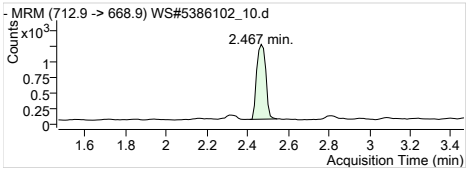



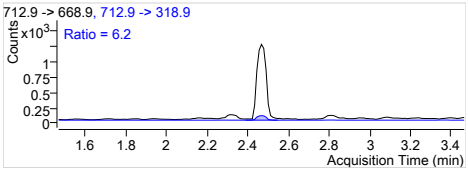

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.78 µg/L
Area ratio: 0.29237
Sample type: CC



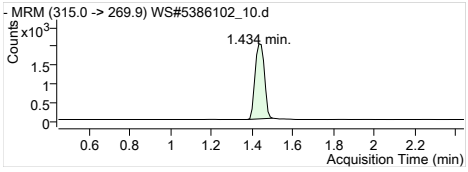



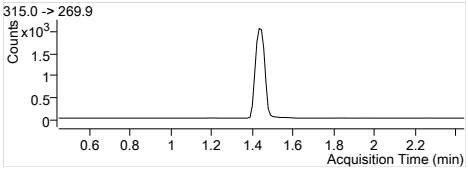

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.93 µg/L
Area ratio: 0.34731
Sample type: CC



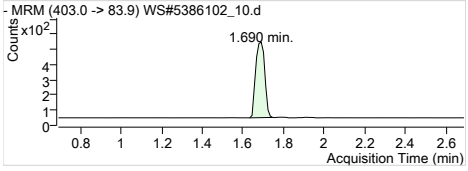



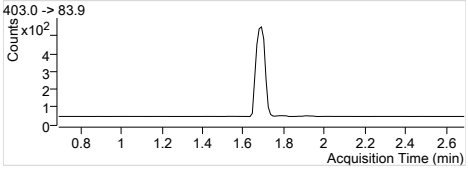

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 0.90 µg/L
Area ratio: 0.29830
Sample type: CC



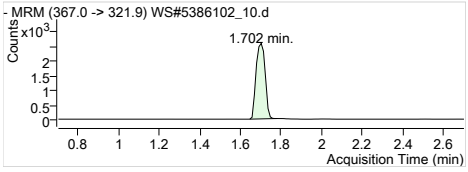



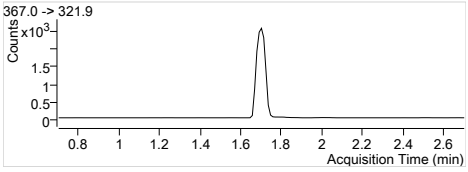

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 102.45 µg/L
Area ratio: 0.19910
Sample type: CC



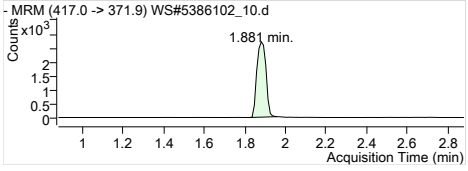



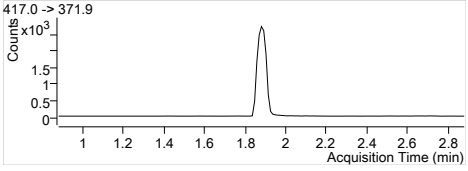

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 97.47 µg/L
Area ratio: 0.04846
Sample type: CC



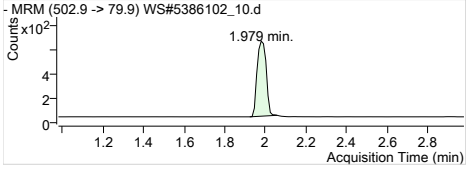



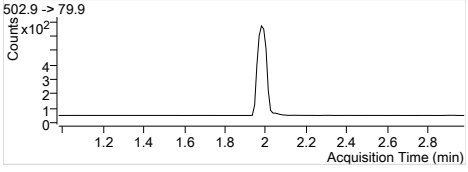

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 96.68 µg/L
Area ratio: 0.24603
Sample type: CC



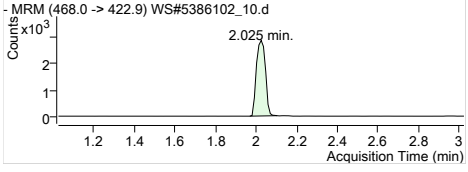



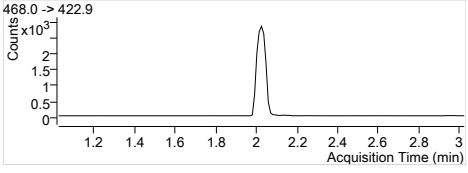

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 96.39 µg/L
Area ratio: 0.25879
Sample type: CC



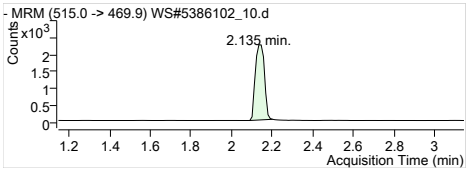



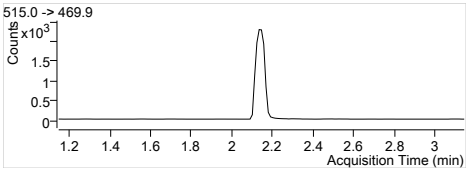

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 98.63 µg/L
Area ratio: 0.05972
Sample type: CC



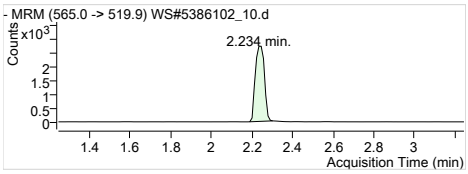



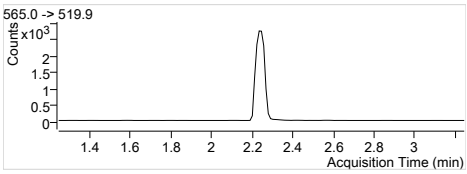

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 100.48 µg/L
Area ratio: 0.26924
Sample type: CC



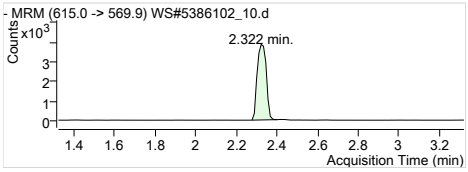



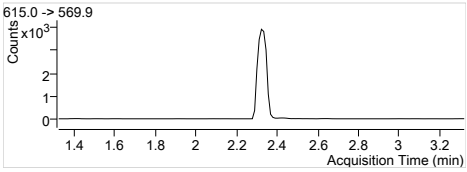

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 98.77 µg/L
Area ratio: 0.16812
Sample type: CC



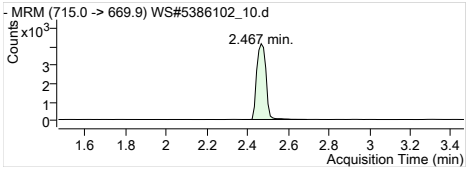



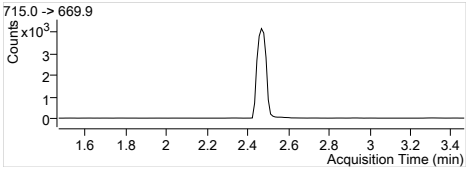

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.245)
Calc. conc. 101.19 µg/L
Area ratio: 0.20424
Sample type: CC



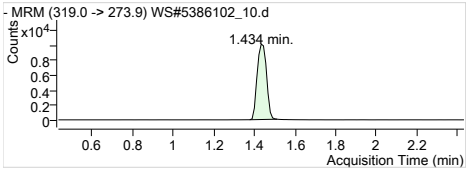



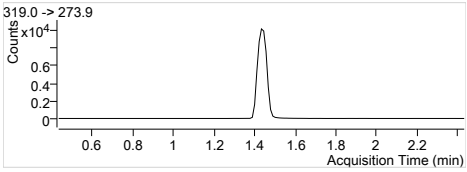

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 101.88 µg/L
Area ratio: 0.28549
Sample type: CC



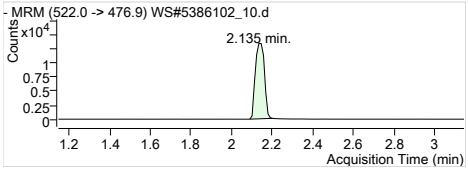



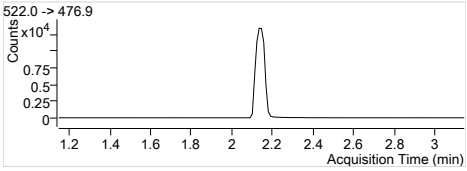

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 98.10 µg/L
Area ratio: 0.31357
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 101.35 µg/L
Area ratio: 0
Sample type: CC



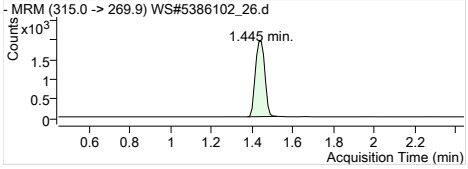

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 102.39 µg/L
Area ratio: 0
Sample type: CC

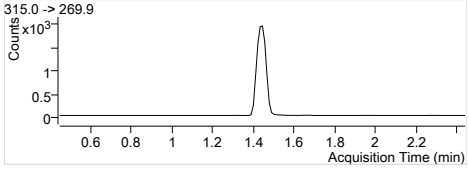
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_26.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D2 |
| **Acq. Date** | 2018/02/08 5:10:13 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

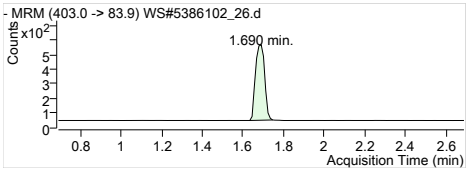
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6212 | 1.44 | 1 µg/L | | |
| MPFHxS | 1630 | 1.69 | 1 µg/L | | |
| MPFHpA | 8094 | 1.70 | 1 µg/L | | |
| MPFOA | 8918 | 1.88 | 1 µg/L | | |
| MPFOS | 1863 | 1.98 | 1 µg/L | | |
| MPFNA | 8635 | 2.02 | 1 µg/L | | |
| MPFDA | 7264 | 2.15 | 1 µg/L | | |
| MPFUnA | 8228 | 2.25 | 1 µg/L | | |
| MPFDoA | 10776 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12927 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 33413 | 1.44 | 1 µg/L | | |
| 13C9-PFDA IS | 42329 | 2.15 | 1 µg/L | | |

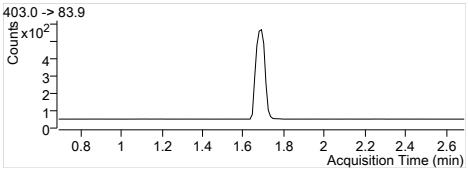
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 8588 | 1.10 | 12.50 | 12.45 µg/L | 99.58 |
| PFHxA 1 | 30130 | 1.45 | 12.50 | 11.99 µg/L | 95.94 |
| PFHxS 1 | 8023 | 1.68 | 12.50 | 11.86 µg/L | 94.85 |
| PFHpA 1 | 38378 | 1.70 | 12.50 | 12.00 µg/L | 95.97 |
| PFOA 1 | 42614 | 1.88 | 12.50 | 11.51 µg/L | 92.10 |
| PFOS 1 | 8167 | 1.98 | 12.50 | 11.97 µg/L | 95.77 |
| PFNA 1 | 37896 | 2.03 | 12.50 | 12.04 µg/L | 96.31 |
| PFDA 1 | 40871 | 2.15 | 12.50 | 11.62 µg/L | 92.98 |
| PFUnA 1 | 44297 | 2.25 | 12.50 | 11.54 µg/L | 92.33 |
| PFDoA 1 | 57343 | 2.32 | 12.50 | 12.82 µg/L | 102.57 |
| PFTrDA 1 | 63954 | 2.40 | 12.50 | 12.02 µg/L | 96.14 |
| PFTeDA 1 | 55279 | 2.47 | 12.50 | 12.28 µg/L | 98.23 |
| 13C2-PFHxA | 6212 | 1.44 | 100.00 | 95.67 µg/L | 95.67 |
| 18O2-PFHxS | 1630 | 1.69 | 100.00 | 98.12 µg/L | 98.12 |
| 13C4-PFHpA | 8094 | 1.70 | 100.00 | 95.19 µg/L | 95.19 |
| 13C4-PFOA | 8918 | 1.88 | 100.00 | 99.42 µg/L | 99.42 |
| 13C4-PFOS | 1863 | 1.98 | 100.00 | 92.09 µg/L | 92.09 |
| 13C5-PFNA | 8635 | 2.02 | 100.00 | 96.45 µg/L | 96.45 |
| 13C2-PFDA | 7108 | 2.15 | 100.00 | 98.66 µg/L | 98.66 |
| 13C2-PFUnA | 8228 | 2.25 | 100.00 | 96.30 µg/L | 96.30 |
| 13C2-PFDoA | 10776 | 2.32 | 100.00 | 90.85 µg/L | 90.85 |
| 13C2-PFTeDA | 13120 | 2.47 | 100.00 | 96.97 µg/L | 96.97 |
| 13C6-PFHxA | 33413 | 1.44 | 100.00 | 105.33 µg/L | 105.33 |
| 13C9-PFDA | 42329 | 2.15 | 100.00 | 104.37 µg/L | 104.37 |



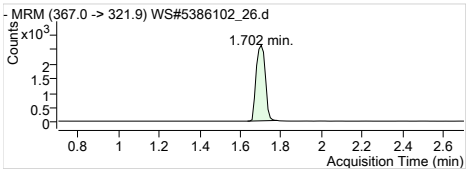



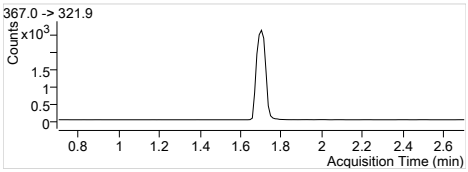

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.445 (1.445) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



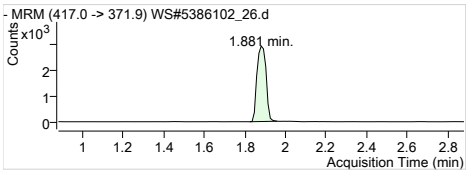



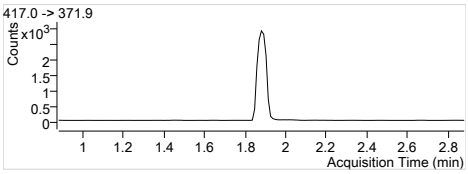

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: CC



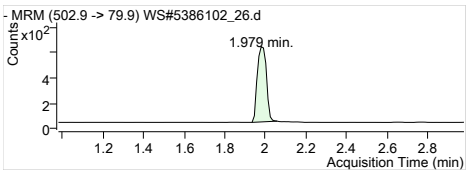



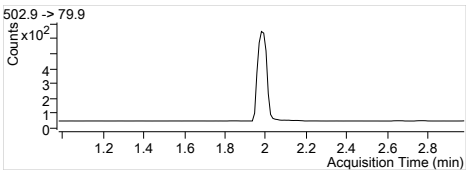

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: CC



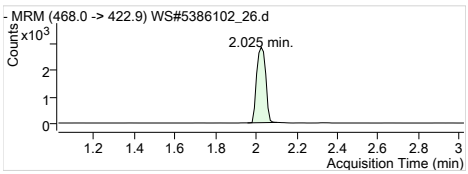



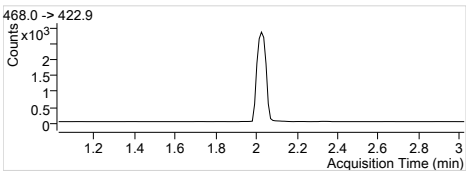

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



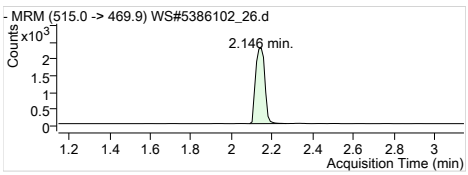



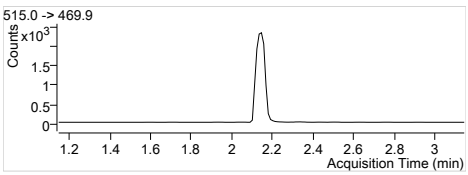

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



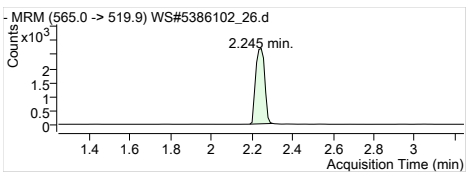



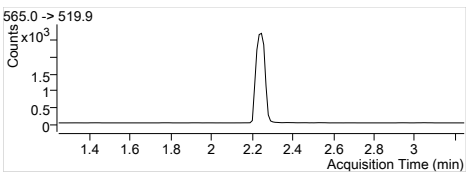

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: CC



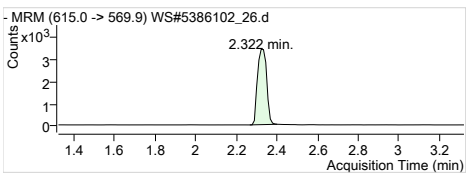



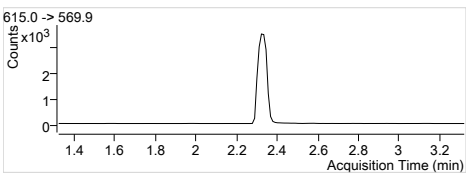

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



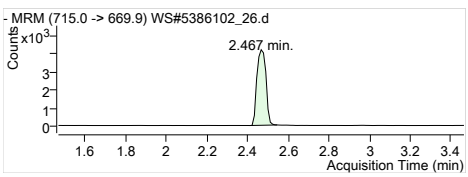



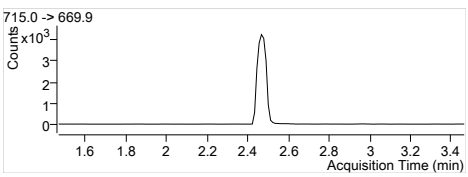

**MPFUnA** Internal Standard
RT (Exp. RT): 2.245 (2.245)
Concentration: 1 µg/L
Sample type: CC



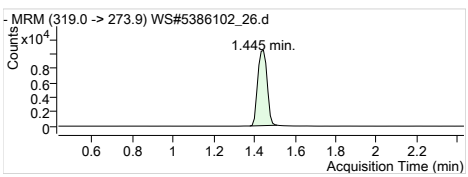



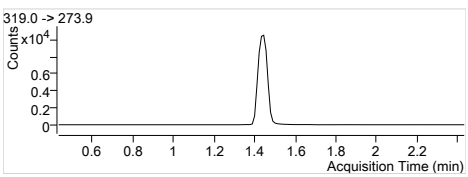

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



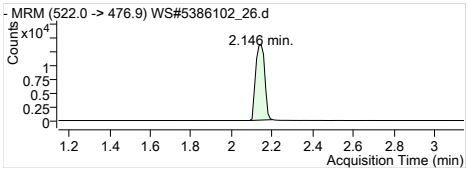



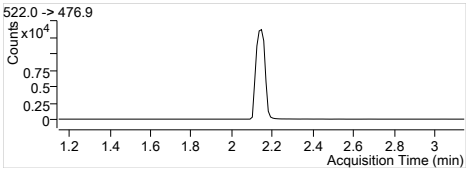

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



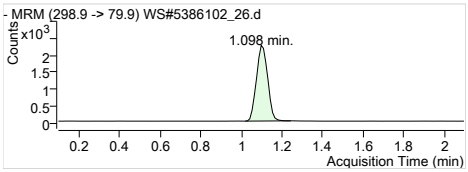



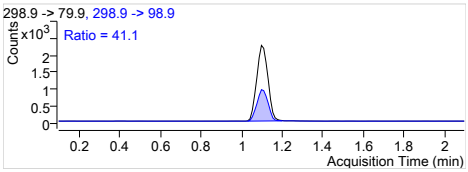

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.445 (1.434)
Concentration: 1 µg/L
Sample type: CC



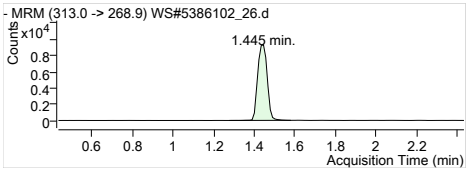



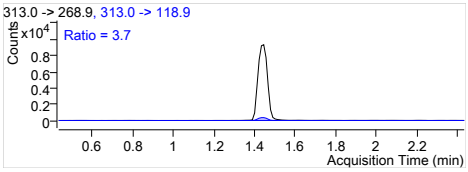

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



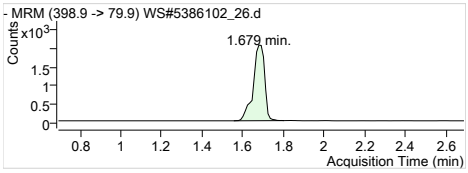



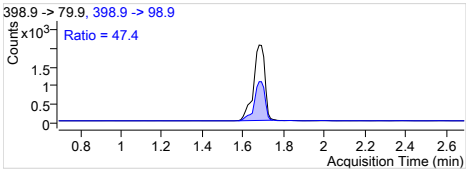

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.098 (1.098)
Calc. conc. 12.45 µg/L
Area ratio: 5.26871
Sample type: CC



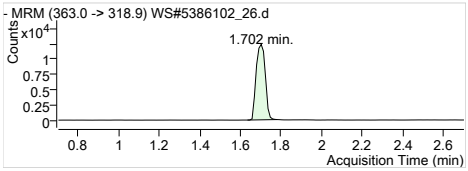



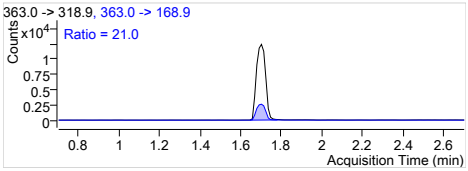

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.445 (1.434)
Calc. conc. 11.99 µg/L
Area ratio: 4.85029
Sample type: CC



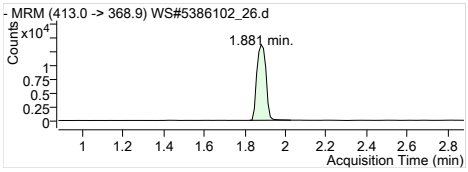



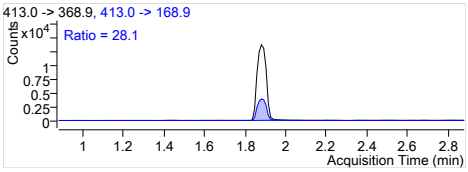

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.691)
Calc. conc. 11.86 µg/L
Area ratio: 4.92209
Sample type: CC



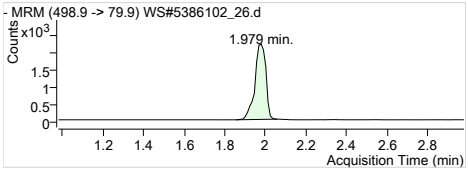



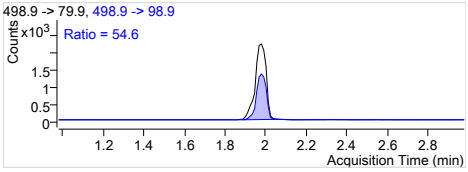

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 12.00 µg/L
Area ratio: 4.74154
Sample type: CC



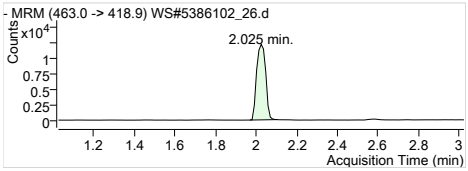



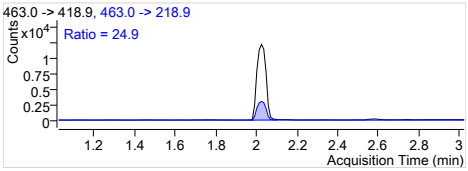

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 11.51 µg/L
Area ratio: 4.77843
Sample type: CC



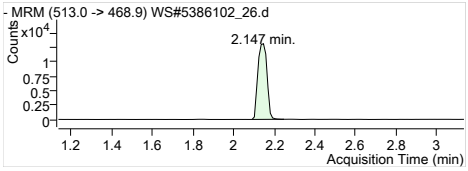



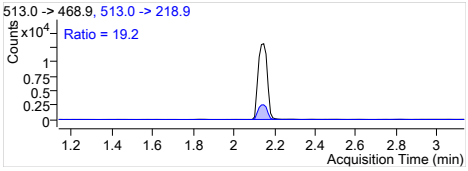

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 11.97 µg/L
Area ratio: 4.38379
Sample type: CC



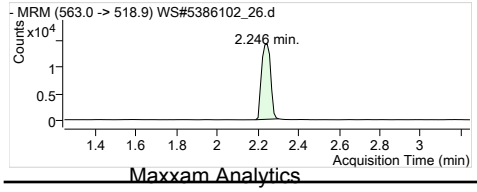



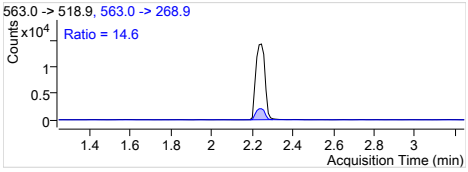

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 12.04 µg/L
Area ratio: 4.38865
Sample type: CC



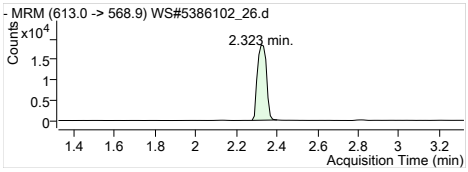



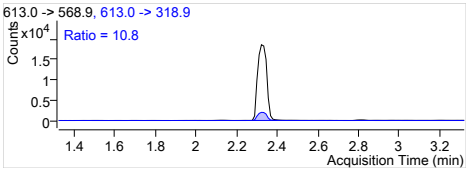

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.147 (2.135)
Calc. conc. 11.62 µg/L
Area ratio: 5.62651
Sample type: CC



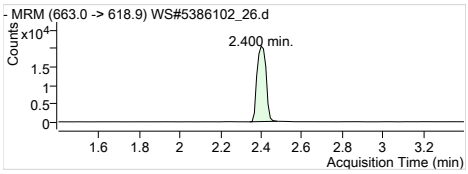



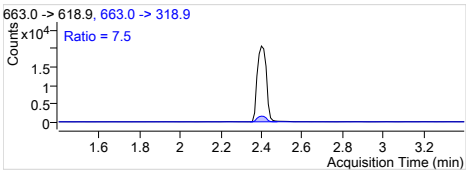

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.246 (2.246)
Calc. conc. 11.54 µg/L
Area ratio: 5.38369
Sample type: CC



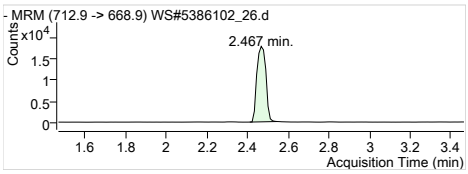



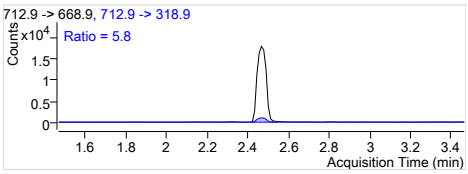

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 12.82 µg/L
Area ratio: 5.32136
Sample type: CC



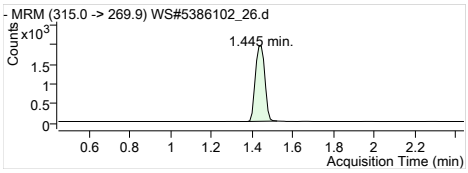



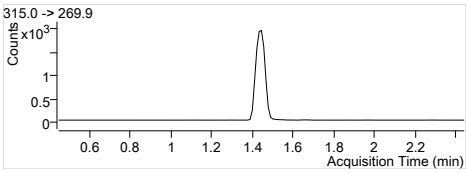

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 12.02 µg/L
Area ratio: 4.94732
Sample type: CC



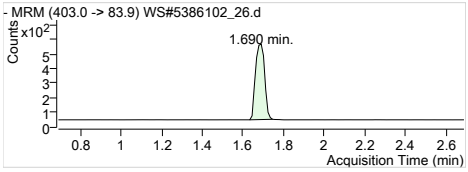



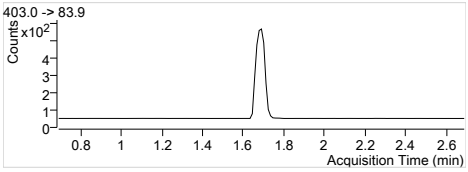

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 12.28 µg/L
Area ratio: 4.27624
Sample type: CC



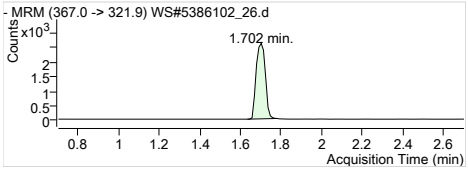



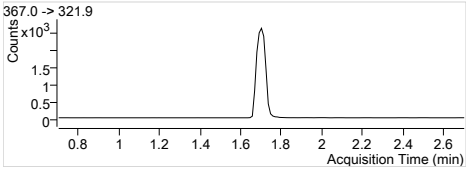

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.445 (1.445)
Calc. conc. 95.67 µg/L
Area ratio: 0.18592
Sample type: CC



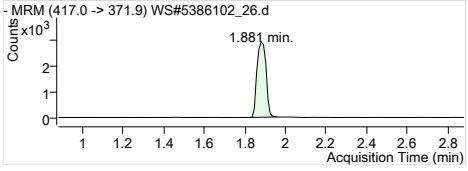



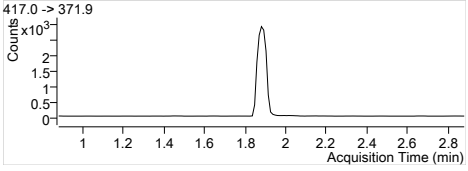

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 98.12 µg/L
Area ratio: 0.04878
Sample type: CC



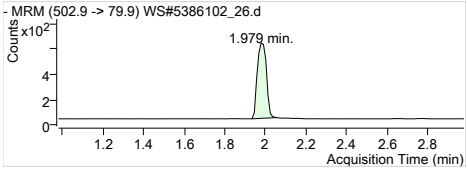



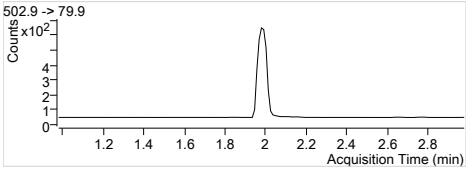

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 95.19 µg/L
Area ratio: 0.24224
Sample type: CC



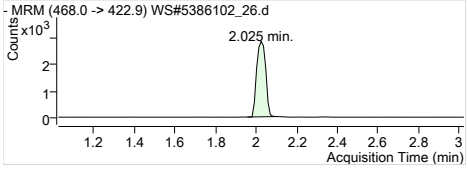



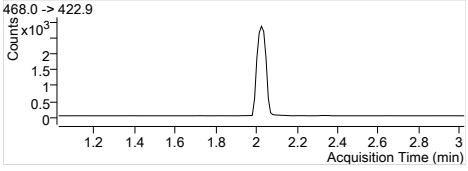

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 99.42 µg/L
Area ratio: 0.26690
Sample type: CC



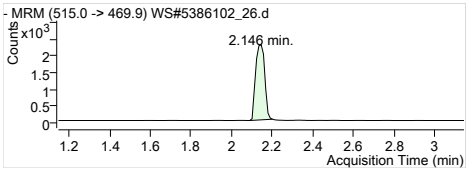



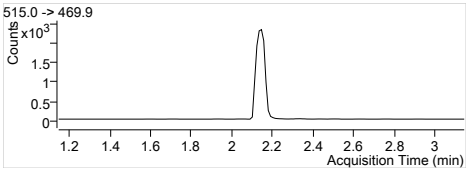

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 92.09 µg/L
Area ratio: 0.05576
Sample type: CC



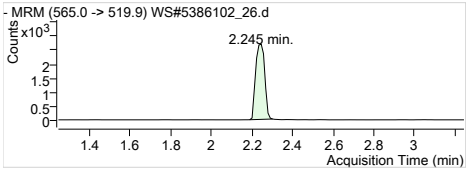



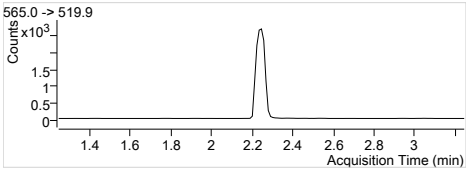

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 96.45 µg/L
Area ratio: 0.25843
Sample type: CC



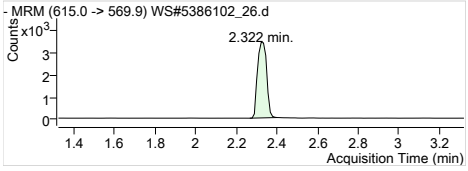



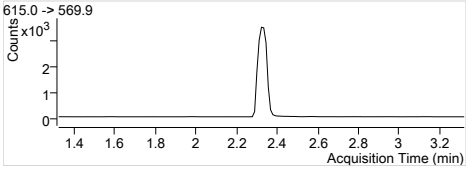

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 98.66 µg/L
Area ratio: 0.16792
Sample type: CC



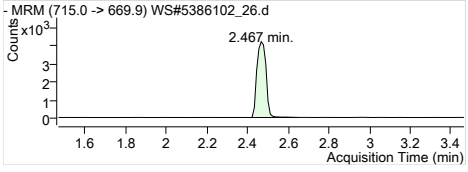



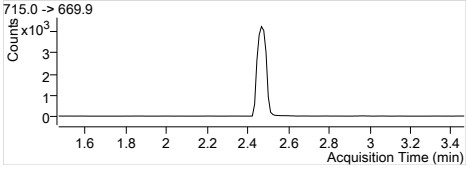

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.245 (2.245)
Calc. conc. 96.30 µg/L
Area ratio: 0.19438
Sample type: CC



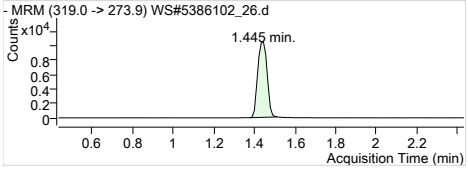



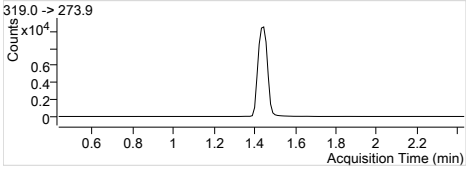

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 90.85 µg/L
Area ratio: 0.25458
Sample type: CC



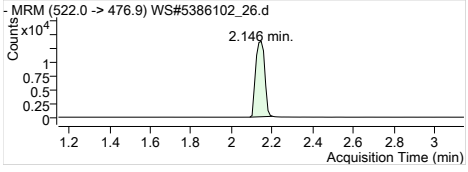



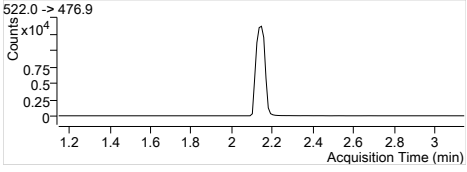

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 96.97 µg/L
Area ratio: 0.30995
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.445 (1.434)
Calc. conc. 105.33 µg/L
Area ratio: 0
Sample type: CC



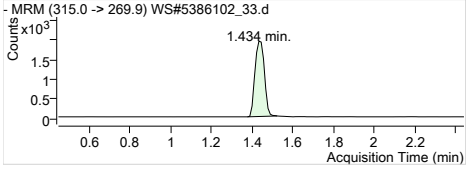

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 104.37 µg/L
Area ratio: 0
Sample type: CC

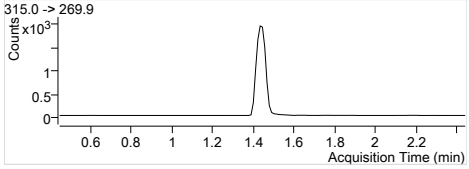
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_33.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D2 |
| **Acq. Date** | 2018/02/08 5:44:45 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

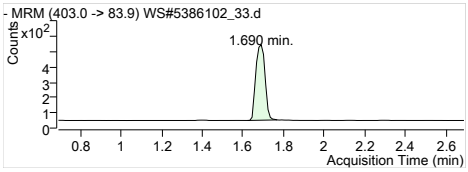
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6168 | 1.43 | 1 µg/L | | |
| MPFHxS | 1571 | 1.69 | 1 µg/L | | |
| MPFHpA | 8387 | 1.70 | 1 µg/L | | |
| MPFOA | 8961 | 1.88 | 1 µg/L | | |
| MPFOS | 1864 | 1.98 | 1 µg/L | | |
| MPFNA | 8761 | 2.02 | 1 µg/L | | |
| MPFDA | 6818 | 2.15 | 1 µg/L | | |
| MPFUnA | 8456 | 2.23 | 1 µg/L | | |
| MPFDoA | 11590 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12009 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 32937 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 44706 | 2.15 | 1 µg/L | | |

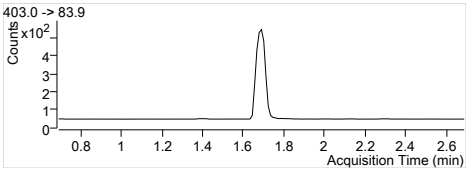
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 7701 | 1.10 | 12.50 | 11.58 µg/L | 92.68 |
| PFHxA 1 | 30556 | 1.43 | 12.50 | 12.25 µg/L | 97.97 |
| PFHxS 1 | 7973 | 1.68 | 12.50 | 12.23 µg/L | 97.81 |
| PFHpA 1 | 37171 | 1.70 | 12.50 | 11.22 µg/L | 89.74 |
| PFOA 1 | 41537 | 1.88 | 12.50 | 11.17 µg/L | 89.37 |
| PFOS 1 | 7884 | 1.98 | 12.50 | 11.55 µg/L | 92.43 |
| PFNA 1 | 38655 | 2.03 | 12.50 | 12.10 µg/L | 96.83 |
| PFDA 1 | 41735 | 2.14 | 12.50 | 12.65 µg/L | 101.17 |
| PFUnA 1 | 44591 | 2.23 | 12.50 | 11.31 µg/L | 90.45 |
| PFDoA 1 | 56589 | 2.32 | 12.50 | 11.77 µg/L | 94.16 |
| PFTrDA 1 | 60995 | 2.40 | 12.50 | 12.33 µg/L | 98.68 |
| PFTeDA 1 | 54366 | 2.47 | 12.50 | 13.00 µg/L | 103.97 |
| 13C2-PFHxA | 6168 | 1.43 | 100.00 | 96.37 µg/L | 96.37 |
| 18O2-PFHxS | 1571 | 1.69 | 100.00 | 95.93 µg/L | 95.93 |
| 13C4-PFHpA | 8387 | 1.70 | 100.00 | 100.06 µg/L | 100.06 |
| 13C4-PFOA | 8961 | 1.88 | 100.00 | 101.34 µg/L | 101.34 |
| 13C4-PFOS | 1864 | 1.98 | 100.00 | 93.47 µg/L | 93.47 |
| 13C5-PFNA | 8760 | 2.02 | 100.00 | 99.26 µg/L | 99.26 |
| 13C2-PFDA | 6675 | 2.15 | 100.00 | 87.72 µg/L | 87.72 |
| 13C2-PFUnA | 8456 | 2.23 | 100.00 | 93.71 µg/L | 93.71 |
| 13C2-PFDoA | 11590 | 2.32 | 100.00 | 92.52 µg/L | 92.52 |
| 13C2-PFTeDA | 12184 | 2.47 | 100.00 | 85.26 µg/L | 85.26 |
| 13C6-PFHxA | 32937 | 1.43 | 100.00 | 103.83 µg/L | 103.83 |
| 13C9-PFDA | 44706 | 2.15 | 100.00 | 110.24 µg/L | 110.24 |



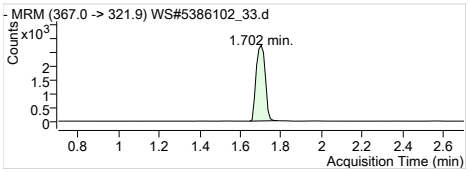



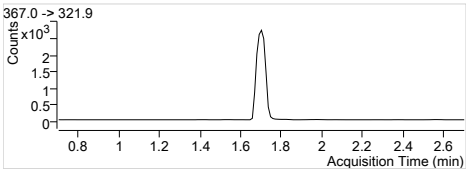

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.445)
Concentration: 1 µg/L
Sample type: CC



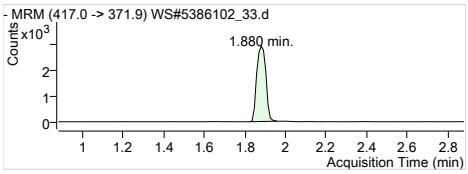



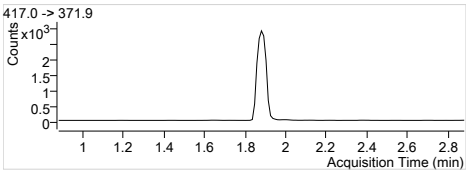

**MPFHxS** Internal Standard
RT (Exp. RT): 1.690 (1.690)
Concentration: 1 µg/L
Sample type: CC



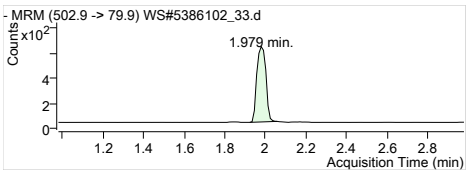



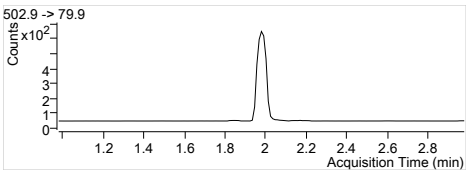

**MPFHpA** Internal Standard
RT (Exp. RT): 1.702 (1.702)
Concentration: 1 µg/L
Sample type: CC



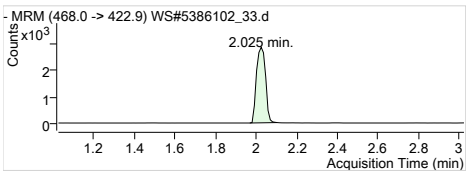



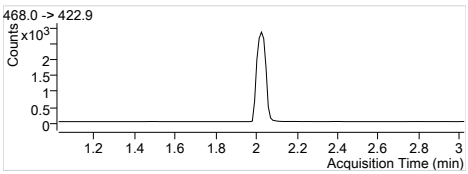

**MPFOA** Internal Standard
RT (Exp. RT): 1.880 (1.881)
Concentration: 1 µg/L
Sample type: CC



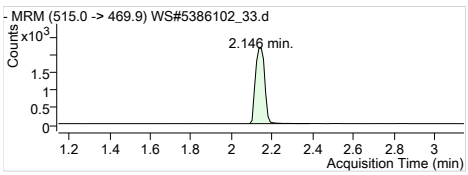



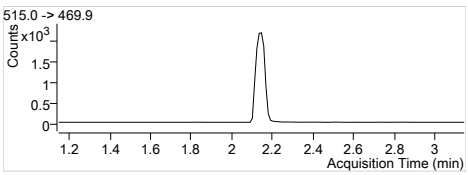

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



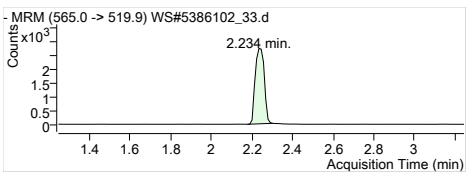



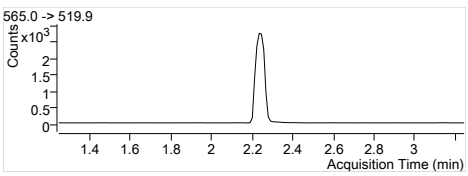

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: CC



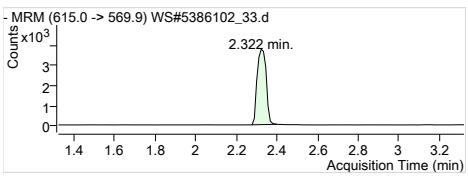



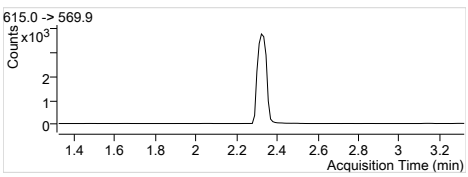

**MPFDA** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



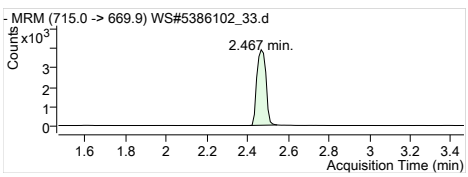



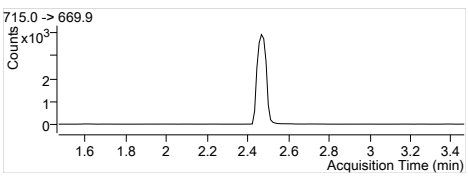

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.245)
Concentration: 1 µg/L
Sample type: CC



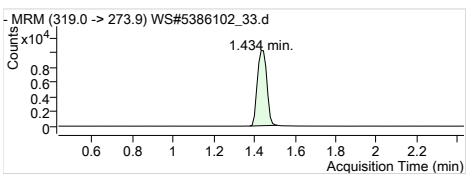



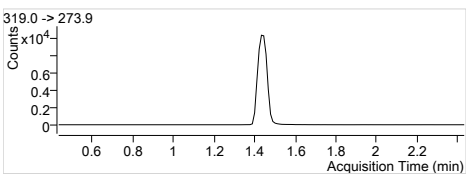

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



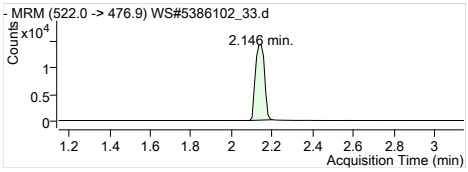



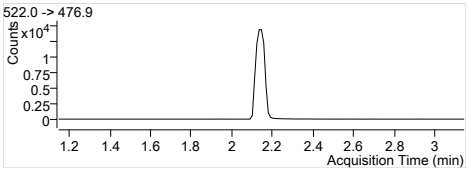

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



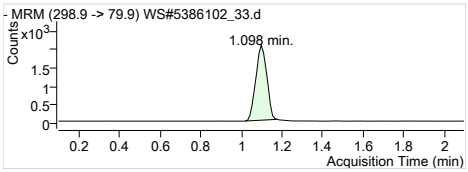



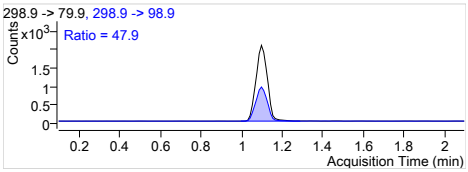

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



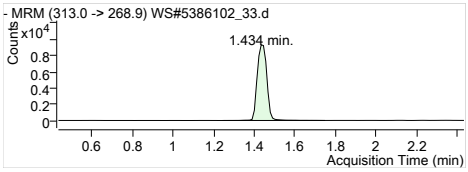



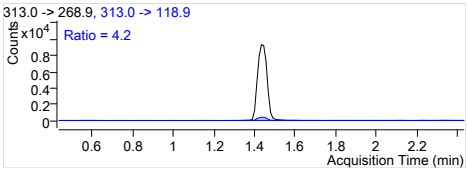

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.146 (2.146)
Concentration: 1 µg/L
Sample type: CC



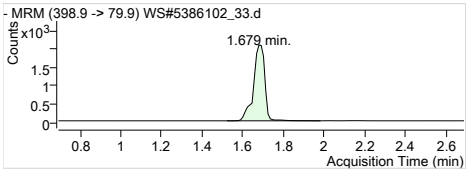



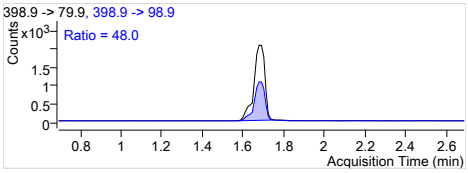

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.098 (1.098)
Calc. conc. 11.58 µg/L
Area ratio: 4.90197
Sample type: CC



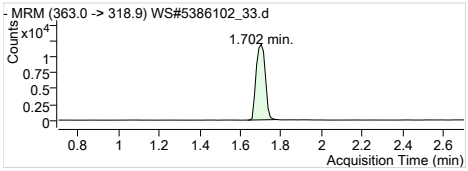



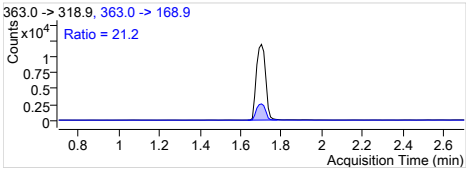

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 12.25 µg/L
Area ratio: 4.95396
Sample type: CC



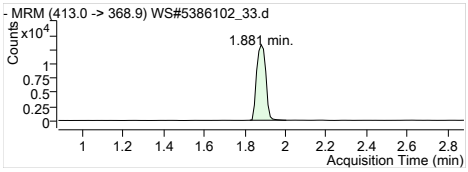



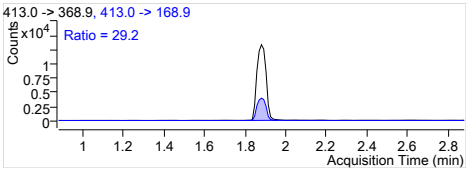

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.691)
Calc. conc. 12.23 µg/L
Area ratio: 5.07511
Sample type: CC



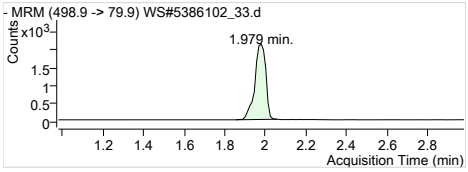



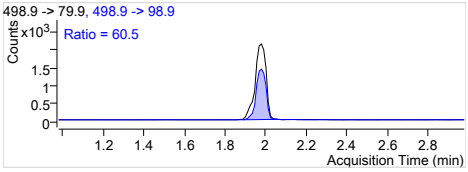

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 11.22 µg/L
Area ratio: 4.43198
Sample type: CC



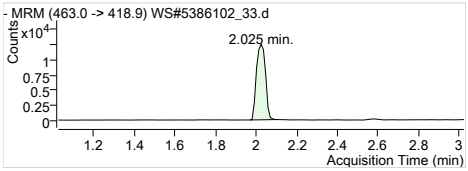



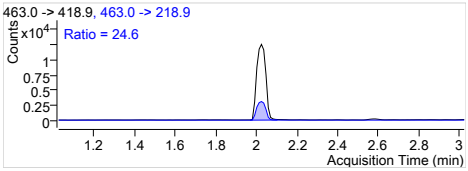

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 11.17 µg/L
Area ratio: 4.63531
Sample type: CC



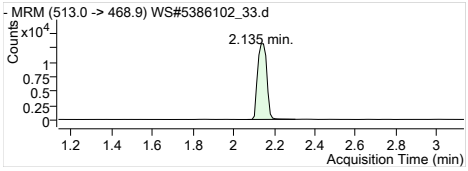



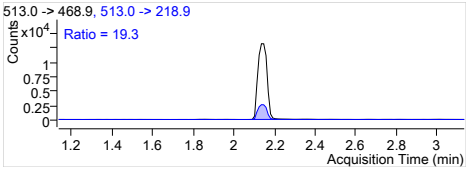

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 11.55 µg/L
Area ratio: 4.22961
Sample type: CC



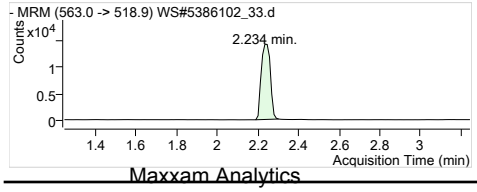



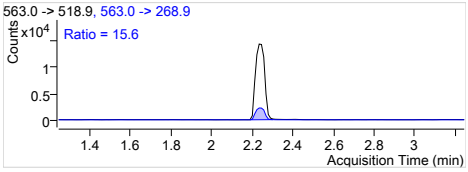

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 12.10 µg/L
Area ratio: 4.41217
Sample type: CC



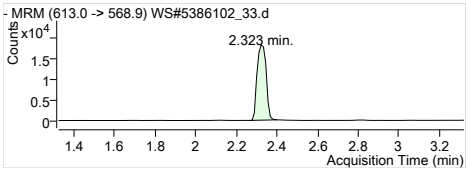



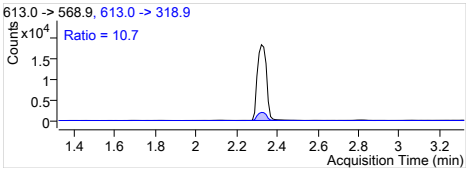

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 12.65 µg/L
Area ratio: 6.12130
Sample type: CC



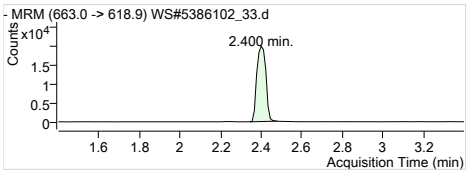



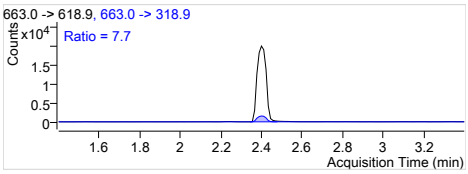

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.246)
Calc. conc. 11.31 µg/L
Area ratio: 5.27330
Sample type: CC



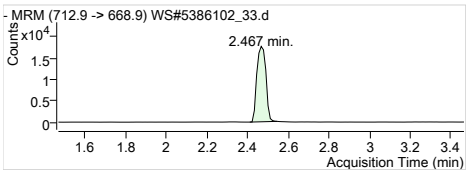



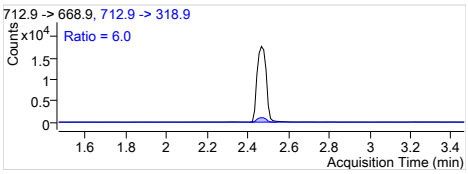

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 11.77 µg/L
Area ratio: 4.88257
Sample type: CC



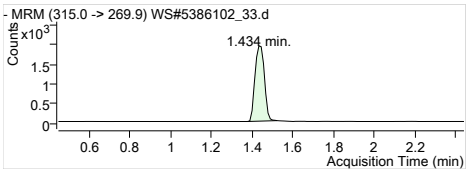



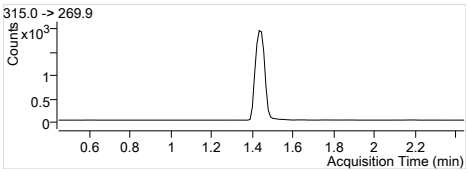

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 12.33 µg/L
Area ratio: 5.07911
Sample type: CC



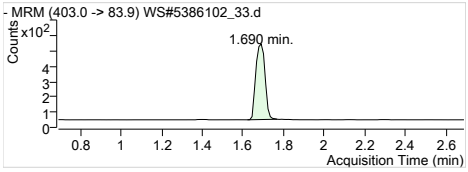



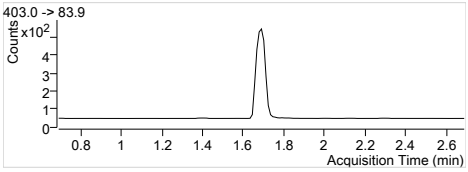

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 13.00 µg/L
Area ratio: 4.52710
Sample type: CC



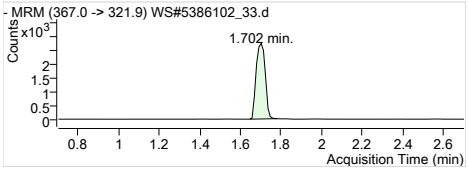



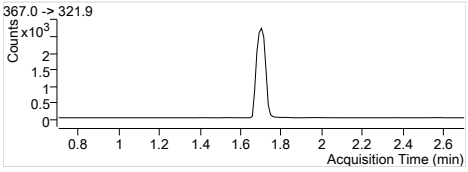

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 96.37 µg/L
Area ratio: 0.18727
Sample type: CC



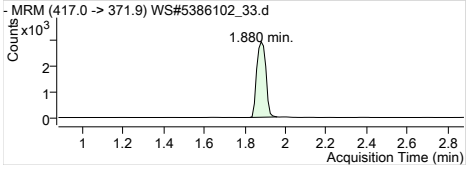



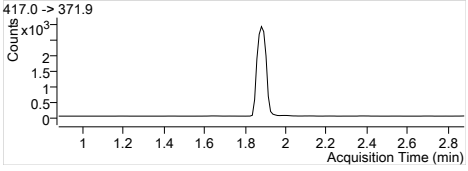

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.690 (1.690)
Calc. conc. 95.93 µg/L
Area ratio: 0.04770
Sample type: CC



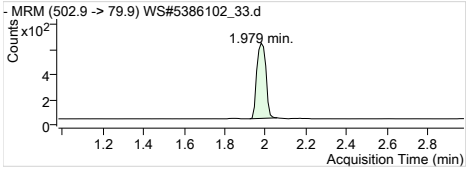



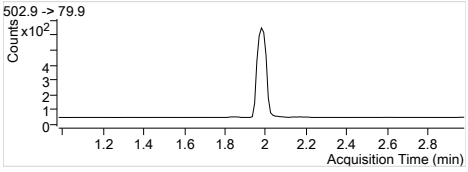

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.702 (1.702)
Calc. conc. 100.06 µg/L
Area ratio: 0.25464
Sample type: CC



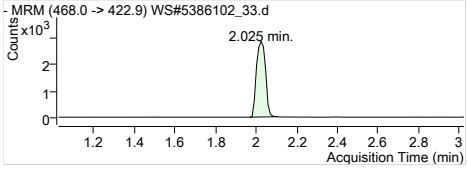



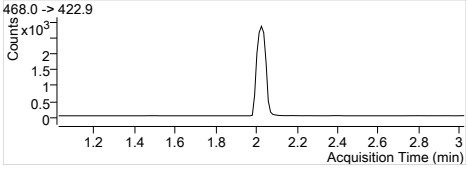

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.880 (1.881)
Calc. conc. 101.34 µg/L
Area ratio: 0.27206
Sample type: CC



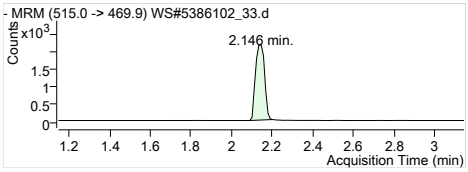



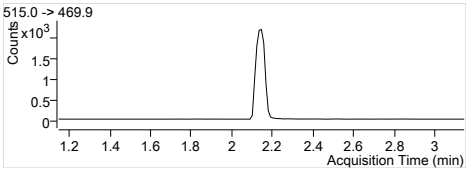

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 93.47 µg/L
Area ratio: 0.05659
Sample type: CC



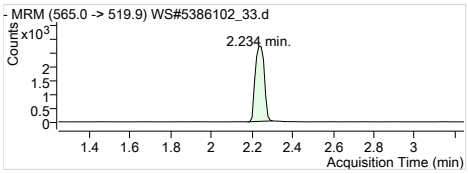



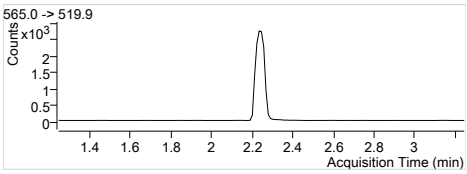

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 99.26 µg/L
Area ratio: 0.26596
Sample type: CC



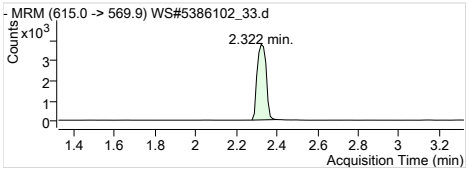



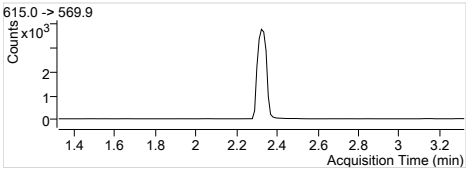

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 87.72 µg/L
Area ratio: 0.14931
Sample type: CC



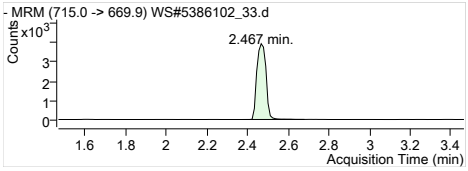



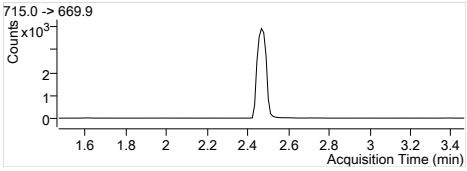

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.245)
Calc. conc. 93.71 µg/L
Area ratio: 0.18915
Sample type: CC



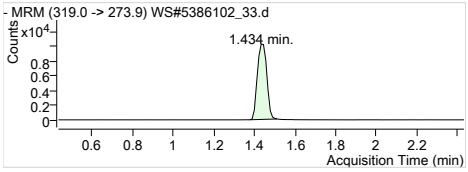



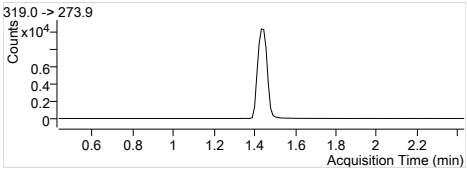

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 92.52 µg/L
Area ratio: 0.25925
Sample type: CC



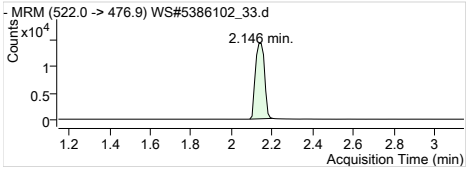



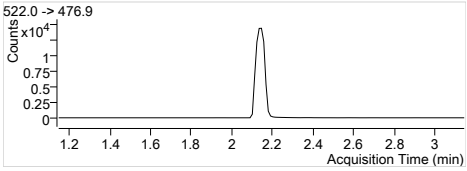

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 85.26 µg/L
Area ratio: 0.27254
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 103.83 µg/L
Area ratio: 0
Sample type: CC



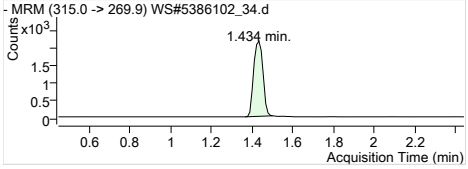

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.146 (2.146)
Calc. conc. 110.24 µg/L
Area ratio: 0
Sample type: CC

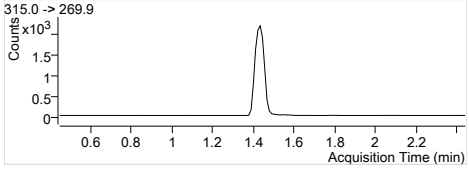
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_34.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-C8 |
| **Acq. Date** | 2018/02/08 3:47:11 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

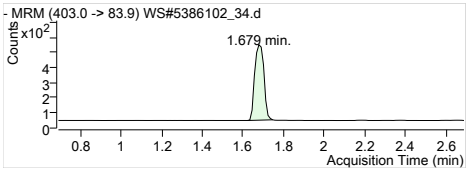
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6824 | 1.43 | 1 µg/L | | |
| MPFHxS | 1577 | 1.68 | 1 µg/L | | |
| MPFHpA | 8844 | 1.69 | 1 µg/L | | |
| MPFOA | 8986 | 1.88 | 1 µg/L | | |
| MPFOS | 2166 | 1.98 | 1 µg/L | | |
| MPFNA | 10142 | 2.02 | 1 µg/L | | |
| MPFDA | 7734 | 2.14 | 1 µg/L | | |
| MPFUnA | 8702 | 2.23 | 1 µg/L | | |
| MPFDoA | 11944 | 2.32 | 1 µg/L | | |
| MPFTeDA | 14298 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 34491 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 43455 | 2.13 | 1 µg/L | | |

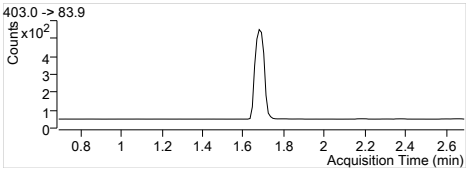
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 642 | 1.09 | 0.83 | 1.02 µg/L | 122.71 |
| PFHxA 1 | 1851 | 1.43 | 0.83 | 0.76 µg/L | 91.29 |
| PFHxS 1 | 534 | 1.68 | 0.83 | 0.77 µg/L | 92.41 |
| PFHpA 1 | 2888 | 1.69 | 0.83 | 0.89 µg/L | 107.34 |
| PFOA 1 | 3343 | 1.88 | 0.83 | 1.01 µg/L | 121.71 |
| PFOS 1 | 579 | 1.97 | 0.83 | 0.83 µg/L | 100.28 |
| PFNA 1 | 2723 | 2.01 | 0.83 | 0.78 µg/L | 94.26 |
| PFDA 1 | 2908 | 2.14 | 0.83 | 0.77 µg/L | 92.29 |
| PFUnA 1 | 2999 | 2.23 | 0.83 | 0.85 µg/L | 102.03 |
| PFDoA 1 | 4144 | 2.32 | 0.83 | 0.91 µg/L | 109.36 |
| PFTrDA 1 | 4355 | 2.40 | 0.83 | 0.83 µg/L | 99.79 |
| PFTeDA 1 | 3818 | 2.47 | 0.83 | 0.81 µg/L | 98.01 |
| 13C2-PFHxA | 6824 | 1.43 | 100.00 | 101.81 µg/L | 101.81 |
| 18O2-PFHxS | 1577 | 1.68 | 100.00 | 91.96 µg/L | 91.96 |
| 13C4-PFHpA | 8844 | 1.69 | 100.00 | 100.76 µg/L | 100.76 |
| 13C4-PFOA | 8986 | 1.88 | 100.00 | 97.04 µg/L | 97.04 |
| 13C4-PFOS | 2166 | 1.98 | 100.00 | 103.72 µg/L | 103.72 |
| 13C5-PFNA | 10047 | 2.02 | 100.00 | 108.71 µg/L | 108.71 |
| 13C2-PFDA | 7567 | 2.14 | 100.00 | 102.31 µg/L | 102.31 |
| 13C2-PFUnA | 8702 | 2.23 | 100.00 | 99.21 µg/L | 99.21 |
| 13C2-PFDoA | 11944 | 2.32 | 100.00 | 98.09 µg/L | 98.09 |
| 13C2-PFTeDA | 14299 | 2.47 | 100.00 | 102.94 µg/L | 102.94 |
| 13C6-PFHxA | 34491 | 1.43 | 100.00 | 108.73 µg/L | 108.73 |
| 13C9-PFDA | 43455 | 2.13 | 100.00 | 107.15 µg/L | 107.15 |



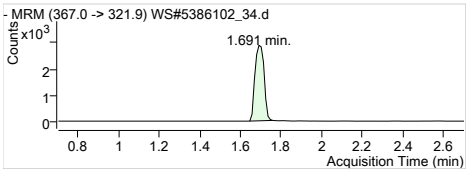



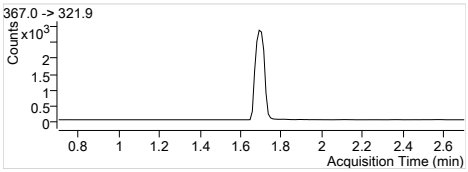

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.445) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



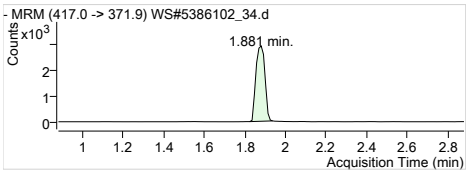



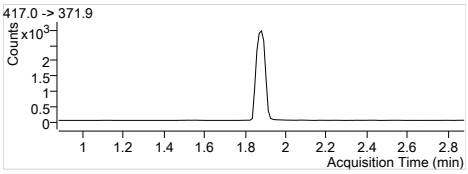

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.690)
Concentration: 1 µg/L
Sample type: CC



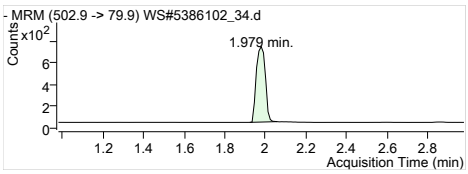



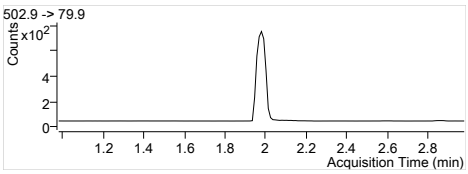

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.702)
Concentration: 1 µg/L
Sample type: CC



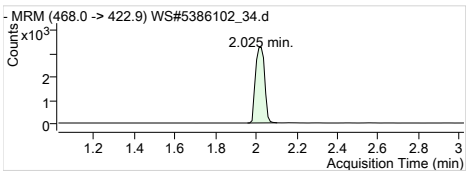



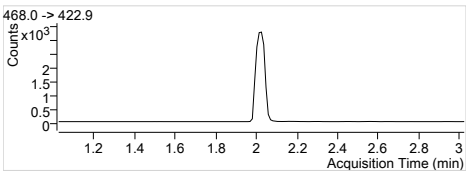

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



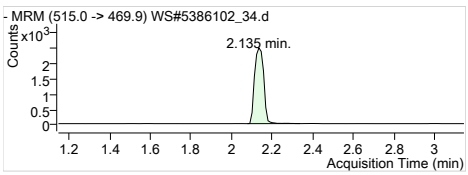



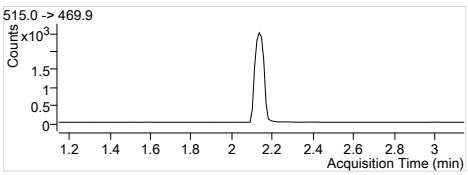

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



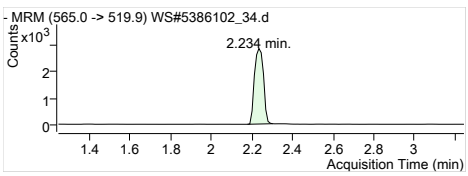



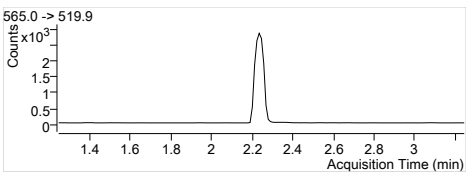

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: CC



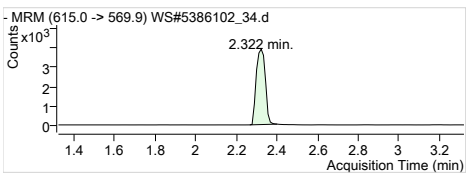



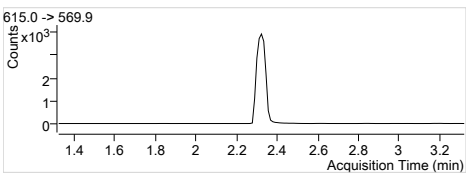

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: CC



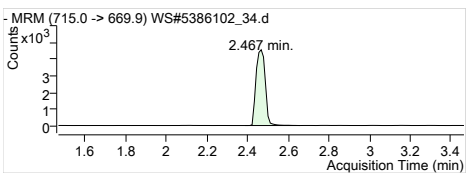



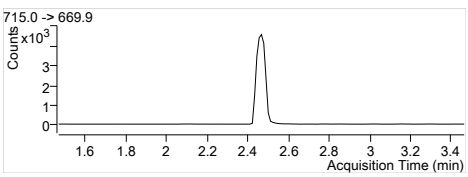

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.245)
Concentration: 1 µg/L
Sample type: CC



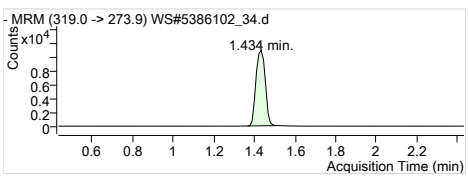



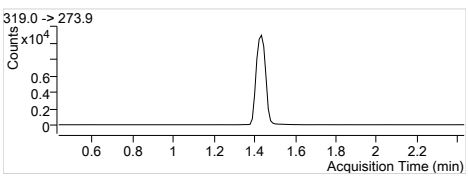

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



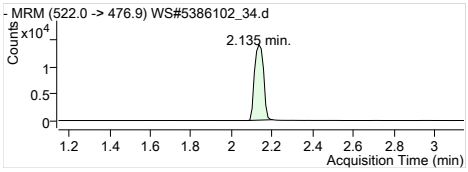



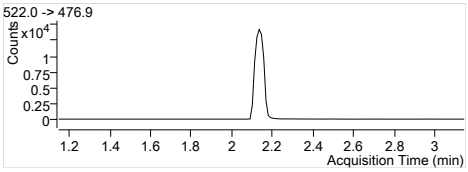

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



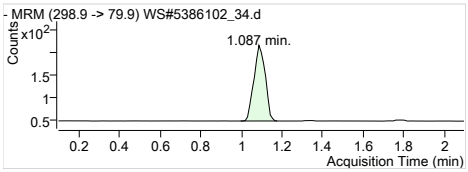



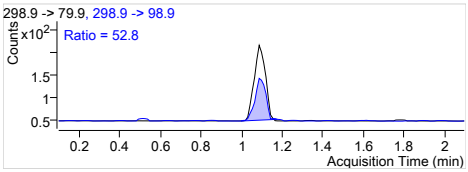

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



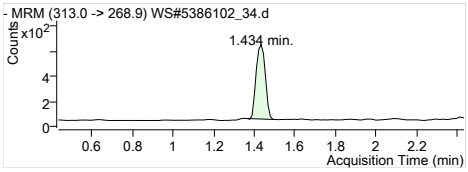



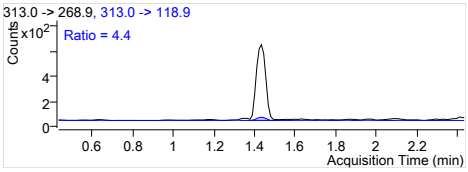

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: CC



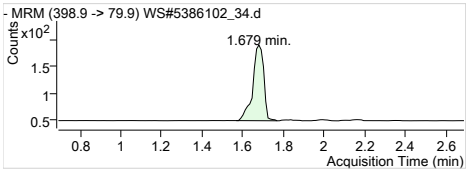



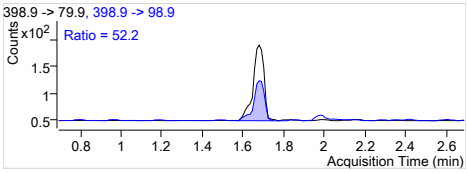

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.098)
Calc. conc. 1.02 µg/L
Area ratio: 0.40710
Sample type: CC



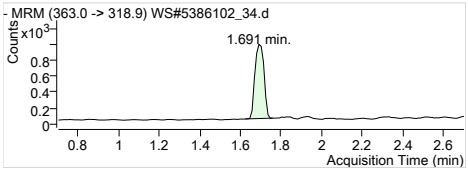



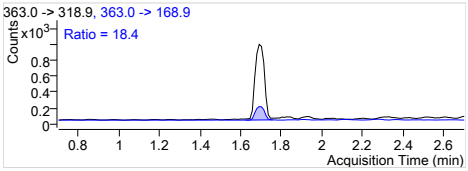

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 0.76 µg/L
Area ratio: 0.27125
Sample type: CC



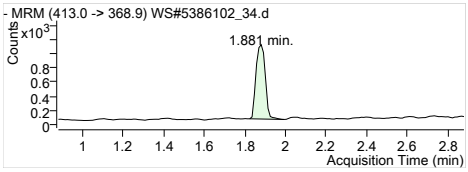



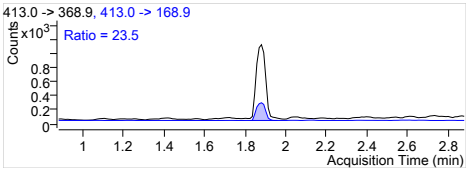

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.691)
Calc. conc. 0.77 µg/L
Area ratio: 0.33862
Sample type: CC



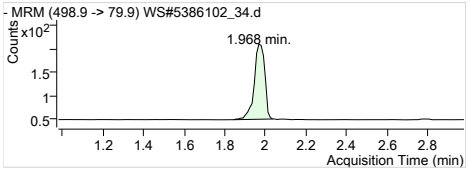



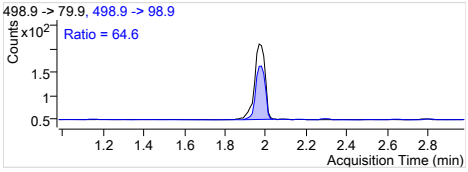

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.702)
Calc. conc. 0.89 µg/L
Area ratio: 0.32655
Sample type: CC



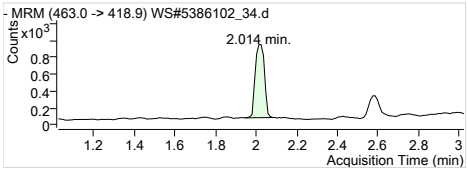



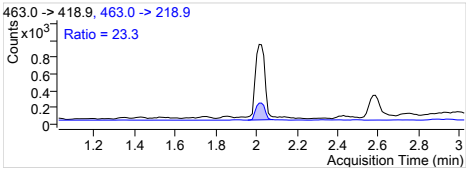

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 1.01 µg/L
Area ratio: 0.37202
Sample type: CC



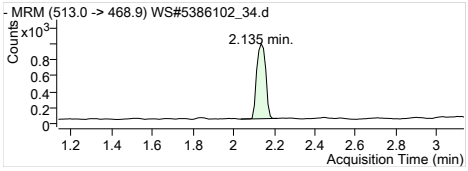



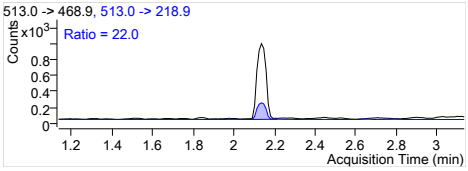

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.979)
Calc. conc. 0.83 µg/L
Area ratio: 0.26731
Sample type: CC



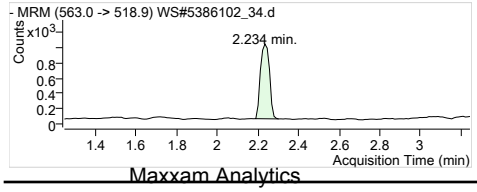



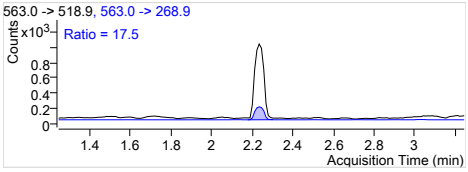

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.025)
Calc. conc. 0.78 µg/L
Area ratio: 0.26849
Sample type: CC



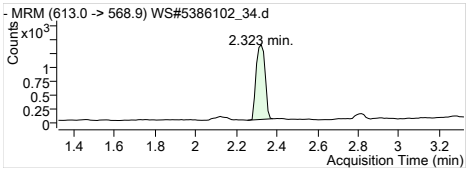



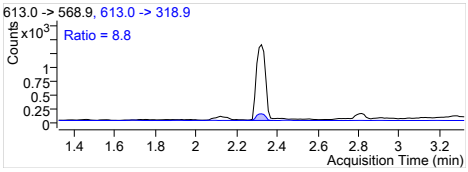

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 0.77 µg/L
Area ratio: 0.37600
Sample type: CC



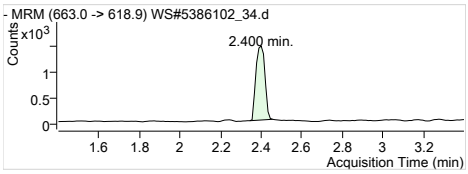



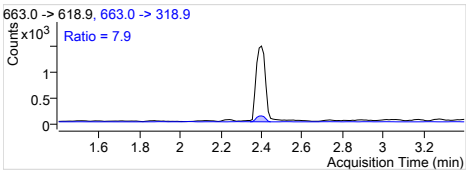

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.246)
Calc. conc. 0.85 µg/L
Area ratio: 0.34463
Sample type: CC



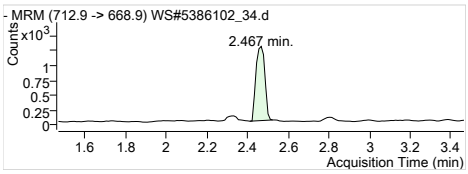



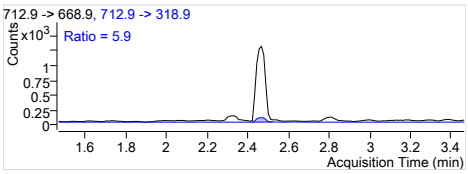

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.91 µg/L
Area ratio: 0.34695
Sample type: CC



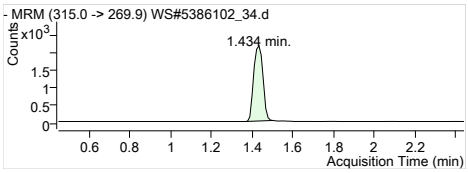



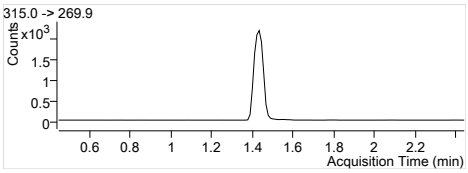

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.83 µg/L
Area ratio: 0.30459
Sample type: CC



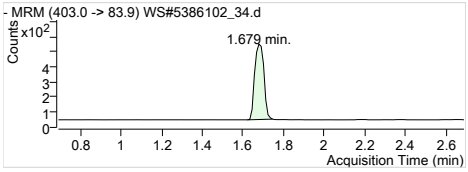



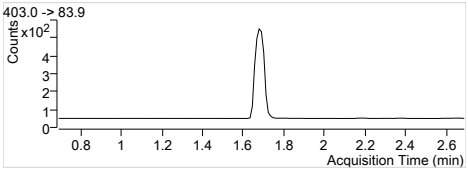

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 0.81 µg/L
Area ratio: 0.26703
Sample type: CC



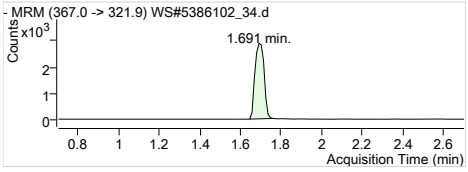



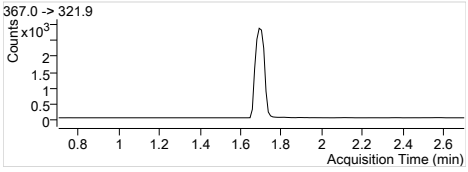

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 101.81 µg/L
Area ratio: 0.19785
Sample type: CC



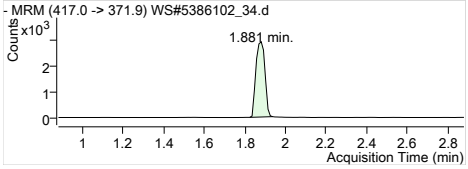



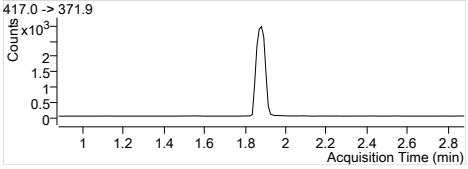

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.690)
Calc. conc. 91.96 µg/L
Area ratio: 0.04572
Sample type: CC



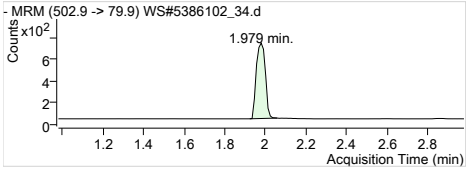



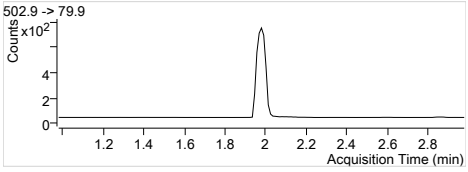

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.702)
Calc. conc. 100.76 µg/L
Area ratio: 0.25641
Sample type: CC



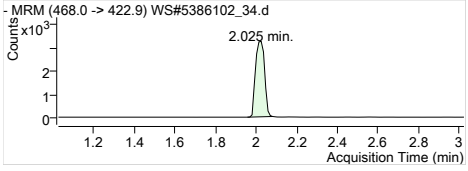



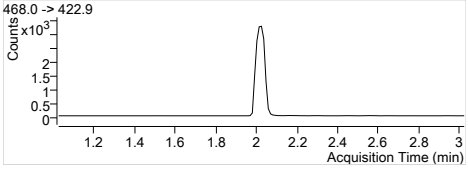

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 97.04 µg/L
Area ratio: 0.26053
Sample type: CC



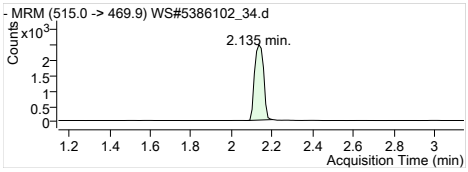



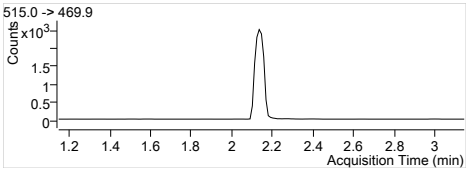

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 103.72 µg/L
Area ratio: 0.06280
Sample type: CC



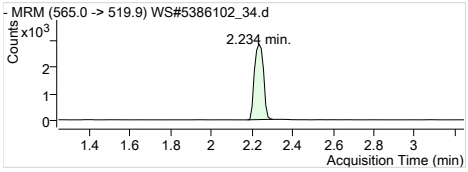



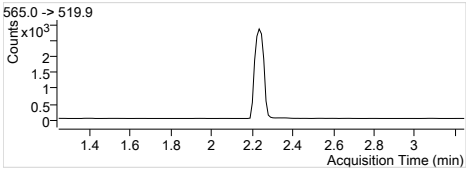

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 108.71 µg/L
Area ratio: 0.29129
Sample type: CC



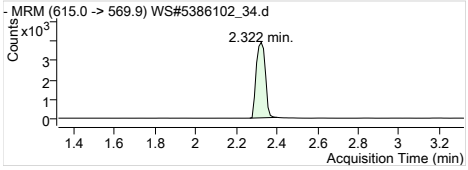



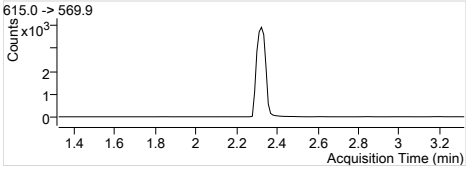

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 102.31 µg/L
Area ratio: 0.17413
Sample type: CC



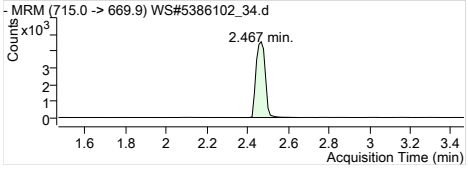



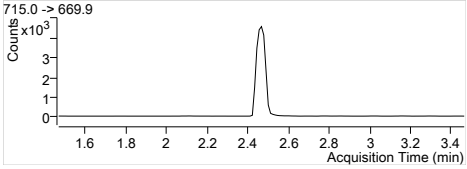

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.245)
Calc. conc. 99.21 µg/L
Area ratio: 0.20025
Sample type: CC



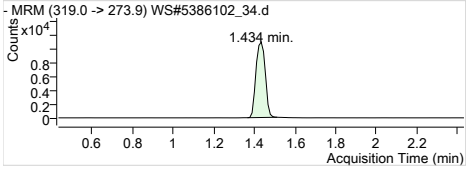



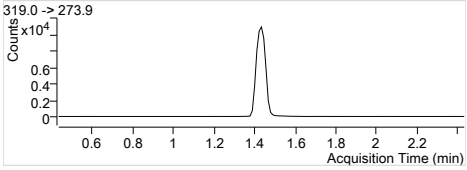

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 98.09 µg/L
Area ratio: 0.27486
Sample type: CC



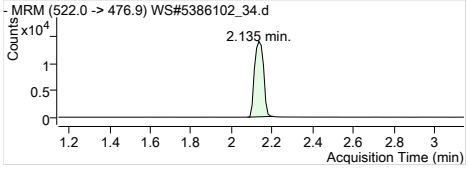



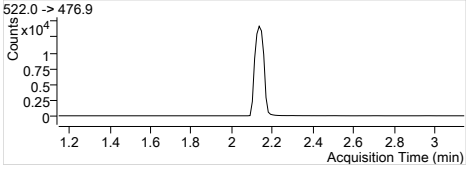

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 102.94 µg/L
Area ratio: 0.32905
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 108.73 µg/L
Area ratio: 0
Sample type: CC



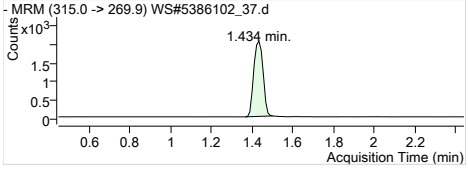

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 107.15 µg/L
Area ratio: 0
Sample type: CC

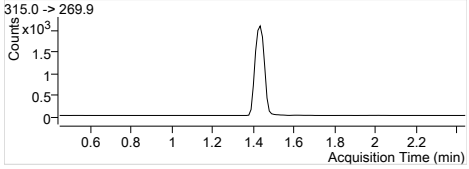
**Batch Path** T:\lcms4\PFC\20180207\WS#5386102\QuantResults\PFC_Water_Low_180207_WS#5386102_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_37.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P1-D2 |
| **Acq. Date** | 2018/02/08 4:01:57 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

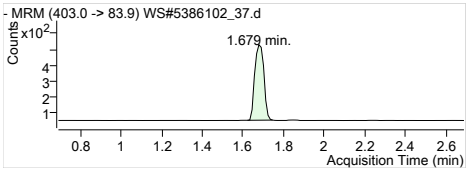
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6476 | 1.43 | 1 µg/L | | |
| MPFHxS | 1498 | 1.68 | 1 µg/L | | |
| MPFHpA | 8243 | 1.69 | 1 µg/L | | |
| MPFOA | 9595 | 1.88 | 1 µg/L | | |
| MPFOS | 1878 | 1.98 | 1 µg/L | | |
| MPFNA | 8637 | 2.02 | 1 µg/L | | |
| MPFDA | 6880 | 2.14 | 1 µg/L | | |
| MPFUnA | 8813 | 2.23 | 1 µg/L | | |
| MPFDoA | 11599 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13627 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 35453 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 44102 | 2.13 | 1 µg/L | | |

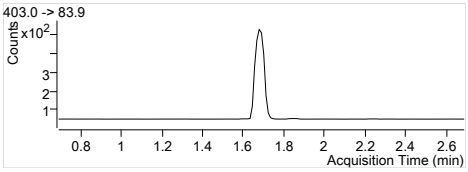
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 8462 | 1.09 | 12.50 | 13.34 µg/L | 106.73 |
| PFHxA 1 | 30830 | 1.43 | 12.50 | 11.77 µg/L | 94.18 |
| PFHxS 1 | 8007 | 1.68 | 12.50 | 12.88 µg/L | 103.04 |
| PFHpA 1 | 41975 | 1.69 | 12.50 | 12.88 µg/L | 103.03 |
| PFOA 1 | 45630 | 1.88 | 12.50 | 11.46 µg/L | 91.66 |
| PFOS 1 | 8451 | 1.97 | 12.50 | 12.29 µg/L | 98.29 |
| PFNA 1 | 38345 | 2.03 | 12.50 | 12.18 µg/L | 97.43 |
| PFDA 1 | 42970 | 2.14 | 12.50 | 12.90 µg/L | 103.23 |
| PFUnA 1 | 46137 | 2.23 | 12.50 | 11.23 µg/L | 89.80 |
| PFDoA 1 | 58450 | 2.32 | 12.50 | 12.15 µg/L | 97.17 |
| PFTrDA 1 | 69208 | 2.40 | 12.50 | 12.33 µg/L | 98.67 |
| PFTeDA 1 | 55720 | 2.47 | 12.50 | 11.74 µg/L | 93.95 |
| 13C2-PFHxA | 6476 | 1.43 | 100.00 | 94.00 µg/L | 94.00 |
| 18O2-PFHxS | 1498 | 1.68 | 100.00 | 84.98 µg/L | 84.98 |
| 13C4-PFHpA | 8243 | 1.69 | 100.00 | 91.37 µg/L | 91.37 |
| 13C4-PFOA | 9595 | 1.88 | 100.00 | 100.81 µg/L | 100.81 |
| 13C4-PFOS | 1878 | 1.98 | 100.00 | 87.49 µg/L | 87.49 |
| 13C5-PFNA | 8581 | 2.02 | 100.00 | 90.33 µg/L | 90.33 |
| 13C2-PFDA | 6799 | 2.14 | 100.00 | 90.57 µg/L | 90.57 |
| 13C2-PFUnA | 8813 | 2.23 | 100.00 | 99.00 µg/L | 99.00 |
| 13C2-PFDoA | 11599 | 2.32 | 100.00 | 93.86 µg/L | 93.86 |
| 13C2-PFTeDA | 13838 | 2.47 | 100.00 | 98.16 µg/L | 98.16 |
| 13C6-PFHxA | 35453 | 1.43 | 100.00 | 111.76 µg/L | 111.76 |
| 13C9-PFDA | 44102 | 2.13 | 100.00 | 108.75 µg/L | 108.75 |



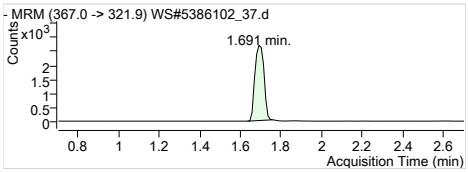



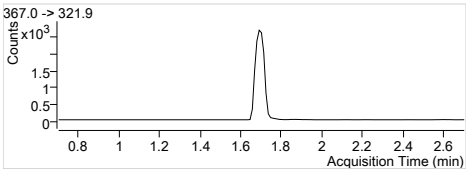

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.445) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



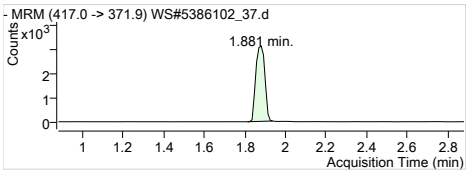



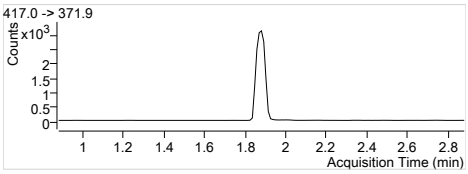

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.690)
Concentration: 1 µg/L
Sample type: CC



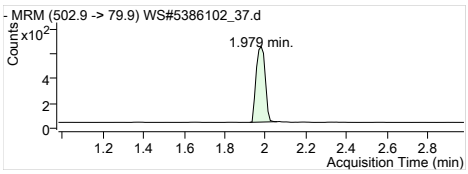



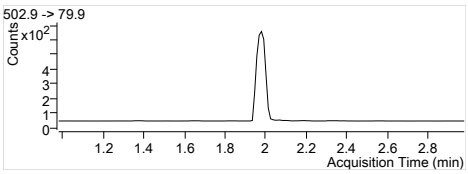

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.702)
Concentration: 1 µg/L
Sample type: CC



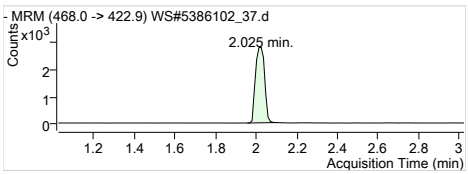



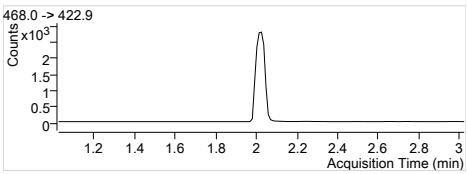

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



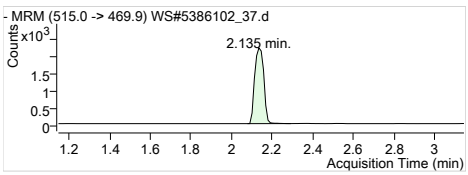



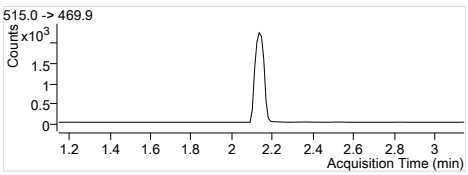

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



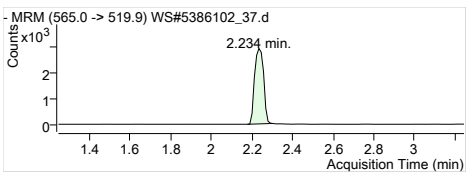



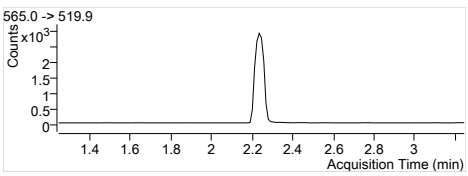

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.025)
Concentration: 1 µg/L
Sample type: CC



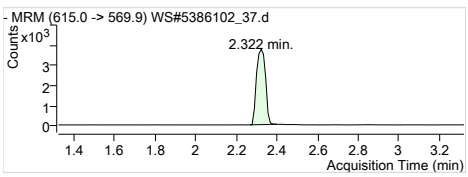



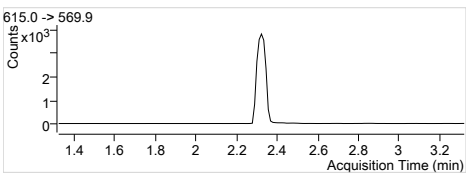

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: CC



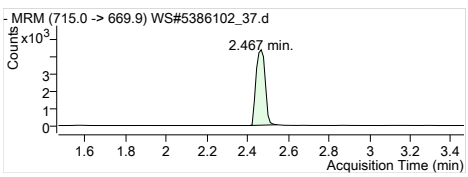



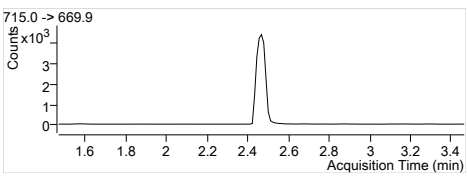

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.245)
Concentration: 1 µg/L
Sample type: CC



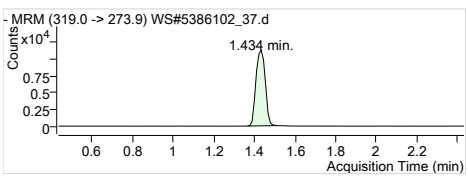



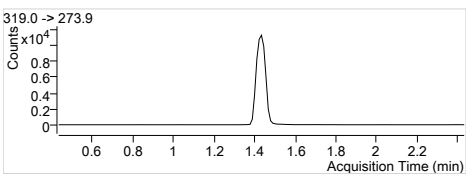

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



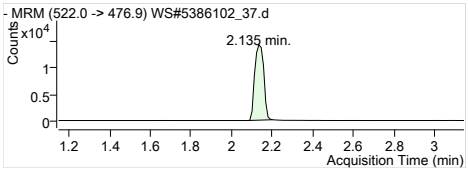



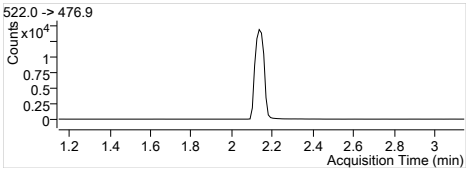

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



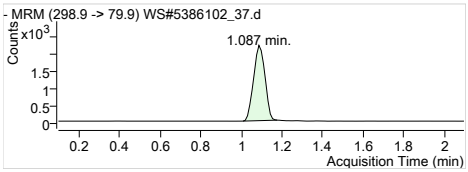



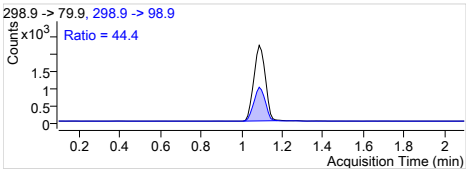

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



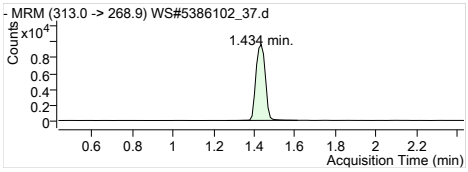



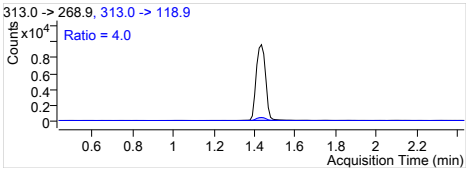

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.146)
Concentration: 1 µg/L
Sample type: CC



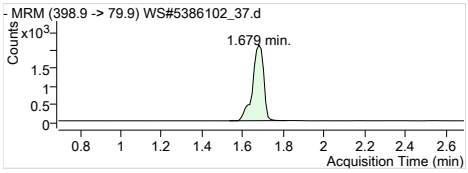



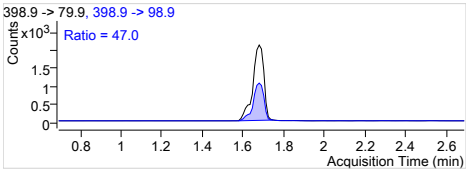

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.098)
Calc. conc. 13.34 µg/L
Area ratio: 5.64887
Sample type: CC



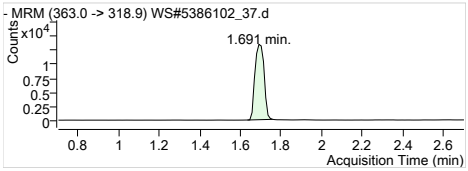



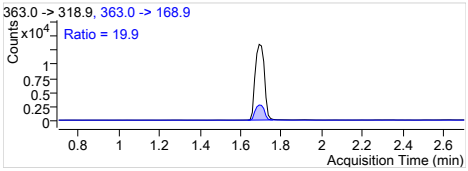

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 11.77 µg/L
Area ratio: 4.76065
Sample type: CC



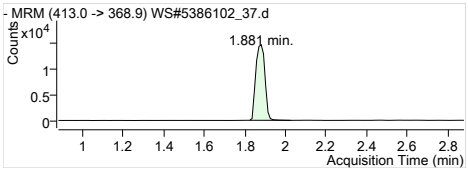



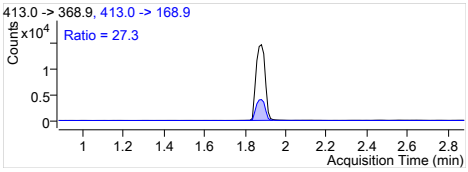

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.691)
Calc. conc. 12.88 µg/L
Area ratio: 5.34513
Sample type: CC



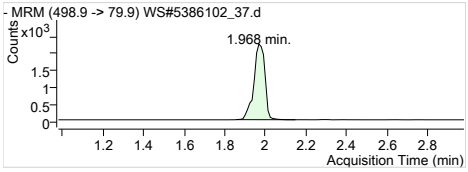



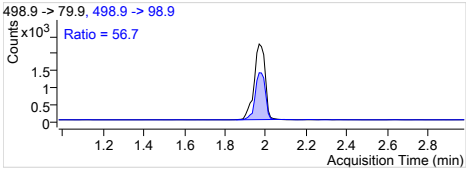

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.702)
Calc. conc. 12.88 µg/L
Area ratio: 5.09220
Sample type: CC



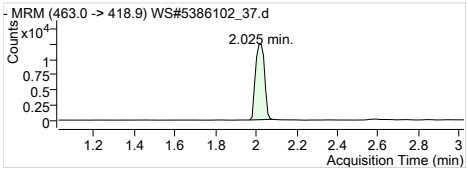



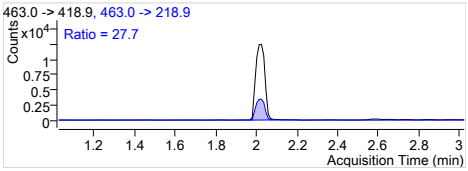

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 11.46 µg/L
Area ratio: 4.75560
Sample type: CC



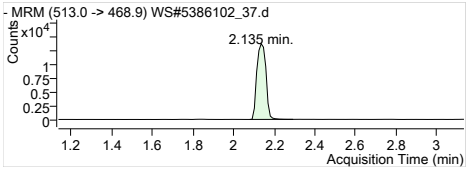



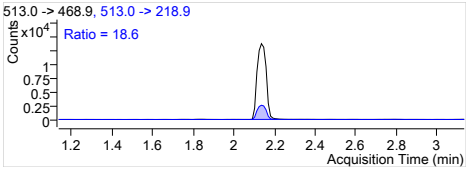

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.979)
Calc. conc. 12.29 µg/L
Area ratio: 4.50000
Sample type: CC



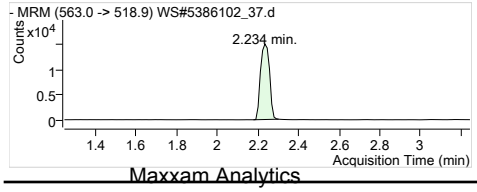



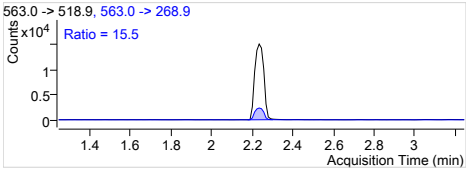

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 12.18 µg/L
Area ratio: 4.43962
Sample type: CC



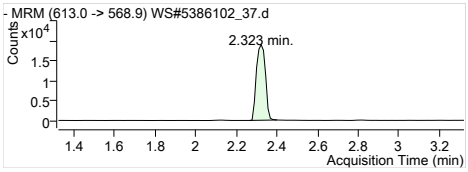



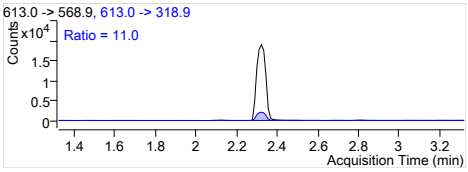

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 12.90 µg/L
Area ratio: 6.24564
Sample type: CC



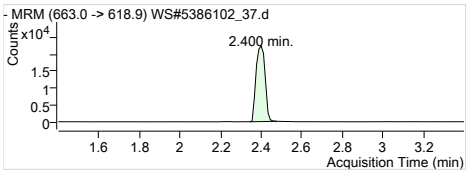



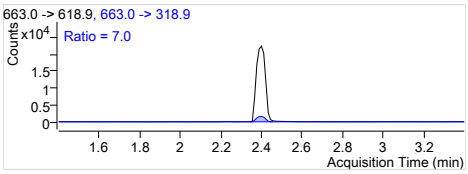

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.246)
Calc. conc. 11.23 µg/L
Area ratio: 5.23511
Sample type: CC



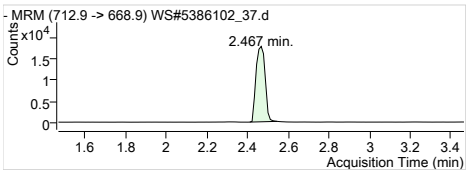



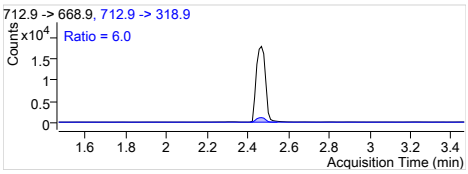

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 12.15 µg/L
Area ratio: 5.03923
Sample type: CC



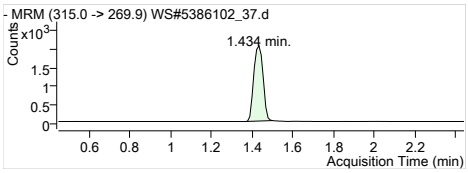



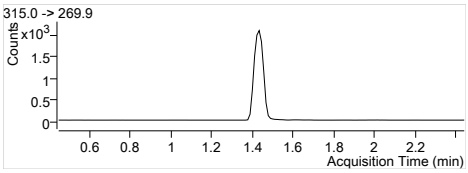

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 12.33 µg/L
Area ratio: 5.07874
Sample type: CC



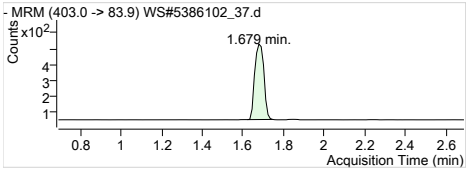



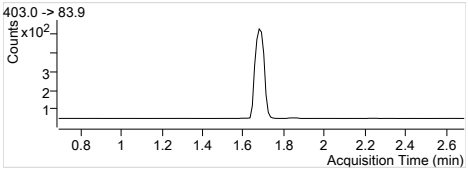

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 11.74 µg/L
Area ratio: 4.08894
Sample type: CC



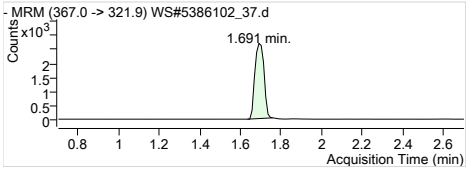



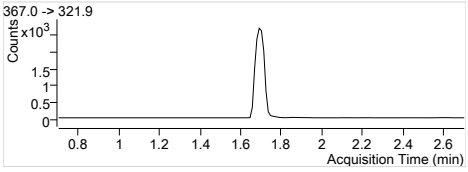

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.445)
Calc. conc. 94.00 µg/L
Area ratio: 0.18266
Sample type: CC



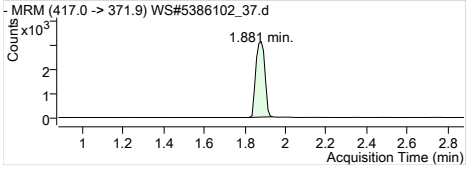



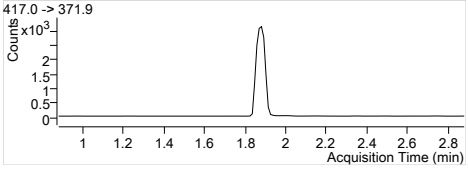

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.690)
Calc. conc. 84.98 µg/L
Area ratio: 0.04225
Sample type: CC



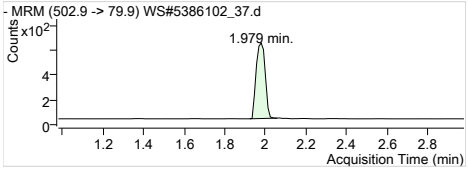



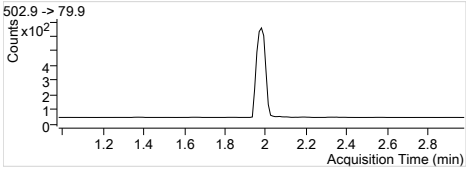

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.702)
Calc. conc. 91.37 µg/L
Area ratio: 0.23251
Sample type: CC



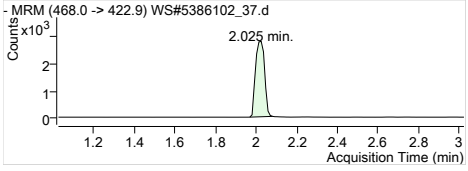



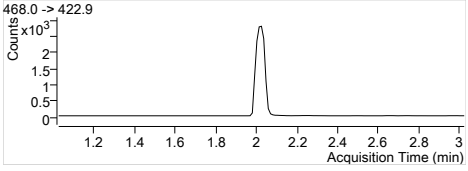

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 100.81 µg/L
Area ratio: 0.27064
Sample type: CC



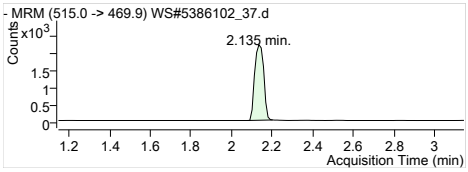



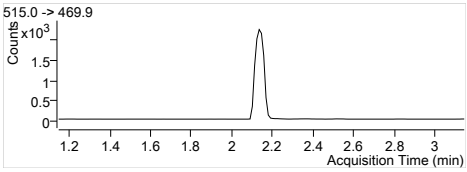

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 87.49 µg/L
Area ratio: 0.05297
Sample type: CC



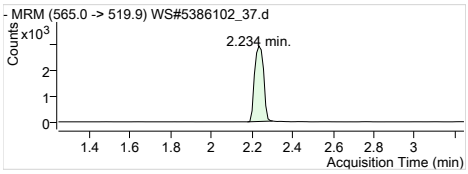



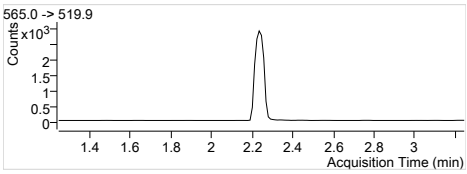

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.025)
Calc. conc. 90.33 µg/L
Area ratio: 0.24204
Sample type: CC



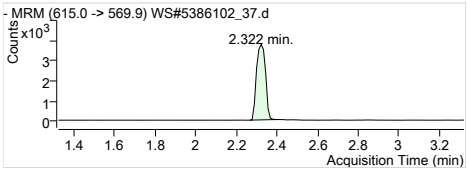



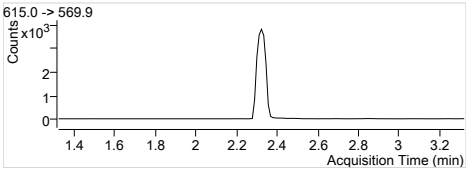

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 90.57 µg/L
Area ratio: 0.15417
Sample type: CC



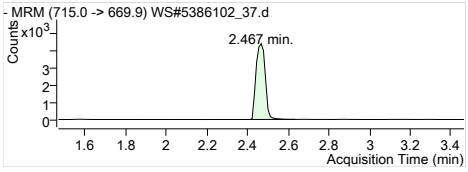



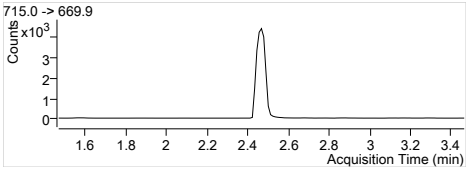

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.245)
Calc. conc. 99.00 µg/L
Area ratio: 0.19983
Sample type: CC



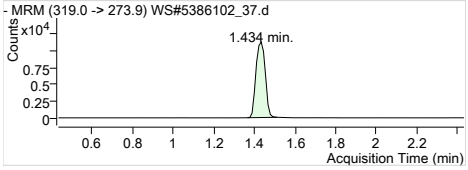



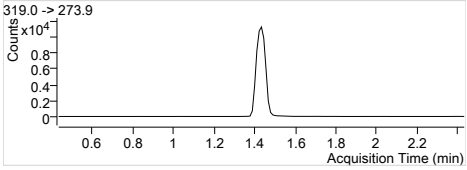

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 93.86 µg/L
Area ratio: 0.26300
Sample type: CC



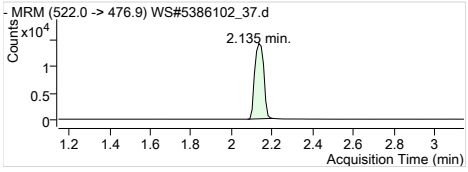



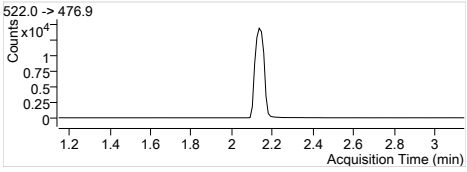

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 98.16 µg/L
Area ratio: 0.31377
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 111.76 µg/L
Area ratio: 0
Sample type: CC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.146)
Calc. conc. 108.75 µg/L
Area ratio: 0
Sample type: CC

# Quantitation Results

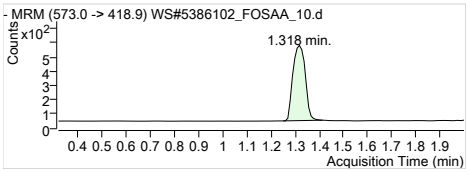
Agilent Technologies

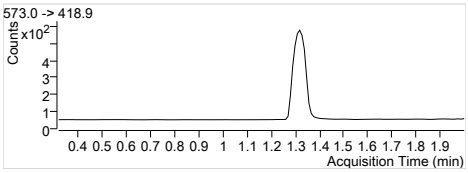
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-C8 |
| **Acq. Date** | 2018/02/08 9:55:40 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

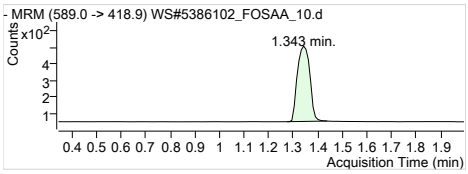
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1882 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1622 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 35225 | 0.92 | 1 µg/L | | |

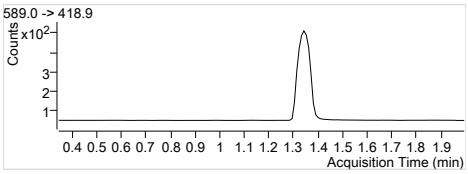
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 545 | 1.31 | 0.83 | 0.82 µg/L | 98.35 |
| EtFOSAA 1 | 551 | 1.34 | 0.83 | 0.87 µg/L | 104.50 |
| D3-MeFOSAA | 1904 | 1.32 | 100.00 | 101.58 µg/L | 101.58 |
| D5-EtFOSAA | 1633 | 1.34 | 100.00 | 100.41 µg/L | 100.41 |
| 13C9-PFDA | 34350 | 0.92 | 100.00 | 102.82 µg/L | 102.82 |



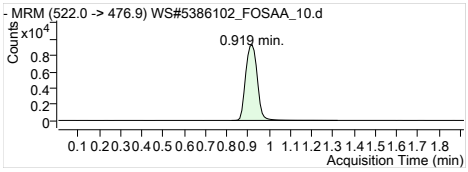



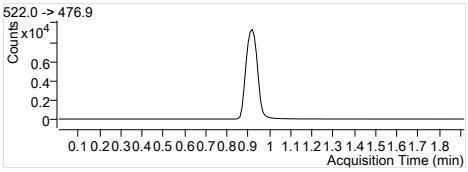

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: CC



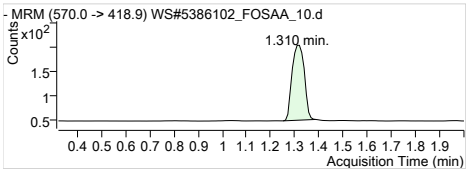



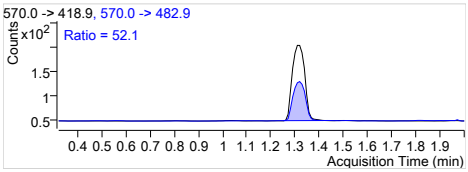

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: CC



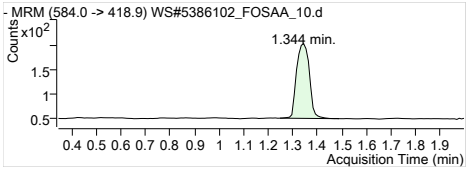



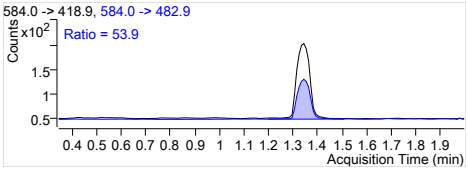

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.919 (0.919)
Concentration: 1 µg/L
Sample type: CC



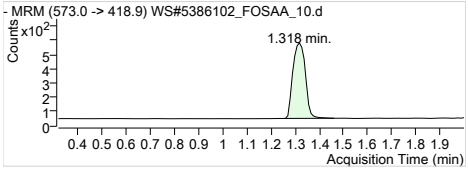



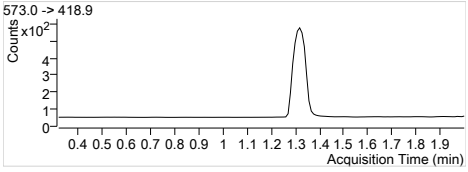

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.319)
Calc. conc. 0.82 µg/L
Area ratio: 0.28959
Sample type: CC



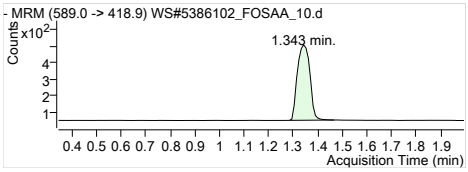



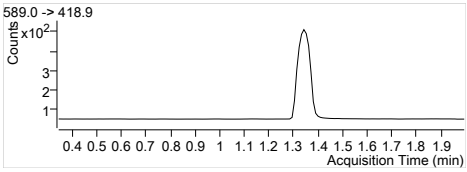

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 0.87 µg/L
Area ratio: 0.33970
Sample type: CC



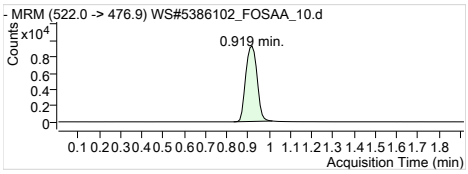



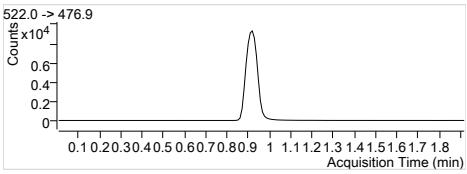

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 101.58 µg/L
Area ratio: 0.05405
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 100.41 µg/L |
| Area ratio: | 0.04636 |
| Sample type: | CC |



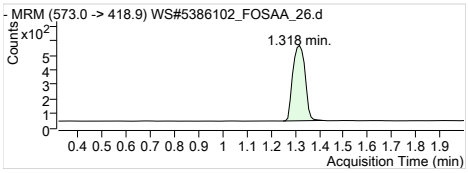

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.919 (0.919) |
| Calc. conc. | 102.82 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

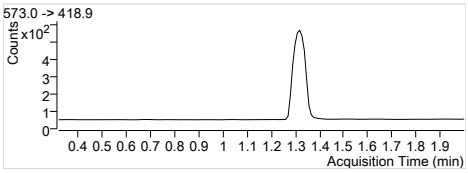
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_26.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-D2 |
| **Acq. Date** | 2018/02/08 10:34:12 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

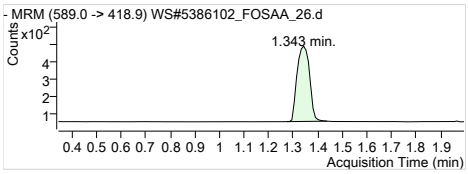
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1825 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1565 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 35972 | 0.92 | 1 µg/L | | |

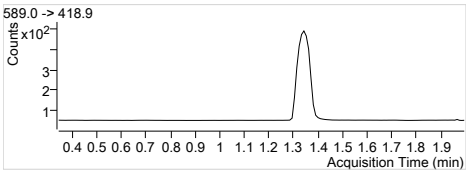
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 7785 | 1.32 | 12.50 | 12.02 µg/L | 96.18 |
| EtFOSAA 1 | 7832 | 1.34 | 12.50 | 11.90 µg/L | 95.17 |
| D3-MeFOSAA | 1835 | 1.32 | 100.00 | 95.87 µg/L | 95.87 |
| D5-EtFOSAA | 1576 | 1.34 | 100.00 | 94.89 µg/L | 94.89 |
| 13C9-PFDA | 35131 | 0.92 | 100.00 | 105.16 µg/L | 105.16 |



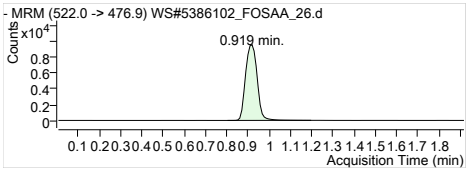



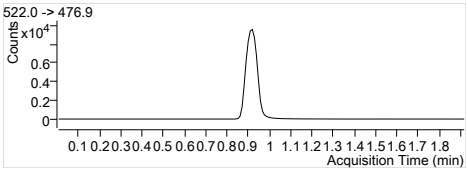

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: CC



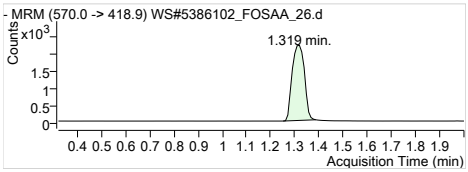



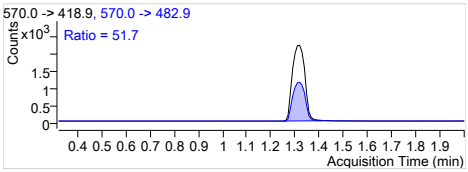

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: CC



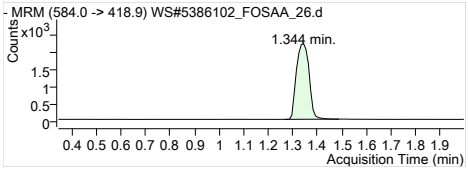



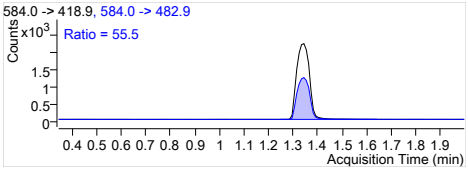

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.919 (0.919)
Concentration: 1 µg/L
Sample type: CC



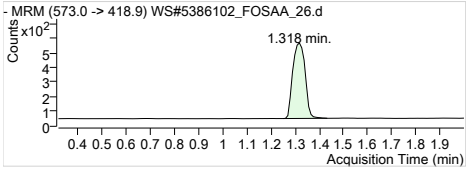



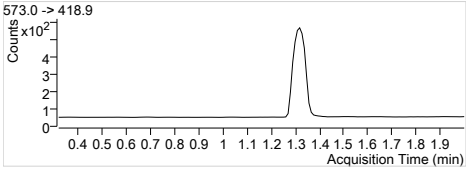

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.319 (1.319)
Calc. conc. 12.02 µg/L
Area ratio: 4.26575
Sample type: CC



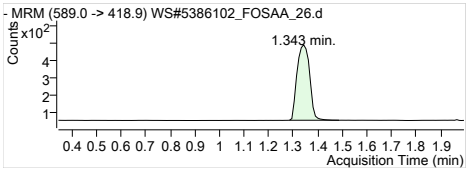



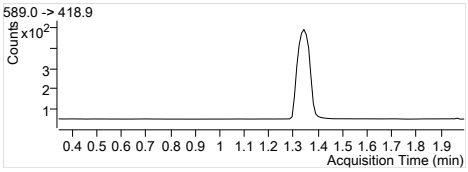

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 11.90 µg/L
Area ratio: 5.00447
Sample type: CC



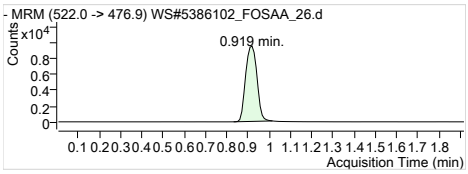



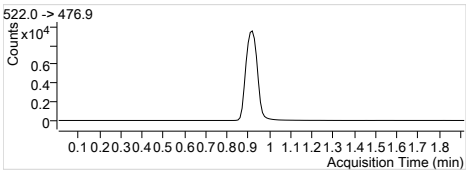

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 95.87 µg/L
Area ratio: 0.05101
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 94.89 µg/L |
| Area ratio: | 0.04381 |
| Sample type: | CC |



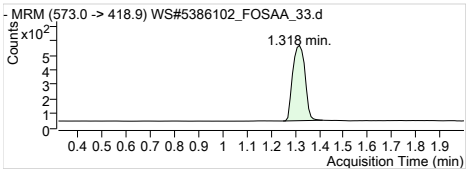

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.919 (0.919) |
| Calc. conc. | 105.16 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

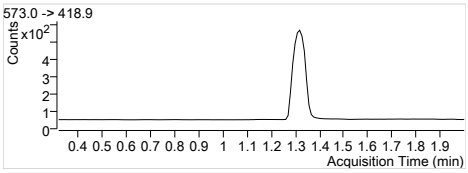
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180207\WS#5386102_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5386102_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5386102_FOSAA_33.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P1-D2 |
| **Acq. Date** | 2018/02/08 10:51:05 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

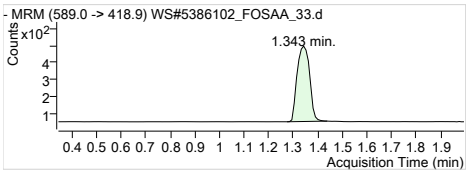
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1832 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1580 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 35917 | 0.92 | 1 µg/L | | |

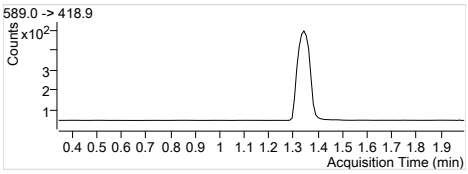
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 7693 | 1.32 | 12.50 | 11.84 µg/L | 94.69 |
| EtFOSAA 1 | 7730 | 1.34 | 12.50 | 11.63 µg/L | 93.05 |
| D3-MeFOSAA | 1846 | 1.32 | 100.00 | 96.59 µg/L | 96.59 |
| D5-EtFOSAA | 1585 | 1.34 | 100.00 | 95.58 µg/L | 95.58 |
| 13C9-PFDA | 35154 | 0.92 | 100.00 | 105.23 µg/L | 105.23 |



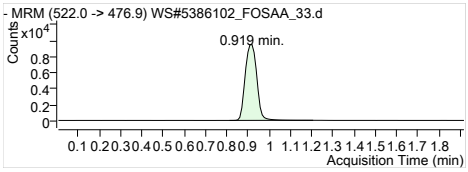



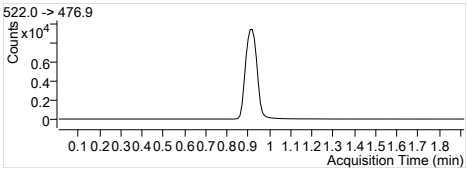

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: CC



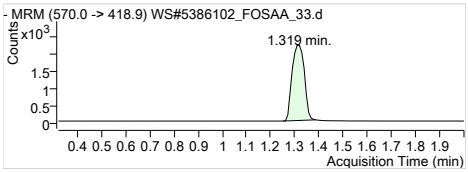



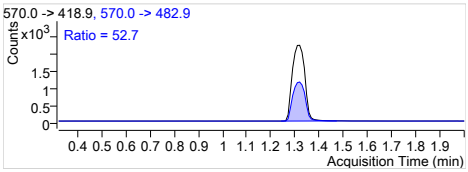

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: CC



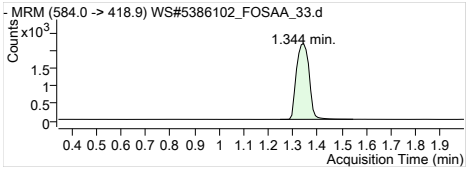



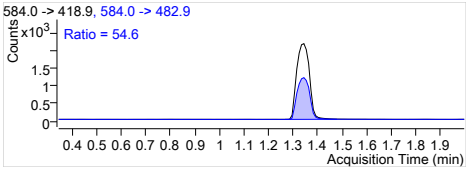

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.919 (0.919)
Concentration: 1 µg/L
Sample type: CC



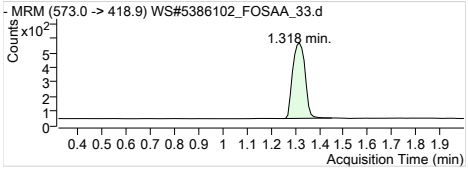



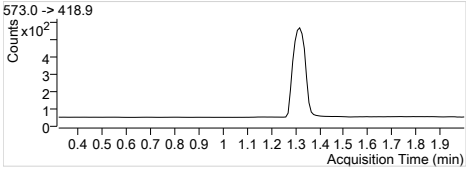

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.319 (1.319)
Calc. conc. 11.84 µg/L
Area ratio: 4.19924
Sample type: CC



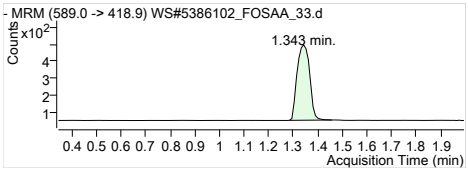



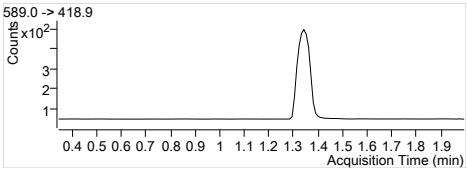

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 11.63 µg/L
Area ratio: 4.89241
Sample type: CC



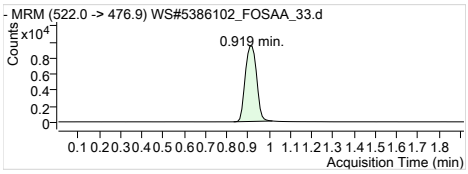



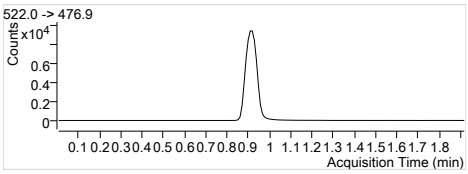

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 96.59 µg/L
Area ratio: 0.05140
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 95.58 µg/L |
| Area ratio: | 0.04413 |
| Sample type: | CC |



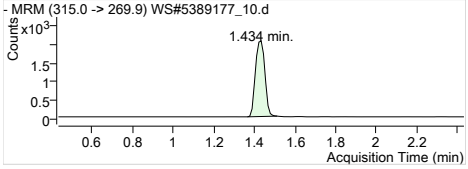

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.919 (0.919) |
| Calc. conc. | 105.23 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

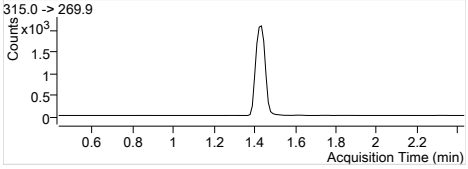
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A2 |
| **Acq. Date** | 2018/02/09 12:41:49 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

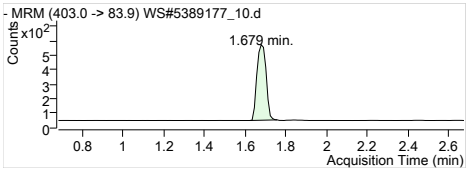
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6608 | 1.43 | 1 µg/L | | |
| MPFHxS | 1651 | 1.68 | 1 µg/L | | |
| MPFHpA | 8514 | 1.69 | 1 µg/L | | |
| MPFOA | 9098 | 1.88 | 1 µg/L | | |
| MPFOS | 1988 | 1.98 | 1 µg/L | | |
| MPFNA | 8860 | 2.01 | 1 µg/L | | |
| MPFDA | 7645 | 2.14 | 1 µg/L | | |
| MPFUnA | 9022 | 2.23 | 1 µg/L | | |
| MPFDoA | 12079 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13175 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 24034 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 32777 | 2.13 | 1 µg/L | | |

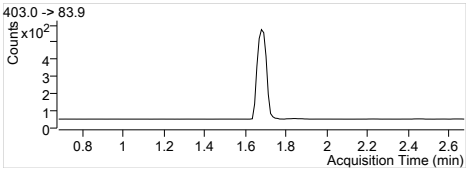
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 667 | 1.09 | 0.83 | 0.87 µg/L | 105.33 |
| PFHxA 1 | 2126 | 1.42 | 0.83 | 0.89 µg/L | 106.90 |
| PFHxS 1 | 697 | 1.68 | 0.83 | 1.06 µg/L | 128.12 |
| PFHpA 1 | 3018 | 1.69 | 0.83 | 0.95 µg/L | 114.29 |
| PFOA 1 | 3316 | 1.88 | 0.83 | 0.86 µg/L | 104.18 |
| PFOS 1 | 629 | 1.97 | 0.83 | 0.96 µg/L | 116.14 |
| PFNA 1 | 2806 | 2.01 | 0.83 | 0.90 µg/L | 109.02 |
| PFDA 1 | 3425 | 2.14 | 0.83 | 1.03 µg/L | 124.46 |
| PFUnA 1 | 3775 | 2.23 | 0.83 | 1.03 µg/L | 124.11 |
| PFDoA 1 | 4282 | 2.32 | 0.83 | 0.91 µg/L | 109.33 |
| PFTrDA 1 | 5201 | 2.40 | 0.83 | 0.95 µg/L | 113.87 |
| PFTeDA 1 | 4548 | 2.47 | 0.83 | 1.05 µg/L | 126.55 |
| 13C2-PFHxA | 6608 | 1.43 | 100.00 | 98.07 µg/L | 98.07 |
| 18O2-PFHxS | 1651 | 1.68 | 100.00 | 95.10 µg/L | 95.10 |
| 13C4-PFHpA | 8514 | 1.69 | 100.00 | 94.99 µg/L | 94.99 |
| 13C4-PFOA | 9098 | 1.88 | 100.00 | 94.87 µg/L | 94.87 |
| 13C4-PFOS | 1988 | 1.98 | 100.00 | 93.39 µg/L | 93.39 |
| 13C5-PFNA | 8861 | 2.01 | 100.00 | 91.66 µg/L | 91.66 |
| 13C2-PFDA | 7557 | 2.14 | 100.00 | 91.53 µg/L | 91.53 |
| 13C2-PFUnA | 9022 | 2.23 | 100.00 | 91.63 µg/L | 91.63 |
| 13C2-PFDoA | 12079 | 2.32 | 100.00 | 92.99 µg/L | 92.99 |
| 13C2-PFTeDA | 13518 | 2.47 | 100.00 | 86.95 µg/L | 86.95 |
| 13C6-PFHxA | 24034 | 1.43 | 100.00 | 112.26 µg/L | 112.26 |
| 13C9-PFDA | 32777 | 2.13 | 100.00 | 114.69 µg/L | 114.69 |



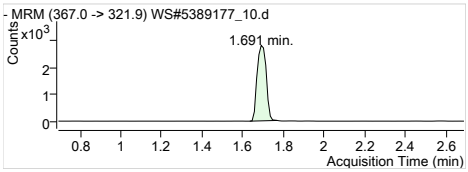



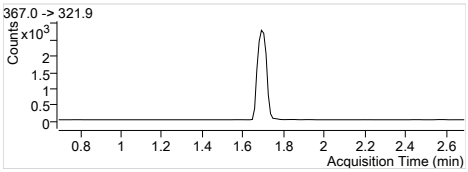

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



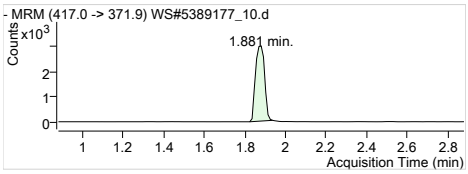



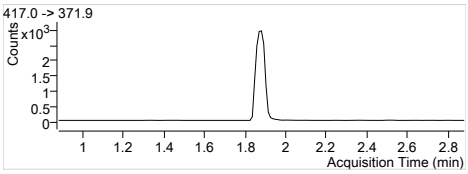

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: CC



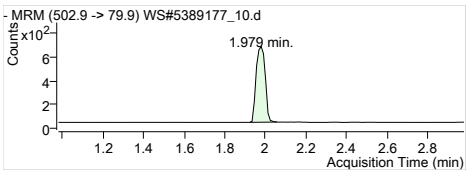



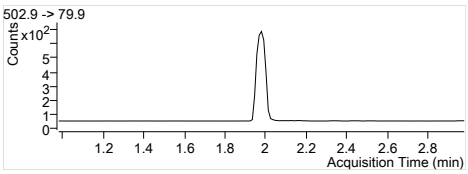

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: CC



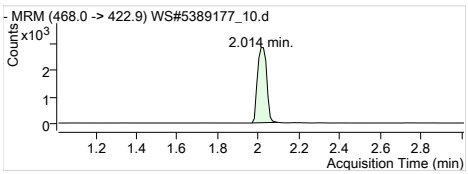



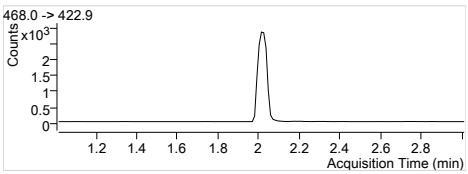

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



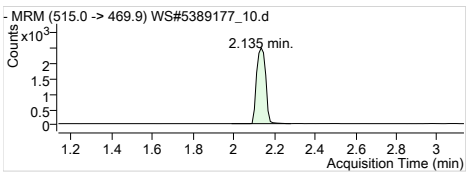



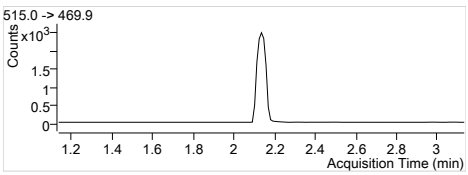

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



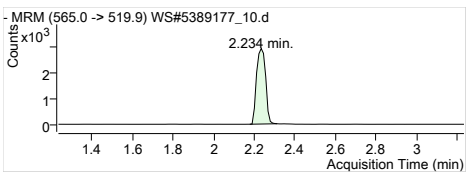



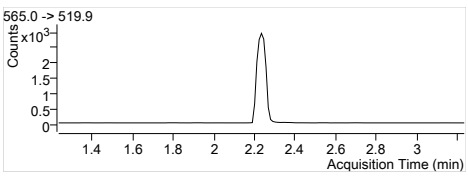

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: CC



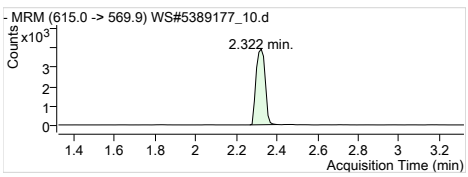



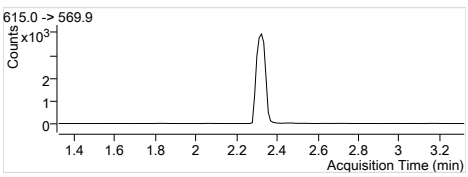

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



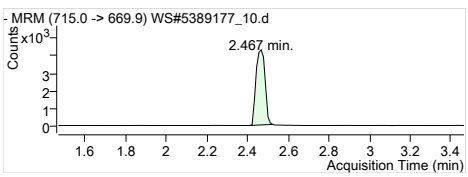



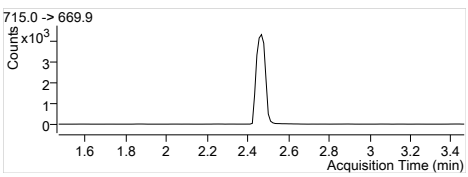

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: CC



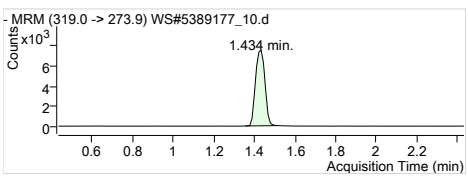



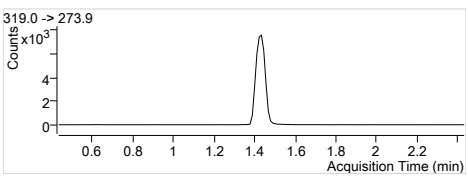

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



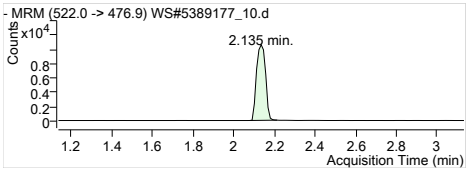



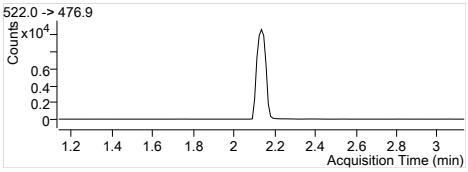

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



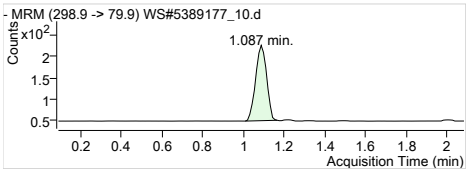



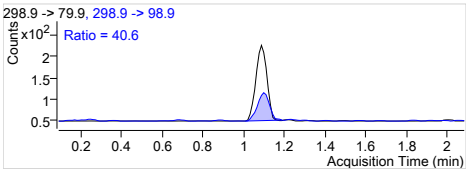

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



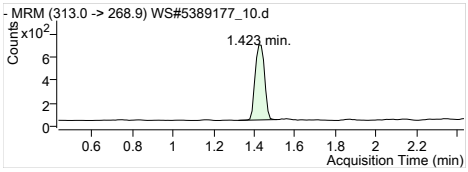



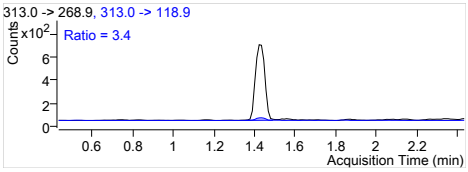

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



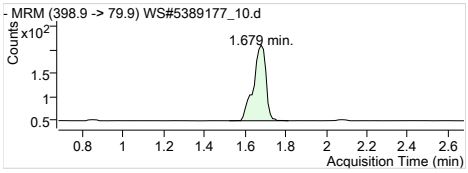



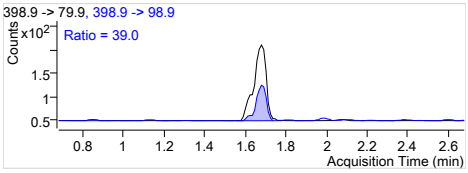

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 0.87 µg/L
Area ratio: 0.40400
Sample type: CC



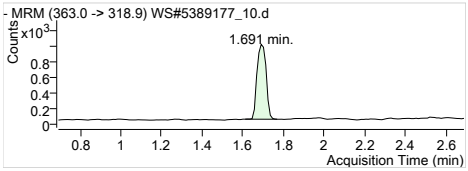



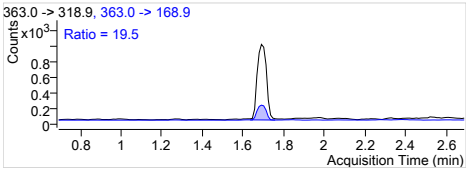

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.434)
Calc. conc. 0.89 µg/L
Area ratio: 0.32173
Sample type: CC



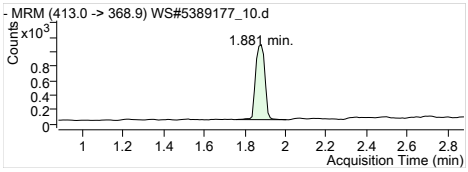



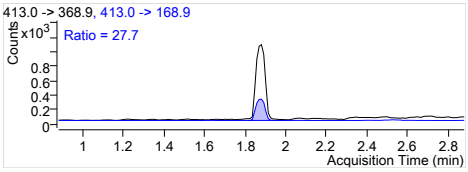

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 1.06 µg/L
Area ratio: 0.42217
Sample type: CC



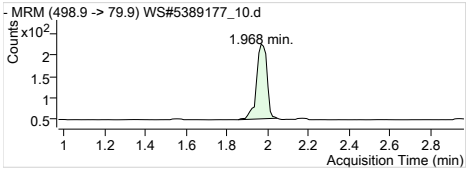



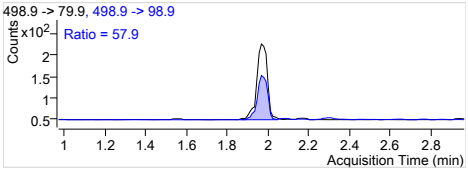

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.95 µg/L
Area ratio: 0.35447
Sample type: CC



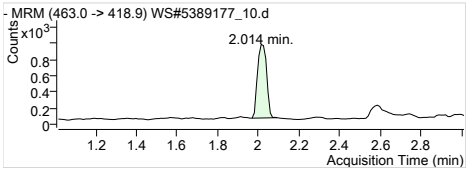



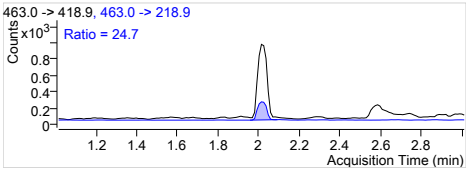

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 0.86 µg/L
Area ratio: 0.36448
Sample type: CC



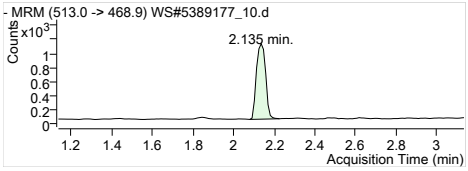



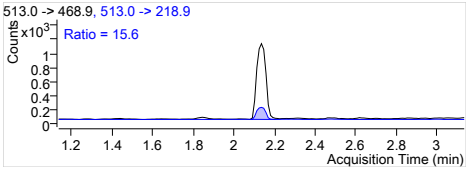

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 0.96 µg/L
Area ratio: 0.31640
Sample type: CC



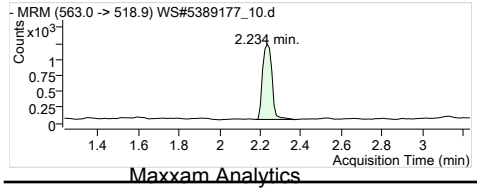



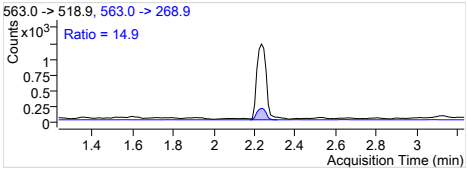

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 0.90 µg/L
Area ratio: 0.31670
Sample type: CC



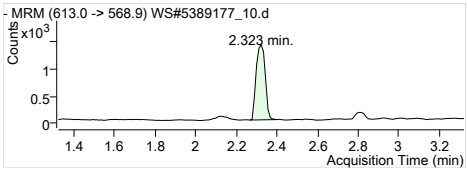



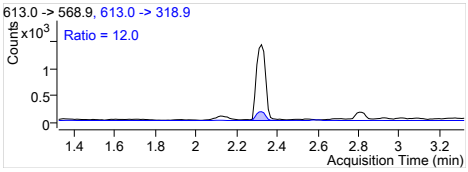

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 1.03 µg/L
Area ratio: 0.44801
Sample type: CC



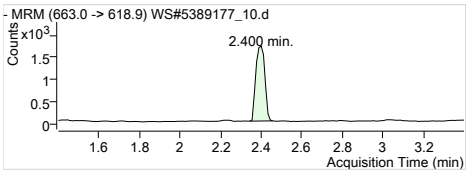



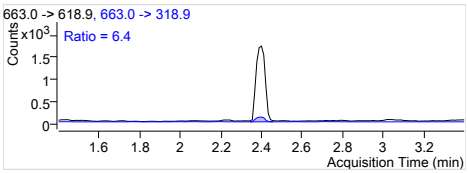

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 1.03 µg/L
Area ratio: 0.41842
Sample type: CC



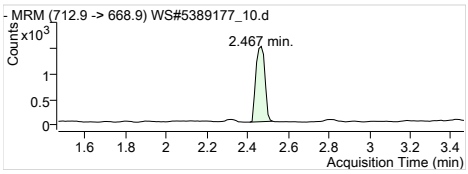



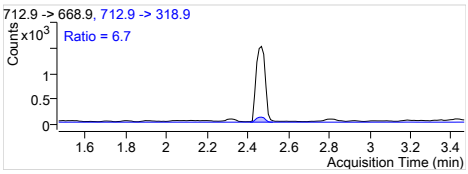

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.91 µg/L
Area ratio: 0.35450
Sample type: CC



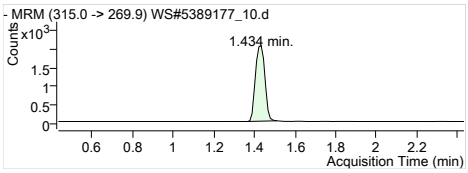



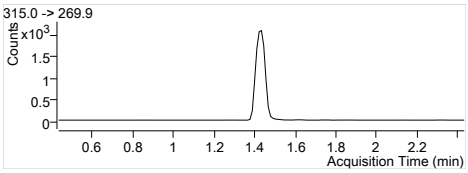

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.95 µg/L
Area ratio: 0.39476
Sample type: CC



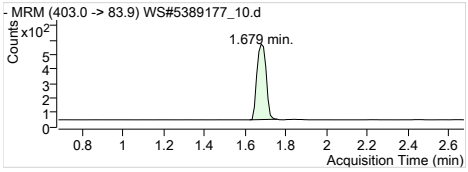



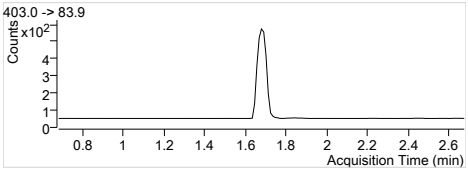

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 1.05 µg/L
Area ratio: 0.34520
Sample type: CC



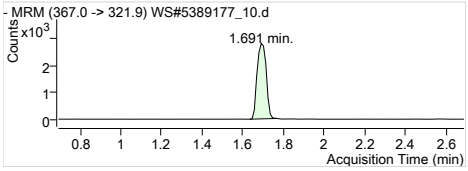



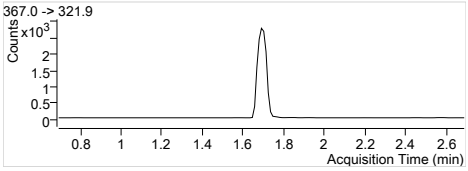

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 98.07 µg/L
Area ratio: 0.27494
Sample type: CC



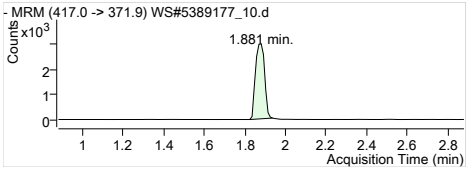



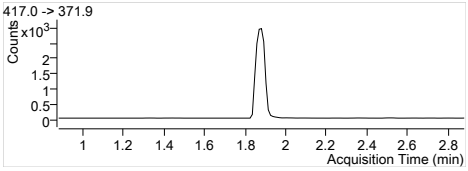

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 95.10 µg/L
Area ratio: 0.06869
Sample type: CC



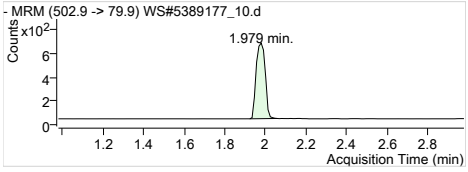



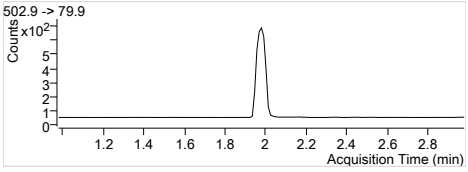

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 94.99 µg/L
Area ratio: 0.35425
Sample type: CC



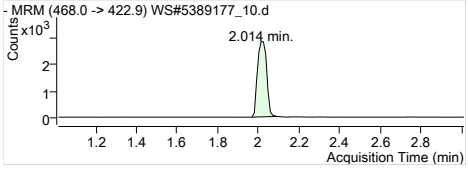



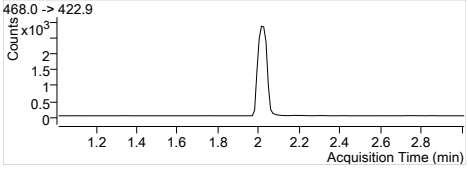

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 94.87 µg/L
Area ratio: 0.37855
Sample type: CC



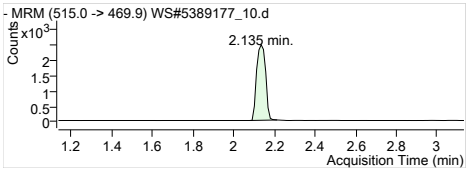



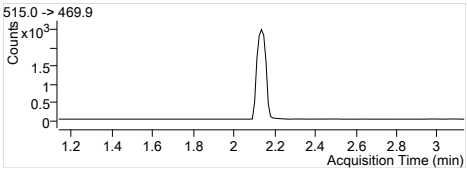

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 93.39 µg/L
Area ratio: 0.08272
Sample type: CC



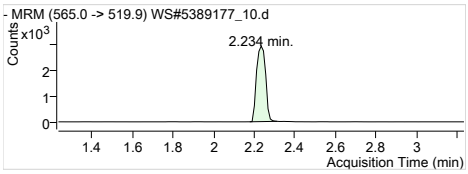



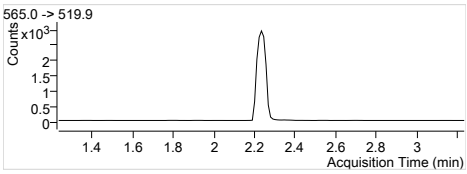

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 91.66 µg/L
Area ratio: 0.36869
Sample type: CC



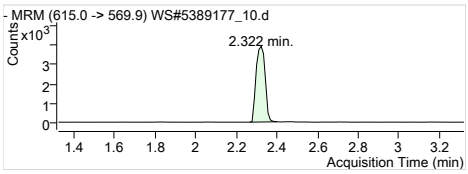



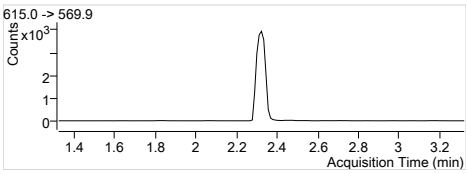

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 91.53 µg/L
Area ratio: 0.23056
Sample type: CC



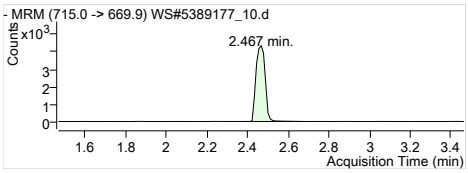



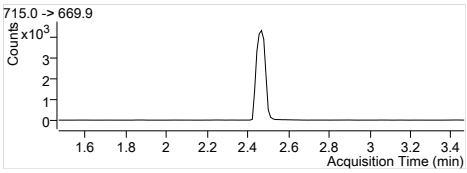

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 91.63 µg/L
Area ratio: 0.27525
Sample type: CC



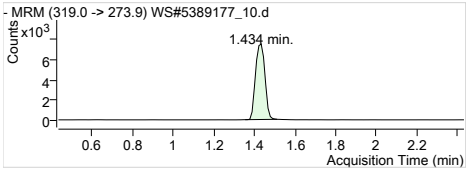



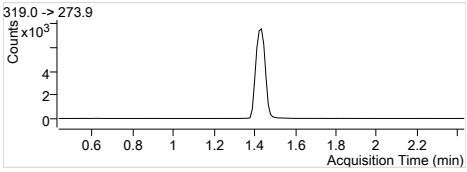

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 92.99 µg/L
Area ratio: 0.36852
Sample type: CC



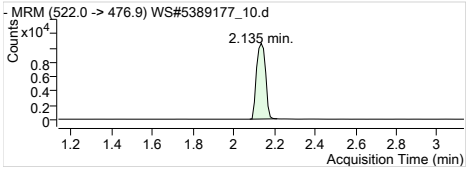



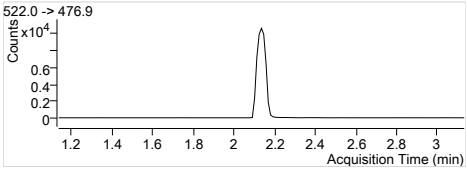

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 86.95 µg/L
Area ratio: 0.41242
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 112.26 µg/L
Area ratio: 0
Sample type: CC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 114.69 µg/L
Area ratio: 0
Sample type: CC

## *DoD Projects - Internal Data Validation Checklist*

Run date: 20181002109

Worksheet # (s): 5389177

Analysis: PFDSA(CM-W)

| | Primary review by the analyst - 1st 100 % analysis review | 1st 100% review yes | no | n/a | *2nd 100% review |
|---|---|---|---|---|---|
| 1 | Sample analyses meet hold time criteria | ✓ | | | ✓ |
| 2 | Analysis set-up meets method criteria | ✓ | | | ✓ |
| 3 | Tuning and correct calibration used - criteria meets method criteria | ✓ | | | ✓ |
| 4 | SQC/Control Charts updated, analysis in statistical/method control | ✓ | | | ✓ |
| 5 | Internal area counts checked (if applicable) | ✓ | | | ✓ |
| 6 | LCS, SRM are within acceptance criteria | ✓ | | | ✓ |
| 7 | Surrogate Recovery(s) is within acceptance criteria | ✓ | | | ✓ |
| 8 | Method Blank meets acceptance criteria | ✓ | | | ✓ |
| 9 | Matrix Spike recovery(s) meets acceptance criteria | | | ✓ | ✓ |
| 10 | Duplicate precision meets acceptance criteria | ✓ | | | ✓ |
| 11 | QC is documented on the run logs | ✓ | | | ✓ |
| 12 | Runs checked for carryover | ✓ | | | ✓ |
| 13 | Prep log / worksheet(s) are present, signed / dated by a prep / instrument analysts | ✓ | | | ✓ |
| 14 | Initial weights, splits, impringer volumes (where applicable) are documented | ✓ | | | ✓ |
| 15 | Standards and reagents traceable to Certificates of Analysis | ✓ | | | ✓ |
| 16 | Samples above calibration range diluted and reanalyzed | ✓ | | | ✓ |
| 17 | Dilution factors (where justified) have been checked for correctness and entered | ✓ | | | ✓ |
| 18 | Analytical observations/anomalies documented in LIMS | ✓ | | | ✓ |
| 19 | Random calculation checked and in correct units | ✓ | | | ✓ |
| 20 | If corrective actions were applied they are documented, initialed & dated | | | ✓ | ✓ |
| 21 | Manual integration – before & after data with a reason included, initialed & dated | | | ✓ | ✓ |
| 22 | Transferred data is validated in LIMS for correctness | ✓ | | | ✓ |
| 23 | Data package assembled (where required) | ✓ | | | ✓ |

Reviewed by: MG Date: 20181002109

Comments:

| | Secondary Supervisor/Qualified Data Review Staff - 2nd 100% verification review | yes | no | n/a | |
|---|---|---|---|---|---|
| 1 | Repeats documented and referenced | | | ✓ | |
| 2 | Method and sample deviations noted, anomalies described (if applicable) | | | ✓ | |
| 3 | Data and QC validated in LIMS | ✓ | | | |
| 4 | Random calculation checked | ✓ | | | |
| 5 | Benchsheet (s) signed and dated | ✓ | | | |
| 6 | Data Package (if required) checked for completeness | ✓ | | | |

Reviewed by: AM Date: 2019/02/16

Comments:

***Note: 2nd 100% verification review documented by secondary qualified data review***
***Primary and Secondary Internal Data Review Check must be performed by a different person***

# Worksheet Data Validation Checklist - Extractable Organics

Worksheet # 5389177 Testcode: PFOSACCM-W

| Sample Preparation | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Samples extracted within hold time | ✓ | | |
| 2 | Client sample ID verified against Lab ID (waters & oils) | ✓ | | |
| 3 | Parameter list and Client comments reviewed, (Spiking solutions matched to parameter list) | ✓ | | |
| 4 | Height of sediment or if sample was decanted, recorded on worksheet | ✓ | | |
| 5 | Method required QC processed with samples, maximum batch size = 20 client samples. | ✓ | | |
| 6 | Sample, duplicate, matrix spike appear similar, initial sample as well as final extract | ✓ | | |
| 7 | Sample weight or initial volume and extract final volume, aliquot factor clearly recorded. | ✓ | | |
| 8 | If performed any additional dilution clearly recorded | ✓ | | |
| 9 | Matrix spike / Duplicate performed on IOL samples if present | | | ✓ |
| 10 | Spiking solutions valid (haven't expired), ID and volume used clearly identified on worksheet | ✓ | | |
| 11 | Spiking process witnessed and signed off | ✓ | | |
| 12 | Extraction type recorded (N3A2B = neutral, 3 x acidic, 2 x basic) | | | ✓ |
| 13 | Sample prep deviations documented within CompliantPro as a Policy Deviation | | | ✓ |
| 14 | Job Remarks reviewed on 2nd page of worksheet. | ✓ | | |
| 15 | Worksheet and reagent tracking record completed and authorized. | ✓ | | |

Reviewed by: SSV Date: 2018/02/07

Comments:

| Worksheet Approval | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Verified the position of the vials in autosampler against sequence list; signed off sequence list | | | |
| 2 | Calibration and CCV standards valid ( haven't expired) | | | |
| 3 | Initial calibration curve and DFTPP tune (if applicable) acceptable | | | |
| 4 | Continuing and Final CCV and DFTPP tune (if applicable) acceptable | | | |
| 5 | System performance check acceptable (if applicable) | | | |
| 6 | Internal standard responses acceptable | | | |
| 7 | Method blank meets acceptance criteria | | | |
| 8 | Lab Control Samples recoveries meets acceptance criteria | | | |
| 9 | Duplicate RPD meets acceptance criteria | | | |
| 10 | Matrix spike recoveries meets acceptance criteria | | | |
| 11 | Surrogate recoveries meets acceptance criteria | | | |
| 12 | Appropriate control charts updated | | | |
| 13 | Samples above calibration range diluted and reanalyzed | | | |
| 14 | Dilutions clearly documented on tracking record, inst file and verified during data upload | | | |
| 15 | Samples following high level samples checked for carryover. | | | |
| 16 | Mass spectra ion ratios acceptable for positive results, hardcopy in file. | | | |
| 17 | Analytical observations / anomalies documented | | | |
| 18 | DQW comments entered in LIMS, hardcopy in file | | | |
| 19 | Sample Prep section (above) reviewed and verified. | | | |
| 20 | WS Approval performed in LIMS | | | |

Reviewed by: Date:

Comments:

Refer to BRL-FCD-00000 2018/02/09 WG

| Worksheet Validation | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Calibration, QC and sample results reviewed and determined acceptable | | | |
| 2 | Manual integrations verified | | | |
| 3 | Random calculation checked | | | |
| 4 | Data and QC validated in LIMS | | | |
| 5 | Comments reviewed for appropriateness | | | |
| 6 | Reworks / relogs documented in file | | | |
| 7 | Worksheet signed and dated, | | | |
| 8 | Worksheet approved and validated within LIMS | | | |

Reviewed by: Date:

Comments:

**WS# : 5389177**

Page #: 1/2

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Wednesday, February 07, 2018

Assigned to : Shivani Shivani

Test Code : PFOSALCM-W

Instrument Id:

Test Description : PFOS and PFOA in water by LC-MS/MS

| Job Number | Sample Number | D | Sample ID | R | Moisture | Wt or Vol | Final Vol | DF or AF | # Cont | Expiry Date | Test DeadLine | Criteria | Extract Date | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SPIKE | 0 | PFOS | | 0 | 125 | 3 | 1X | | | | | 2018/02/07 | 27 |
| | SPIKE | 1 | PFOS | | 0 | 125 | 3 | 1X | | | | | 2018/02/07 | 26 |
| | BLANK | | | | 0 | 125 | 3 | 1X | | | | | 2018/02/07 | 25 |
| B818419 | *FZA807-01R | | EB-WC-012418-3 | | 0 | 115 | 3 | 1X | 2 | 2018/02/07 | 2018/02/07 23:00 | DOD | 2018/02/07 | 30 |
| B818419 | *FZA808-01R | | FB-OLD-012418-5 | | 0 | 115 | 3 | 1X | 2 | 2018/02/07 | 2018/02/07 23:00 | DOD | 2018/02/07 | 32 |
| B818419 | *FZA809-01R | | EB-DPT-012418-3 | | 0 | 125 | 3 | 1X | 2 | 2018/02/07 | 2018/02/07 23:00 | DOD | 2018/02/07 | 31 |
| B819794 | *FZH324-01R | | [redacted] | | <0.1 | 12.5/12.5 | 3 | 10X/10X | 2 | 2018/02/07 | 2018/02/09 18:00 | DOD | 2018/02/07 | 29 |
| B819794 | *FZH325-01R | | [redacted] | | <0.1 | 12.5/12.5 | 3 | 10X/10X | 2 | 2018/02/07 | 2018/02/09 18:00 | DOD | 2018/02/07 | 28 |
| B820260 | *FZJ938-01R | | [redacted] | | 0 | 125 | 3 | 1X | 2 | 2018/02/07 | 2018/02/09 23:00 | DOD | 2018/02/07 | 27 |
| B820260 | *FZJ941-01R | | [redacted] | | 0 | 12.5/12.5 | 3 | 1X/10X | 2 | 2018/02/07 | 2018/02/09 23:00 | DOD | 2018/02/07 | 26 |
| B820260 | *FZJ953-01R | | [redacted] | | <0.1 | 12.5/25 | 3 | 10X/5X | 2 | 2018/02/07 | 2018/02/09 23:00 | DOD | 2018/02/07 | 25 |
| B820260 | *FZJ954-01R | | [redacted] | | <0.1 | 25/5 | 3 | 5X/25X | 2 | 2018/02/07 | 2018/02/09 23:00 | DOD | 2018/02/07 | 28 |

2018/02/07 SSV

Remarks: • Carbon clean up done. Shivani 2018/02/07

Samples extracted by: Shivani Shivani

Instrumentation performed by:

Calculations performed by:

Validated by:

Date: 2018/02/08 WE 2018/02/09 LG

Date: 2018/02/09

Date: 2018/02/16

| Job No. | Rep / Client Name / Remarks | Contact | Client Tier | National |
|---|---|---|---|---|
| GB818419 | SP8 Earth Toxics Inc<br>NREG. PFOSALCM-W MS/MSD required on FZA786 Level IV Package and TetraTech EDD required Project #: JM11<br>NTC Orlando | Rick Carr | Tier 5 (Enviro.) AECOM | |
| GB819794 | [redacted] | | | |
| GB820260 | | | | |

| Job | Sample | Lab Comments |
|---|---|---|
| | SPIKE | |
| | SPIKE | |
| | BLANK | |
| B818419 | FZA807-01R | |
| B818419 | FZA808-01R | |
| B818419 | FZA809-01R | |
| B819794 | FZH324-01R | |
| B819794 | FZH325-01R | |
| B820260 | FZJ938-01R | |
| B820260 | FZJ941-01R | |
| B820260 | FZJ953-01R | |
| B820260 | FZJ954-01R | |

Calibration Standard Preparation #

| | mean(ue) | spk(ue) | | IS |
|---|---|---|---|---|
| S1 | 2825 | 25 | SK-7377 | |
| S2 | 2800 | 50 | | |
| S3 | 2700 | 150 | | |
| S4 | 2813 | 37.5 | I-5297 | |
| S5 | 2775 | 75 | | |
| S6 | 2725 | 125 | | |
| ICV | 2788 | 62.5 | I-5299 | 150(ue) |
| ICB | 2852 | | | |

JHS 2018/02/07

Folder: 2018/02/08

Worksheet Reagent Tracking Record  Worksheet # 5389177

| Surrogate/Spike solutions | √ | Solution ID # | Conc. | Volume (µL) Blk-Spk Solid | Blk-Spk Liquid | MS Solid | MS Liquid | Samples Solid | Samples Liquid |
|---|---|---|---|---|---|---|---|---|---|
| DGT Spike | | | 100 ug/mL | 60 | 30 | 60 | 30 | NA | NA |
| Diquat Dibromide | | | 50 ug/mL | NA | 350 | NA | 350 | NA | NA |
| Explosives Spiking solution A | | | 20 ug/mL | 250 | 100 | 250 | 100 | NA | NA |
| Explosives Spiking solution B | | | 20/80 ug/mL | 250 | 100 | 250 | 100 | NA | NA |
| Formaldehyde Spike | | | 100 ug/mL | 25 | 25 | 25 | 25 | NA | NA |
| Glyphosate Spike | | | 25 ug/mL | 500 | 20 | 500 | 20 | NA | NA |
| Nonylphenol Ethoxylate Spike | | | 100 ug/mL | 100 | 100 | 100 | 100 | NA | NA |
| Nonylphenol Spike | | | 10 ug/mL | 100 | 100 | 100 | 100 | NA | NA |
| Paraquat Cl Tetrahydrate | | | 20 ug/mL | NA | 125 | NA | 125 | NA | NA |
| Perchlorate Standard Spike | | | 10 ng/mL | NA | 100 | NA | 100 | NA | NA |
| Perchlorate Standard Spike | | | 500 ng/mL | 40 | NA | 40 | NA | NA | NA |
| Perchlorate O-18 Internal Standard | | | 0.10 ng/uL | 20 | 20 | 20 | 20 | 20 | 20 |
| Morpholine Second Source Working Std | | | 2500 ug/L | NA | 80 | NA | 80 | NA | NA |
| Morpholine-D8 Internal Standard | | | 10 ug/mL | NA | 50 | NA | 50 | NA | 50 |
| Steril Second Source Spiking Solution | | | NA | 20 | NA | 20 | NA | NA | NA |
| Sterilants Comp. IS Working Solution | | | 3 ug/mL | 50 | NA | 50 | NA | 50 | NA |
| Comp. PFC Working Solution A | ✓ | I-5299(1/3) | 1ug/mL | 75 | 21 62.5 | 75 | 21 62.5 | NA | NA |
| PFC Internal Standard Solution | ✓ | SI-6763(3/4) JPB | 50/125 ng/mL | 200 | 100 150 | 200 | 100 150 | 200 | 100/150 |
| PFC Injection IS | ✓ | SI-6770(1/2) JPB | ~~400~~ 100 ng/mL | 20 | 20 | 20 | 20 | 20 | 20 |
| ICV | ✓ | I-6299(1/3) | 1ug/mL | | 62.5 | | | | |

| Solvent/Reagent | √ | Lot No. | Date Opened | Solvent/Reagent | √ | Lot No. | Date Opened/ Prepared |
|---|---|---|---|---|---|---|---|
| DCM | | | | 50% NaOH | | | |
| Ottawa Sand | | | | o-Phosphoric Acid | | | |
| Methanol | ✓ | 0135451 | 2018/02/07 | Borax | | | |
| 2-Propanol (IPA) | | | | Calcium Chloride | | | |
| Acetonitrile | | | | EDTA | | | |
| Sodium Sulfate | | | | Phosphate Buffer | | | |
| 70:30 Methanol: Water | | | | Sodium Thiosulphate | | | |
| 60:40 Water: Methanol | ✓ | PRLRE | 108-341 | DNPH | | | |
| DCM:Ethyl Ether (75:25) | | | | FMOC | | | |
| Hexane:IPA (98:2) | | | | 5M Acetate Buffer | | | |
| 2% Formic Acid | ✓ | PRLRE | 108-342 | 0.2% $NH_4OH$ | ✓ | PRLRE | 108-343 |
| 0.2% Formic Acid | | | | Leachate Fluid | | | |
| 0.05M KOH | | | | Reagent Water | ✓ | 57297 | 2018/02/07 |
| 0.05M HCl | | | | | | | |
| | | | | | | | |
| | | | | | | | |

*Spiked by: SSV

Spike Date SSV 2018/02/07

Spike Syringe/Pipette ID# G243906

Int. Std Syringe/Pipette ID# Intend Std# K19865F Injection IS# G243906

*Spiking Witnessed by: JPB

Final pH

| Equipment & ID | √ | Equipment | ID# | √ | Equipment | Lot # |
|---|---|---|---|---|---|---|
| Pipettor K551916 E479876 K19865F | ✓ | SPE Cartridge | 0034372477A | | QC Balance ID | FC-1 |
| | ✓ | Filter | | | Thermometer ID &Temp | |
| Dispenser | | Centrifuge | 42148683 | 10:00-10:05 | | |
| | | Sonicator | | | | |

Bottle Tracking: Bottle# 18587; Cap# 18422; Systems plus Lot# 17/12/11

Comments: Encor Cork# 92806V
250mL volumetric Cylinder# 3026

* - SPIKING OF QC & SAMPLES MUST BE WITNESSED AT ALL TIMES.

Worksheet Number: **5389177**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | Units | SPIKE | SPIKE Dup1 | BLANK | B818419 FZA807 | B818419 FZA808 | DL |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | ug/L | 101.80715 | 97.25684 | 0 | N/A******* | N/A******* | 0.022 |
| 8:2 Fluorotelomer sulfonate | ug/L | 105.09873 | 105.75934 | 0 | N/A******* | N/A******* | 0.022 |
| N-ethylperfluorooctane sulfonamide | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.022 |
| EtFOSAA | ug/L | 99.82537 | 101.40709 | 0 | 0 | 0 | 0.022 |
| N-ethylperfluorooctane sulfonamidoe | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.022 |
| N-methylperfluorooctane sulfonamide | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.022 |
| MeFOSAA | ug/L | 92.00553 | 90.56484 | 0 | 0 | 0 | 0.022 |
| N-methylperfluorooctanesulfonamidol | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.022 |
| Perfluorobutanoic acid | ug/L | 98.98256 | 101.59396 | 0 | N/A******* | N/A******* | 0.022 |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 101.35585 | 102.21542 | 0 | 0 | 0 | 0.022 |
| Perfluorodecane Sulfonate | ug/L | 97.26271 | 91.72273 | 0 | N/A******* | N/A******* | 0.022 |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 94.38391 | 95.01436 | 0 | 0 | 0 | 0.022 |
| Perfluoroheptane sulfonate | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.022 |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 95.27639 | 93.55771 | 0 | 0 | 0 | 0.022 |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 97.53899 | 95.54233 | 0 | 0 | 0 | 0.022 |
| Perfluorononanoic Acid (PFNA) | ug/L | 96.71681 | 102.44410 | 0 | 0 | 0 | 0.022 |
| Perfluorooctane Sulfonamide (PFOSA) | ug/L | 94.32576 | 94.92057 | 0 | N/A******* | N/A******* | 0.022 |
| Perfluoropentanoic Acid (PFPeA) | ug/L | 104.84296 | 97.89165 | 0 | N/A******* | N/A******* | 0.022 |
| Perfluorotetradecanoic Acid | ug/L | 99.95152 | 102.63101 | 0 | 0 | 0 | 0.022 |
| Perfluorotridecanoic Acid | ug/L | 103.21430 | 102.45102 | 0 | 0 | 0 | 0.022 |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 97.83899 | 98.45232 | 0 | 0 | 0 | 0.022 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 100.27056 | 97.32217 | 0 | 0 | 0 | 0.022 |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 98.21714 | 96.31629 | 0 | 0 | 0 | 0.022 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 101.05693 | 98.38524 | 0 | 0 | 0 | 0.022 |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 96.02830 | 93.40478 | 0 | 0 | 0 | 0.022 |
| 13C2-6:2 Fluorotelomer sulfonate | ug/L | 84.2579093 | 91.1834076 | 88.5914478 | N/A******* | N/A******* | |
| 13C2-8:2 Fluorotelomer sulfonate | ug/L | 77.6822957 | 80.3026024 | 83.2478597 | N/A******* | N/A******* | |
| 13C2-perfluorotetradecanoic acid | ug/L | 77.8619602 | 76.4229416 | 79.6388689 | 79.1938918 | 71.1684513 | |
| 13C4-Perfluorobutanoic acid | ug/L | 85.6166200 | 95.4945019 | 93.8318766 | N/A******* | N/A******* | |
| D3-MeFOSAA | ug/L | 80.9965791 | 82.3685635 | 75.9548576 | 78.5883706 | 75.5661875 | |
| D5-EtFOSAA | ug/L | 76.3541647 | 77.1910162 | 71.5946155 | 77.8870648 | 74.7353765 | |
| N-methyl-d3-perfluorooctane sulfona | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | |
| N-ethyl-d5-perfluorooctane sulfonam | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | |
| 13C2-Perfluorodecanoic acid | ug/L | 86.0572668 | 90.6666485 | 79.3079824 | 86.9790659 | 90.3520047 | |
| 13C2-Perfluorododecanoic acid | ug/L | 79.7079549 | 80.4222814 | 75.5121447 | 87.7607614 | 78.4026526 | |
| 13C2-Perfluorohexanoic acid | ug/L | 86.5951556 | 98.1675626 | 92.1894303 | 93.1344289 | 95.7329591 | |
| 13C2-Perfluoroundecanoic acid | ug/L | 91.9196802 | 90.9093368 | 77.7263782 | 92.5200201 | 80.6273673 | |
| 13C4-Perfluoroheptanoic acid | ug/L | 87.2189564 | 93.7752732 | 92.6745393 | 99.3597899 | 95.7721484 | |
| 13C5-Perfluorononanoic acid | ug/L | 86.1114262 | 89.9042797 | 87.2363757 | 91.5948469 | 94.4461451 | |
| 13C4-Perfluorooctanoic acid | ug/L | 83.7392679 | 94.0137907 | 95.6961759 | 92.1639745 | 90.0889514 | |
| 13C4-Perfluorooctanesulfonate | ug/L | 82.1054936 | 89.1690305 | 86.2777091 | 92.2570241 | 89.9473927 | |
| 13C5-Perfluoropentanoic acid | ug/L | 82.2489947 | 98.9429635 | 94.9732240 | N/A******* | N/A******* | |
| 13C8-Perfluorooctane Sulfonamide | ug/L | 81.6151025 | 87.7555783 | 90.6434078 | N/A******* | N/A******* | |
| 18O2-Perfluorohexanesulfonate | ug/L | 83.8086429 | 91.0614714 | 92.8910351 | 90.3874231 | 93.3468109 | |

2018/02/09 MP

Worksheet Number: **5389177**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | B818419 FZA809 | DL | B819794 FZH324 | DL | B819794 FZH325 | DL | B820260 FZJ938 |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | 0 |
| 8:2 Fluorotelomer sulfonate | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | 0 |
| N-ethylperfluorooctane sulfonamide | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | N/A******* |
| EtFOSAA | 0 | 0.02 | 0 | 0.2 | 0 | 0.2 | N/A******* |
| N-ethylperfluorooctane sulfonamidoe | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | N/A******* |
| N-methylperfluorooctane sulfonamide | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | N/A******* |
| MeFOSAA | 0 | 0.02 | 0 | 0.2 | 0 | 0.2 | N/A******* |
| N-methylperfluorooctanesulfonamidol | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | N/A******* |
| Perfluorobutanoic acid | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | 0 |
| Perfluorobutane Sulfonate (PFBS) | 0 | 0.02 | 0.12710653 | 0.2 | 0.19178362 | 0.2 | 0 |
| Perfluorodecane Sulfonate | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | 0 |
| Perfluoroheptanoic Acid (PFHpA) | 0 | 0.02 | 1.00024440 | 0.2 | 2.02929068 | 0.2 | 0 |
| Perfluoroheptane sulfonate | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | 0 | 0.02 | 1.33343420 | 0.2 | 2.55547512 | 0.2 | 0 |
| Perfluorohexane Sulfonate (PFHxS) | 0 | 0.02 | 2.17941727 | 0.2 | 11.7352984 | 2.0 | 0 |
| Perfluorononanoic Acid (PFNA) | 0 | 0.02 | 0.18465743 | 0.2 | 0.89610086 | 0.2 | 0 |
| Perfluorooctane Sulfonamide (PFOSA) | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | 0 |
| Perfluoropentanoic Acid (PFPeA) | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.2 | 0 |
| Perfluorotetradecanoic Acid | 0 | 0.02 | 0 | 0.2 | 0 | 0.2 | 0 |
| Perfluorotridecanoic Acid | 0 | 0.02 | 0 | 0.2 | 0 | 0.2 | 0 |
| Perfluoroundecanoic Acid (PFUnA) | 0 | 0.02 | 0 | 0.2 | 0 | 0.2 | 0 |
| Perfluorodecanoic Acid (PFDA) | 0 | 0.02 | 0 | 0.2 | 0 | 0.2 | 0 |
| Perfluorododecanoic Acid (PFDoA) | 0 | 0.02 | 0 | 0.2 | 0.12329213 | 0.2 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0 | 0.02 | 0.99128265 | 0.2 | 1.57523688 | 0.2 | 0 |
| Perfluorooctane Sulfonate (PFOS) | 0 | 0.02 | 21.3862748 | 2.0 | 36.6776718 | 2.0 | 0 |
| 13C2-6:2 Fluorotelomer sulfonate | N/A******* | | N/A******* | | N/A******* | | 98.4288899 |
| 13C2-8:2 Fluorotelomer sulfonate | N/A******* | | N/A******* | | N/A******* | | 95.9028421 |
| 13C2-perfluorotetradecanoic acid | 83.1097274 | | 78.1644631 | | 79.7725519 | | 79.8119339 |
| 13C4-Perfluorobutanoic acid | N/A******* | | N/A******* | | N/A******* | | 105.366702 |
| D3-MeFOSAA | 86.7620362 | | 88.5879800 | | 87.1735670 | | N/A******* |
| D5-EtFOSAA | 82.9776497 | | 85.1779772 | | 84.2579715 | | N/A******* |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | | N/A******* | | N/A******* | | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | | N/A******* | | N/A******* | | N/A******* |
| 13C2-Perfluorodecanoic acid | 101.488771 | | 87.2581674 | | 83.9740926 | | 86.9311187 |
| 13C2-Perfluorododecanoic acid | 91.1675816 | | 87.5341590 | | 82.4763545 | | 85.6046715 |
| 13C2-Perfluorohexanoic acid | 100.556952 | | 104.282774 | | 91.5480588 | | 100.797580 |
| 13C2-Perfluoroundecanoic acid | 93.7296466 | | 90.7920819 | | 81.6997659 | | 84.4639171 |
| 13C4-Perfluoroheptanoic acid | 99.8684596 | | 106.412944 | | 88.9735314 | | 99.2293432 |
| 13C5-Perfluorononanoic acid | 96.5654260 | | 97.6929904 | | 85.1224857 | | 96.0227830 |
| 13C4-Perfluorooctanoic acid | 96.0506627 | | 93.5394505 | | 91.6404110 | | 98.0682319 |
| 13C4-Perfluorooctanesulfonate | 105.133320 | | 109.347422 | | 86.0014663 | | 92.4389783 |
| 13C5-Perfluoropentanoic acid | N/A******* | | N/A******* | | N/A******* | | 105.574959 |
| 13C8-Perfluorooctane Sulfonamide | N/A******* | | N/A******* | | N/A******* | | 89.8830369 |
| 18O2-Perfluorohexanesulfonate | 96.9587190 | | 89.6638138 | | 104.125730 | | 102.256757 |

Worksheet Number: **5389177**

PFOS and PFOA in water by SPE/LCMS - Water

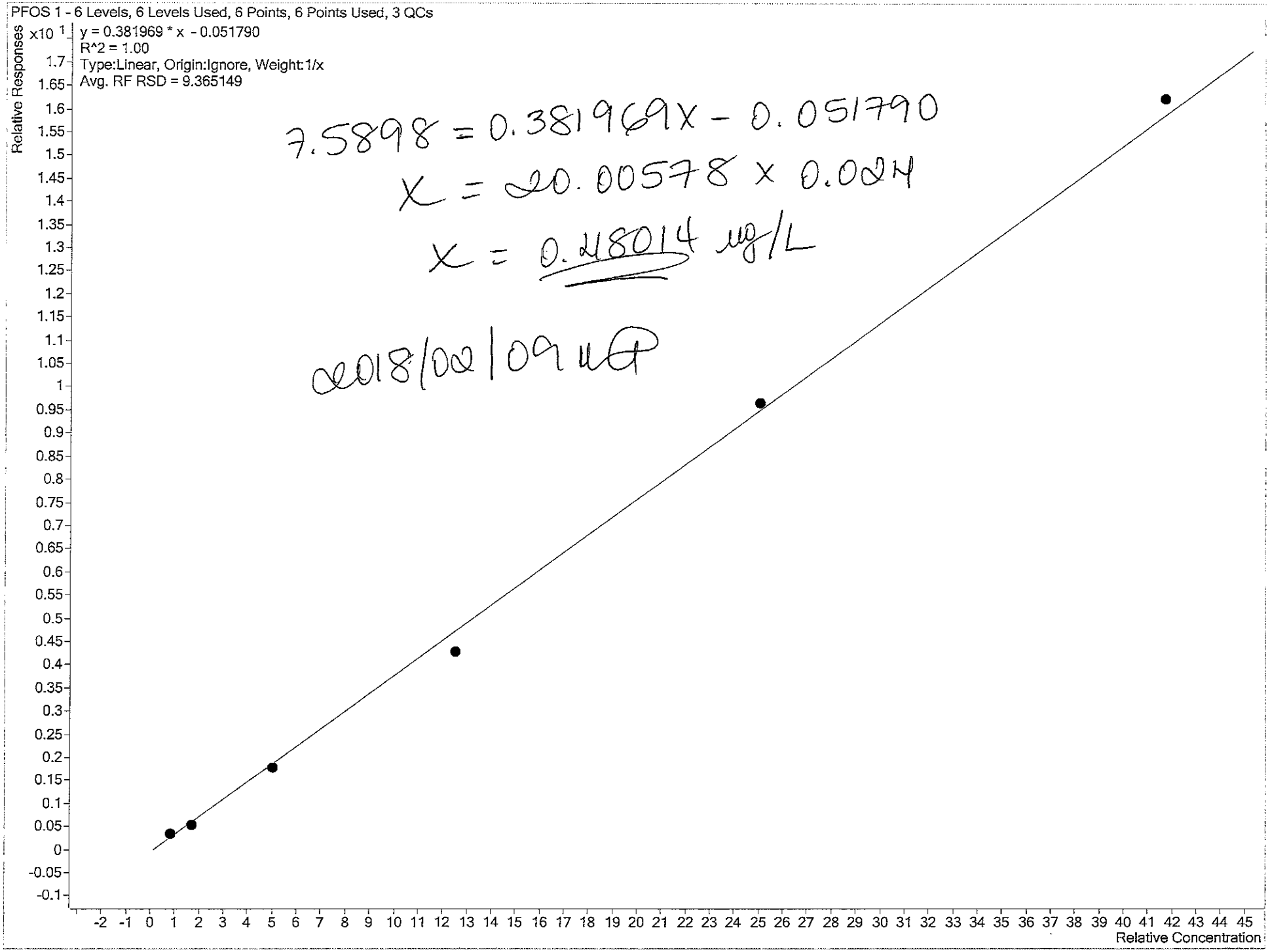
ug/L

| Parameter Name | DL | B820260 FZJ941 | DL | B820260 FZJ953 | DL | B820260 FZJ954 | DL |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0.02 | 0.64277813 | 0.2 | 0 | 0.2 | 0 | 0.1 |
| 8:2 Fluorotelomer sulfonate | 0.02 | 0 | 0.02 | 0 | 0.2 | 0 | 0.1 |
| N-ethylperfluorooctane sulfonamide | 0.02 | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.1 |
| EtFOSAA | 0.02 | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.1 |
| N-ethylperfluorooctane sulfonamidoe | 0.02 | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.1 |
| N-methylperfluorooctane sulfonamide | 0.02 | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.1 |
| MeFOSAA | 0.02 | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.1 |
| N-methylperfluorooctanesulfonamidol | 0.02 | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.1 |
| Perfluorobutanoic acid | 0.02 | 0.01789437 | 0.02 | 0 | 0.2 | 0.41201254 | 0.1 |
| Perfluorobutane Sulfonate (PFBS) | 0.02 | 0 | 0.02 | 0.08503510 | 0.2 | 0.06335875 | 0.1 |
| Perfluorodecane Sulfonate | 0.02 | 0 | 0.02 | 0 | 0.2 | 0 | 0.1 |
| Perfluoroheptanoic Acid (PFHpA) | 0.02 | 0.00943613 | 0.02 | 0.20751695 | 0.2 | 0.33398366 | 0.1 |
| Perfluoroheptane sulfonate | 0.02 | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | 0.1 |
| Perfluorohexanoic Acid (PFHxA) | 0.02 | 0.26703462 | 0.02 | 1.59456642 | 0.2 | 3.92541783 | 0.1 |
| Perfluorohexane Sulfonate (PFHxS) | 0.02 | 0.01131403 | 0.02 | 8.50537070 | 0.2 | 11.5441861 | 0.5 |
| Perfluorononanoic Acid (PFNA) | 0.02 | 0 | 0.02 | 0 | 0.2 | 0.05250739 | 0.1 |
| Perfluorooctane Sulfonamide (PFOSA) | 0.02 | 0.01617505 | 0.02 | 0 | 0.2 | 0 | 0.1 |
| Perfluoropentanoic Acid (PFPeA) | 0.02 | 0.01648651 | 0.02 | 0.31172276 | 0.2 | 0.78441645 | 0.1 |
| Perfluorotetradecanoic Acid | 0.02 | 0 | 0.02 | 0 | 0.2 | 0 | 0.1 |
| Perfluorotridecanoic Acid | 0.02 | 0 | 0.02 | 0 | 0.2 | 0 | 0.1 |
| Perfluoroundecanoic Acid (PFUnA) | 0.02 | 0 | 0.02 | 0 | 0.2 | 0 | 0.1 |
| Perfluorodecanoic Acid (PFDA) | 0.02 | 0 | 0.02 | 0 | 0.2 | 0 | 0.1 |
| Perfluorododecanoic Acid (PFDoA) | 0.02 | 0 | 0.02 | 0 | 0.2 | 0 | 0.1 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.02 | 0.00563552 | 0.02 | 0.88021969 | 0.2 | 2.92577126 | 0.1 |
| Perfluorooctane Sulfonate (PFOS) | 0.02 | 0.83905751 | 0.2 | 26.0520123 | 1.0 | 5.40598684 | 0.5 |
| 13C2-6:2 Fluorotelomer sulfonate | | 79.5795584 | | 93.3136458 | | 85.7303165 | |
| 13C2-8:2 Fluorotelomer sulfonate | | 87.9408829 | | 85.8833507 | | 87.4445116 | |
| 13C2-perfluorotetradecanoic acid | | 78.8231745 | | 55.2433613 | | 54.2082950 | |
| 13C4-Perfluorobutanoic acid | | 98.6046999 | | 97.2302986 | | 96.6611460 | |
| D3-MeFOSAA | | N/A******* | | N/A******* | | N/A******* | |
| D5-EtFOSAA | | N/A******* | | N/A******* | | N/A******* | |
| N-methyl-d3-perfluorooctane sulfona | | 71.7444527 | | N/A******* | | N/A******* | |
| N-ethyl-d5-perfluorooctane sulfonam | | 66.4657803 | | N/A******* | | N/A******* | |
| 13C2-Perfluorodecanoic acid | | 97.7208315 | | 92.5450972 | | 85.9661640 | |
| 13C2-Perfluorododecanoic acid | | 81.3619855 | | 78.5172803 | | 81.5215968 | |
| 13C2-Perfluorohexanoic acid | | 96.8865302 | | 102.467661 | | 104.236432 | |
| 13C2-Perfluoroundecanoic acid | | 82.4094788 | | 85.4727361 | | 86.4738408 | |
| 13C4-Perfluoroheptanoic acid | | 95.6543955 | | 87.7616279 | | 92.3044413 | |
| 13C5-Perfluorononanoic acid | | 91.4111481 | | 83.9166446 | | 90.5446618 | |
| 13C4-Perfluorooctanoic acid | | 92.8314937 | | 94.7030951 | | 95.2159699 | |
| 13C4-Perfluorooctanesulfonate | | 82.4158378 | | 93.0837522 | | 92.4213338 | |
| 13C5-Perfluoropentanoic acid | | 96.3795463 | | 93.6920871 | | 93.5649676 | |
| 13C8-Perfluorooctane Sulfonamide | | 94.1222883 | | 85.5425855 | | 87.0887821 | |
| 18O2-Perfluorohexanesulfonate | | 91.0623557 | | 90.5654177 | | 93.1582697 | |

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | RDL | MDL | IDL | | | | |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0.02 | 0.0066 | 0 | | | | |
| 8:2 Fluorotelomer sulfonate | 0.02 | 0.0066 | 0 | | | | |
| N-ethylperfluorooctane sulfonamide | 0.02 | 0.01 | 0 | | | | |
| EtFOSAA | 0.02 | 0.0033 | 0 | | | | |
| N-ethylperfluorooctane sulfonamidoe | 0.02 | 0.0079 | 0 | | | | |
| N-methylperfluorooctane sulfonamide | 0.02 | 0.013 | 0 | | | | |
| MeFOSAA | 0.02 | 0.0029 | 0 | | | | |
| N-methylperfluorooctanesulfonamidol | 0.02 | 0.012 | 0 | | | | |
| Perfluorobutanoic acid | 0.02 | 0.0055 | 0 | | | | |
| Perfluorobutane Sulfonate (PFBS) | 0.02 | 0.0054 | 0 | | | | |
| Perfluorodecane Sulfonate | 0.02 | 0.006 | 0 | | | | |
| Perfluoroheptanoic Acid (PFHpA) | 0.02 | 0.0074 | 0 | | | | |
| Perfluoroheptane sulfonate | 0.02 | 0.008 | 0 | | | | |
| Perfluorohexanoic Acid (PFHxA) | 0.02 | 0.0035 | 0 | | | | |
| Perfluorohexane Sulfonate (PFHxS) | 0.02 | 0.0056 | 0 | | | | |
| Perfluorononanoic Acid (PFNA) | 0.02 | 0.0087 | 0 | | | | |
| Perfluorooctane Sulfonamide (PFOSA) | 0.02 | 0.0034 | 0 | | | | |
| Perfluoropentanoic Acid (PFPeA) | 0.02 | 0.0075 | 0 | | | | |
| Perfluorotetradecanoic Acid | 0.02 | 0.0027 | 0 | | | | |
| Perfluorotridecanoic Acid | 0.02 | 0.0038 | 0 | | | | |
| Perfluoroundecanoic Acid (PFUnA) | 0.02 | 0.0025 | 0 | | | | |
| Perfluorodecanoic Acid (PFDA) | 0.02 | 0.0061 | 0 | | | | |
| Perfluorododecanoic Acid (PFDoA) | 0.02 | 0.005 | 0 | | | | |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.02 | 0.0033 | 0 | | | | |
| Perfluorooctane Sulfonate (PFOS) | 0.02 | 0.006 | 0 | | | | |
| 13C2-6:2 Fluorotelomer sulfonate | | | | | | | |
| 13C2-8:2 Fluorotelomer sulfonate | | | | | | | |
| 13C2-perfluorotetradecanoic acid | | | | | | | |
| 13C4-Perfluorobutanoic acid | | | | | | | |
| D3-MeFOSAA | | | | | | | |
| D5-EtFOSAA | | | | | | | |
| N-methyl-d3-perfluorooctane sulfona | | | | | | | |
| N-ethyl-d5-perfluorooctane sulfonam | | | | | | | |
| 13C2-Perfluorodecanoic acid | | | | | | | |
| 13C2-Perfluorododecanoic acid | | | | | | | |
| 13C2-Perfluorohexanoic acid | | | | | | | |
| 13C2-Perfluoroundecanoic acid | | | | | | | |
| 13C4-Perfluoroheptanoic acid | | | | | | | |
| 13C5-Perfluorononanoic acid | | | | | | | |
| 13C4-Perfluorooctanoic acid | | | | | | | |
| 13C4-Perfluorooctanesulfonate | | | | | | | |
| 13C5-Perfluoropentanoic acid | | | | | | | |
| 13C8-Perfluorooctane Sulfonamide | | | | | | | |
| 18O2-Perfluorohexanesulfonate | | | | | | | |

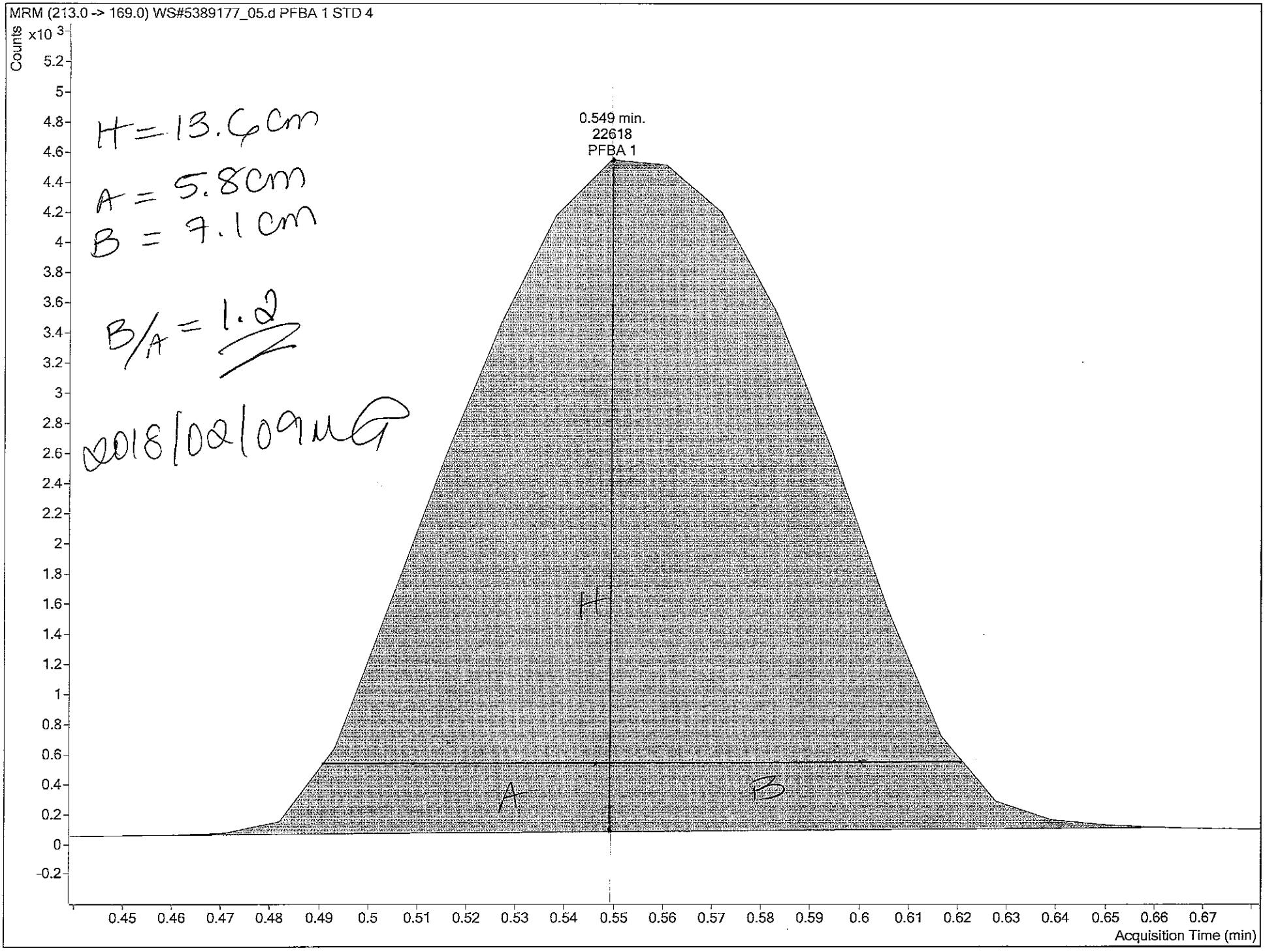


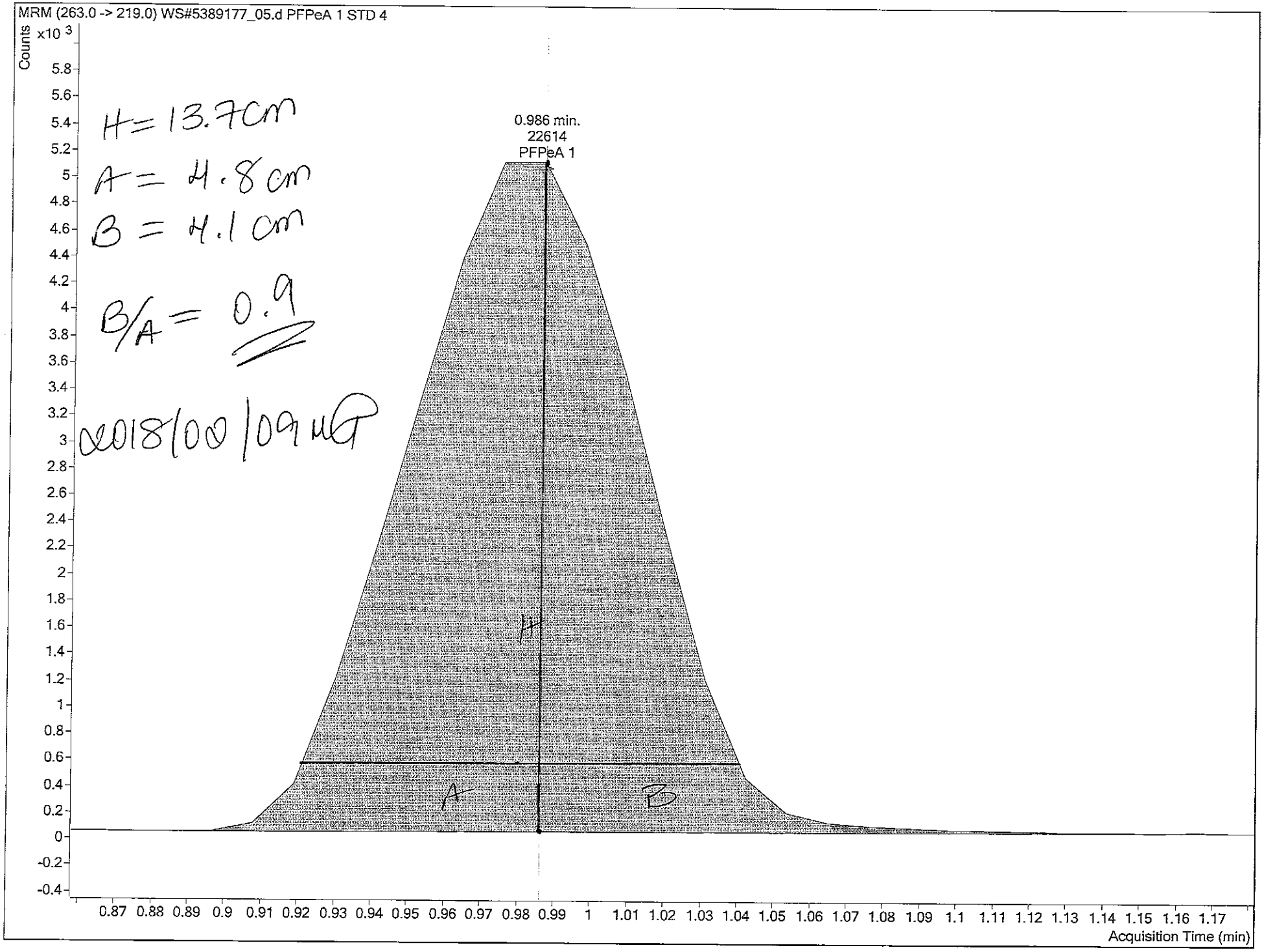

$7.5898 = 0.381969X - 0.051790$

$X = 20.00578 \times 0.024$

$X = \underline{0.48014}$ ug/L

2018/02/09 UP


MRM (213.0 -> 169.0) WS#5389177_05.d PFBA 1 STD 4
Counts
x10 3
0.549 min.
22618
PFBA 1
H=13.6cm
A=5.8cm
B=7.1cm
B/A=1.2
2018/02/09 MG
H
A
B
Acquisition Time (min)


MRM (263.0 -> 219.0) WS#5389177_05.d PFPeA 1 STD 4
Counts x10 3
0.986 min.
22614
PFPeA 1
H= 13.7cm
A= 14.8 cm
B = 14.1 cm
B/A = 0.9
0.018/0.02/0.09 uG
H
A
B
Acquisition Time (min)

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/07

Test Code: **PFOSALCM-W**

Worksheet Number: **5389177**

| Sample Number | Parameter Code | Parameter | |
|---|---|---|---|
| FZA807-01 | ETFOSAA | EtFOSAA | * |
| FZA808-01 | MEFOSAA | MeFOSAA | * |
| FZA809-01 | PFBS | Perfluorobutane Sulfonate (PFBS) | |
| FZH324-01 | PFHPA | Perfluoroheptanoic Acid (PFHpA) | |
| FZH325-01 | PFHXA | Perfluorohexanoic Acid (PFHxA) | |
| | PFHXS | Perfluorohexane Sulfonate (PFHxS) | |
| | PFNA | Perfluorononanoic Acid (PFNA) | |
| | PFTEDA | Perfluorotetradecanoic Acid | |
| | PFTRDA | Perfluorotridecanoic Acid | |
| | PFUNA | Perfluoroundecanoic Acid (PFUnA) | |
| | PFDA | Perfluorodecanoic Acid (PFDA) | |
| | PFDOA | Perfluorododecanoic Acid (PFDoA) | |
| | PFOA | Perfluoro-n-Octanoic Acid (PFOA) | |
| | PFOS | Perfluorooctane Sulfonate (PFOS) | |
| FZJ938-01 | 6:2FTS | 6:2 Fluorotelomer sulfonate | * |
| FZJ941-01 | 8:2FTS | 8:2 Fluorotelomer sulfonate | * |
| FZJ953-01 | PFBA | Perfluorobutanoic acid | |
| FZJ954-01 | PFBS | Perfluorobutane Sulfonate (PFBS) | |
| | PFDS | Perfluorodecane Sulfonate | |
| | PFHPA | Perfluoroheptanoic Acid (PFHpA) | |
| | PFHXA | Perfluorohexanoic Acid (PFHxA) | |
| | PFHXS | Perfluorohexane Sulfonate (PFHxS) | |
| | PFNA | Perfluorononanoic Acid (PFNA) | |
| | PFOSA | Perfluorooctane Sulfonamide (PFOSA) | |
| | PFPEA | Perfluoropentanoic Acid | |

* - This parameter is usually off, but will be reported for this group of samples!

# WorkSheet 5389177 Instrument Sequences

| | | |
|---|---|---|
| 1. | 5389177:SPIKE | SPIKE |
| 2. | 5389177:SPIKE:D1 | SPIKE :D1 |
| 3. | 5389177:BLANK | BLANK |
| 4. | 5389177:FZA807-01 | EB-WC-012418-3 |
| 5. | 5389177:FZA808-01 | FB-OLD-012418-5 |
| 6. | 5389177:FZA809-01 | EB-DPT-012418-3 |
| 7. | 5389177:FZH324-01 | [redacted] |
| 8. | 5389177:FZH325-01 | [redacted] |
| 9. | 5389177:FZJ938-01 | [redacted] |
| 10. | 5389177:FZJ941-01 | [redacted] |
| 11. | 5389177:FZJ953-01 | [redacted] |
| 12. | 5389177:FZJ954-01 | [redacted] |

# Worklist Report

Agilent Technologies

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180208_Low.wkl

Maxxam Analytics

**Operator Name:** ---
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\Data\PFC\20180208\WS#5389177
**Pre-Worklist Script:** ---
**Post-Worklist Script:** SCP_InstrumentStandby(){MH_Acq_Scripts.exe}
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** Column #198
MP A1: Solution# 280 (FSRE18)
MP B1: Methanol lot# SHBJ6339, Sigma

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P3 | |

**Worklist Table**

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Solvent | P3-A1 | PFC_Water_Low.m | WS#5389177_01.d | Sample | | As Method | - |
| 2 | STD 1 | P3-A2 | PFC_Water_Low.m | WS#5389177_02.d | Calibration | STD 1 | As Method | - |
| 3 | STD 2 | P3-A3 | PFC_Water_Low.m | WS#5389177_03.d | Calibration | STD 2 | As Method | - |
| 4 | STD 3 | P3-A4 | PFC_Water_Low.m | WS#5389177_04.d | Calibration | STD 3 | As Method | - |
| 5 | STD 4 | P3-A5 | PFC_Water_Low.m | WS#5389177_05.d | Calibration | STD 4 | As Method | - |
| 6 | STD 5 | P3-A6 | PFC_Water_Low.m | WS#5389177_06.d | Calibration | STD 5 | As Method | - |
| 7 | STD 6 | P3-A7 | PFC_Water_Low.m | WS#5389177_07.d | Calibration | STD 6 | As Method | - |

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# Worklist Report

Agilent Technologies

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 8 | IB | P3-A8 | PFC_Water_Low.m | WS#5389177_08.d | Sample | | As Method | - |
| 9 | ICV | P3-A9 | PFC_Water_Low.m | WS#5389177_09.d | QC | ICV | As Method | - |
| 10 | ISC | P3-A2 | PFC_Water_Low.m | WS#5389177_10.d | ConCal | STD 1 | As Method | - |
| 11 | 5389177:BLANK | P3-B1 | PFC_Water_Low.m | WS#5389177_11.d | Sample | | As Method | - |
| 12 | 5389177:SPIKE | P3-B2 | PFC_Water_Low.m | WS#5389177_12.d | QC | ICV | As Method | - |
| 13 | 5389177:SPIKE:D1 | P3-B3 | PFC_Water_Low.m | WS#5389177_13.d | QC | ICV | As Method | - |
| 14 | 5389177:FZA807-01 | P3-B4 | PFC_Water_Low.m | WS#5389177_14.d | Sample | | As Method | - |
| 15 | 5389177:FZA808-01 | P3-B5 | PFC_Water_Low.m | WS#5389177_15.d | Sample | | As Method | - |
| 16 | 5389177:FZA809-01 | P3-B6 | PFC_Water_Low.m | WS#5389177_16.d | Sample | | As Method | - |
| 17 | 5389177:FZH324-01:100x | P3-B7 | PFC_Water_Low.m | WS#5389177_17.d | Sample | | As Method | - |
| 18 | 5389177:FZH324-01:10x | P3-B8 | PFC_Water_Low.m | WS#5389177_18.d | Sample | | As Method | - |
| 19 | IB | P3-A8 | PFC_Water_Low.m | WS#5389177_19.d | Sample | | As Method | - |
| 20 | 5389177:FZH325-01:100x | P3-B9 | PFC_Water_Low.m | WS#5389177_20.d | Sample | | As Method | - |
| 21 | 5389177:FZH325-01:10x | P3-C1 | PFC_Water_Low.m | WS#5389177_21.d | Sample | | As Method | - |
| 22 | IB | P3-A8 | PFC_Water_Low.m | WS#5389177_22.d | Sample | | As Method | - |
| 23 | 5389177:FZJ938-01 | P3-C2 | PFC_Water_Low.m | WS#5389177_23.d | Sample | | As Method | - |
| 24 | 5389177:FZJ941-01:10x | P3-C3 | PFC_Water_Low.m | WS#5389177_24.d | Sample | | As Method | - |
| 25 | 5389177:FZJ941-01 | P3-C4 | PFC_Water_Low.m | WS#5389177_25.d | Sample | | As Method | - |
| 26 | IB | P3-A8 | PFC_Water_Low.m | WS#5389177_26.d | Sample | | As Method | - |
| 27 | CCV | P3-A5 | PFC_Water_Low.m | WS#5389177_27.d | ConCal | STD 4 | As Method | - |
| 28 | 5389177:FZJ953-01:50x | P3-C5 | PFC_Water_Low.m | WS#5389177_28.d | Sample | | As Method | - |
| 29 | 5389177:FZJ953-01:10x | P3-C6 | PFC_Water_Low.m | WS#5389177_29.d | Sample | | As Method | - |
| 30 | IB | P3-A8 | PFC_Water_Low.m | WS#5389177_30.d | Sample | | As Method | - |

Maxxam Analytics

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Maxxam Analytics

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 31 | 5389177:FZJ954-01:25x | P3-C7 | PFC_Water_Low.m | WS#5389177_31.d | Sample | | As Method | - |
| 32 | 5389177:FZJ954-01:5x | P3-C8 | PFC_Water_Low.m | WS#5389177_32.d | Sample | | As Method | - |
| 33 | IB | P3-A8 | PFC_Water_Low.m | WS#5389177_33.d | Sample | | As Method | - |
| 34 | CCV | P3-A5 | PFC_Water_Low.m | WS#5389177_34.d | ConCal | STD 4 | As Method | - |

# Worklist Report

Agilent Technologies

Maxxam Analytics

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180208_Low_FOSAA.wkl

**Operator Name:** ---
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\Data\PFC\20180208\WS#5389177_FOSAA
**Pre-Worklist Script:** ---
**Post-Worklist Script:** SCP_InstrumentStandby(){MH_Acq_Scripts.exe}
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** Column #198
MP A1: Solution# 280 (FSRE18)
MP B2: Solution# 272 (FSRE18)

20180208 MC

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P3 | |

**Worklist Table**

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Solvent | P3-A1 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_01.d | Sample | | As Method | - |
| 2 | STD 1 | P3-A2 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_02.d | Calibration | STD 1 | As Method | - |
| 3 | STD 2 | P3-A3 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_03.d | Calibration | STD 2 | As Method | - |
| 4 | STD 3 | P3-A4 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_04.d | Calibration | STD 3 | As Method | - |
| 5 | STD 4 | P3-A5 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_05.d | Calibration | STD 4 | As Method | - |
| 6 | STD 5 | P3-A6 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_06.d | Calibration | STD 5 | As Method | - |
| 7 | STD 6 | P3-A7 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_07.d | Calibration | STD 6 | As Method | - |
| 8 | IB | P3-A8 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_08.d | Sample | | As Method | - |

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# Worklist Report

Agilent Technologies

Maxxam Analytics

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 9 | ICV | P3-A9 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_09.d | QC | ICV | As Method | - |
| 10 | ISC | P3-A2 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_10.d | ConCal | STD 1 | As Method | - |
| 11 | 5389177:BLANK | P3-B1 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_11.d | Sample | | As Method | - |
| 12 | 5389177:SPIKE | P3-B2 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_12.d | QC | ICV | As Method | - |
| 13 | 5389177:SPIKE:D1 | P3-B3 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_13.d | QC | ICV | As Method | - |
| 14 | 5389177:FZA807-01 | P3-B4 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_14.d | Sample | | As Method | - |
| 15 | 5389177:FZA808-01 | P3-B5 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_15.d | Sample | | As Method | - |
| 16 | 5389177:FZA809-01 | P3-B6 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_16.d | Sample | | As Method | - |
| 17 | 5389177:FZH324-01:100x | P3-B7 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_17.d | Sample | | As Method | - |
| 18 | 5389177:FZH324-01:10x | P3-B8 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_18.d | Sample | | As Method | - |
| 19 | IB | P3-A8 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_19.d | Sample | | As Method | - |
| 20 | 5389177:FZH325-01:100x | P3-B9 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_20.d | Sample | | As Method | - |
| 21 | 5389177:FZH325-01:10x | P3-C1 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_21.d | Sample | | As Method | - |
| 22 | IB | P3-A8 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_22.d | Sample | | As Method | - |
| 23 | 5389177:FZJ938-01 | P3-C2 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_23.d | Sample | | As Method | - |
| 24 | 5389177:FZJ941-01:10x | P3-C3 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_24.d | Sample | | As Method | - |
| 25 | 5389177:FZJ941-01 | P3-C4 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_25.d | Sample | | As Method | - |
| 26 | IB | P3-A8 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_26.d | Sample | | As Method | - |
| 27 | CCV | P3-A5 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_27.d | ConCal | STD 4 | As Method | - |
| 28 | 5389177:FZJ953-01:50x | P3-C5 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_28.d | Sample | | As Method | - |
| 29 | 5389177:FZJ953-01:10x | P3-C6 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_29.d | Sample | | As Method | - |
| 30 | IB | P3-A8 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_30.d | Sample | | As Method | - |
| 31 | 5389177:FZJ954-01:25x | P3-C7 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_31.d | Sample | | As Method | - |
| 32 | 5389177:FZJ954-01:5x | P3-C8 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_32.d | Sample | | As Method | - |
| 33 | IB | P3-A8 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_33.d | Sample | | As Method | - |
| 34 | CCV | P3-A5 | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_34.d | ConCal | STD 4 | As Method | - |



D:\MassHunter\Worklists\PFCs\PFC_180208_Low_FOSAA.wkl

Report generation date: 08-Feb-2018 03:43:40 PM

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| STD 1 | - | 2018/02/09 12:02 AM | PFC_Water_Low.m | WS#5389177_02.d | P3-A2 |
| STD 2 | - | 2018/02/09 12:07 AM | PFC_Water_Low.m | WS#5389177_03.d | P3-A3 |
| STD 3 | - | 2018/02/09 12:12 AM | PFC_Water_Low.m | WS#5389177_04.d | P3-A4 |
| STD 4 | - | 2018/02/09 12:17 AM | PFC_Water_Low.m | WS#5389177_05.d | P3-A5 |
| STD 5 | - | 2018/02/09 12:22 AM | PFC_Water_Low.m | WS#5389177_06.d | P3-A6 |
| STD 6 | - | 2018/02/09 12:27 AM | PFC_Water_Low.m | WS#5389177_07.d | P3-A7 |
| IB | - | 2018/02/09 12:31 AM | PFC_Water_Low.m | WS#5389177_08.d | P3-A8 |
| ICV | - | 2018/02/09 12:36 AM | PFC_Water_Low.m | WS#5389177_09.d | P3-A9 |
| ISC | - | 2018/02/09 12:41 AM | PFC_Water_Low.m | WS#5389177_10.d | P3-A2 |
| 5389177:BLANK | - | 2018/02/09 12:46 AM | PFC_Water_Low.m | WS#5389177_11.d | P3-B1 |
| 5389177:SPIKE | - | 2018/02/09 12:51 AM | PFC_Water_Low.m | WS#5389177_12.d | P3-B2 |
| 5389177:SPIKE:D1 | - | 2018/02/09 12:56 AM | PFC_Water_Low.m | WS#5389177_13.d | P3-B3 |
| 5389177:FZA807-01 | - | 2018/02/09 1:01 AM | PFC_Water_Low.m | WS#5389177_14.d | P3-B4 |
| 5389177:FZA808-01 | - | 2018/02/09 1:06 AM | PFC_Water_Low.m | WS#5389177_15.d | P3-B5 |
| 5389177:FZA809-01 | - | 2018/02/09 1:11 AM | PFC_Water_Low.m | WS#5389177_16.d | P3-B6 |
| 5389177:FZH324-01:100x | Reported for PFOS only. | 2018/02/09 1:16 AM | PFC_Water_Low.m | WS#5389177_17.d | P3-B7 |
| 5389177:FZH324-01:10x | Reported for all except PFOS. | 2018/02/09 1:21 AM | PFC_Water_Low.m | WS#5389177_18.d | P3-B8 |
| IB | - | 2018/02/09 1:26 AM | PFC_Water_Low.m | WS#5389177_19.d | P3-A8 |
| 5389177:FZH325-01:100x | Reported for PFOS, PFHxS only. | 2018/02/09 1:31 AM | PFC_Water_Low.m | WS#5389177_20.d | P3-B9 |
| 5389177:FZH325-01:10x | Reported for all except PFOS, PFHxS. | 2018/02/09 1:36 AM | PFC_Water_Low.m | WS#5389177_21.d | P3-C1 |
| IB | - | 2018/02/09 1:41 AM | PFC_Water_Low.m | WS#5389177_22.d | P3-A8 |
| 5389177:FZJ938-01 | - | 2018/02/09 1:45 AM | PFC_Water_Low.m | WS#5389177_23.d | P3-C2 |
| 5389177:FZJ941-01:10x | Reported for 6:2-FTS, PFOS only. | 2018/02/09 1:50 AM | PFC_Water_Low.m | WS#5389177_24.d | P3-C3 |
| 5389177:FZJ941-01 | Reported for all except 6:2-FTS, PFOS. | 2018/02/09 1:55 AM | PFC_Water_Low.m | WS#5389177_25.d | P3-C4 |
| IB | - | 2018/02/09 2:00 AM | PFC_Water_Low.m | WS#5389177_26.d | P3-A8 |
| CCV | - | 2018/02/09 2:05 AM | PFC_Water_Low.m | WS#5389177_27.d | P3-A5 |
| 5389177:FZJ953-01:50x | Reported for PFOS only. | 2018/02/09 2:10 AM | PFC_Water_Low.m | WS#5389177_28.d | P3-C5 |
| 5389177:FZJ953-01:10x | Reported for all except PFOS. | 2018/02/09 2:15 AM | PFC_Water_Low.m | WS#5389177_29.d | P3-C6 |
| IB | - | 2018/02/09 2:20 AM | PFC_Water_Low.m | WS#5389177_30.d | P3-A8 |
| 5389177:FZJ954-01:25x | Reported for PFOS, PFHxS only. | 2018/02/09 2:25 AM | PFC_Water_Low.m | WS#5389177_31.d | P3-C7 |
| 5389177:FZJ954-01:5x | Reported for all except PFOS, PFHxS. | 2018/02/09 2:30 AM | PFC_Water_Low.m | WS#5389177_32.d | P3-C8 |
| IB | - | 2018/02/09 2:35 AM | PFC_Water_Low.m | WS#5389177_33.d | P3-A8 |
| CCV | - | 2018/02/09 2:40 AM | PFC_Water_Low.m | WS#5389177_34.d | P3-A5 |



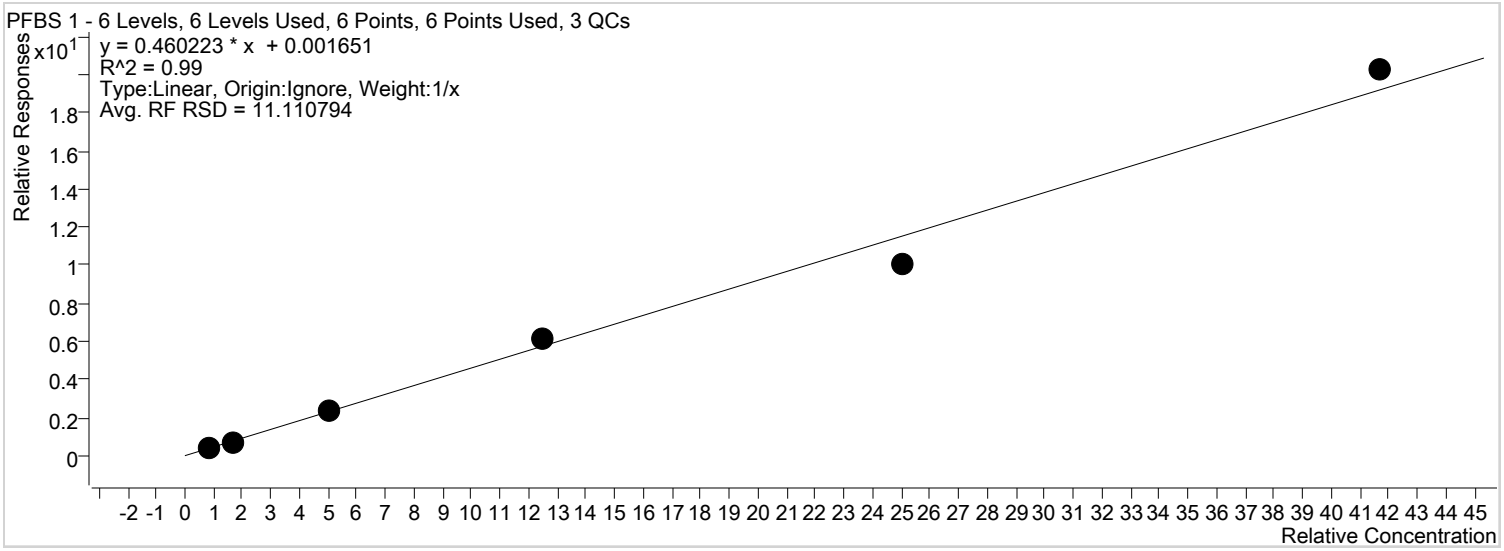
Maxxam Analytics

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| STD 1 | - | 2018/02/08 6:03 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_02.d | P3-A2 |
| STD 2 | - | 2018/02/08 6:06 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_03.d | P3-A3 |
| STD 3 | - | 2018/02/08 6:08 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_04.d | P3-A4 |
| STD 4 | - | 2018/02/08 6:11 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_05.d | P3-A5 |
| STD 5 | - | 2018/02/08 6:13 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_06.d | P3-A6 |
| STD 6 | - | 2018/02/08 6:16 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_07.d | P3-A7 |
| IB | - | 2018/02/08 6:18 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_08.d | P3-A8 |
| ICV | - | 2018/02/08 6:20 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_09.d | P3-A9 |
| ISC | - | 2018/02/08 6:23 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_10.d | P3-A2 |
| 5389177:BLANK | - | 2018/02/08 6:25 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_11.d | P3-B1 |
| 5389177:SPIKE | - | 2018/02/08 6:28 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_12.d | P3-B2 |
| 5389177:SPIKE:D1 | - | 2018/02/08 6:30 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_13.d | P3-B3 |
| 5389177:FZA807-01 | - | 2018/02/08 6:32 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_14.d | P3-B4 |
| 5389177:FZA808-01 | - | 2018/02/08 6:35 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_15.d | P3-B5 |
| 5389177:FZA809-01 | - | 2018/02/08 6:37 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_16.d | P3-B6 |
| 5389177:FZH324-01:100x | Not Used | 2018/02/08 6:40 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_17.d | P3-B7 |
| 5389177:FZH324-01:10x | - | 2018/02/08 6:42 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_18.d | P3-B8 |
| IB | - | 2018/02/08 6:44 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_19.d | P3-A8 |
| 5389177:FZH325-01:100x | Not Used | 2018/02/08 6:47 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_20.d | P3-B9 |
| 5389177:FZH325-01:10x | - | 2018/02/08 6:49 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_21.d | P3-C1 |
| IB | - | 2018/02/08 6:52 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_22.d | P3-A8 |
| 5389177:FZJ938-01 | - | 2018/02/08 6:54 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_23.d | P3-C2 |
| 5389177:FZJ941-01:10x | - | 2018/02/08 6:56 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_24.d | P3-C3 |
| 5389177:FZJ941-01 | - | 2018/02/08 6:59 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_25.d | P3-C4 |
| IB | - | 2018/02/08 7:01 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_26.d | P3-A8 |
| CCV | - | 2018/02/08 7:04 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_27.d | P3-A5 |
| 5389177:FZJ953-01:50x | - | 2018/02/08 7:06 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_28.d | P3-C5 |
| 5389177:FZJ953-01:10x | - | 2018/02/08 7:08 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_29.d | P3-C6 |
| IB | - | 2018/02/08 7:11 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_30.d | P3-A8 |
| 5389177:FZJ954-01:25x | - | 2018/02/08 7:13 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_31.d | P3-C7 |
| 5389177:FZJ954-01:5x | - | 2018/02/08 7:16 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_32.d | P3-C8 |
| IB | - | 2018/02/08 7:18 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_33.d | P3-A8 |
| CCV | - | 2018/02/08 7:21 PM | PFC_Water_Low_FOSAA.m | WS#5389177_FOSAA_34.d | P3-A5 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

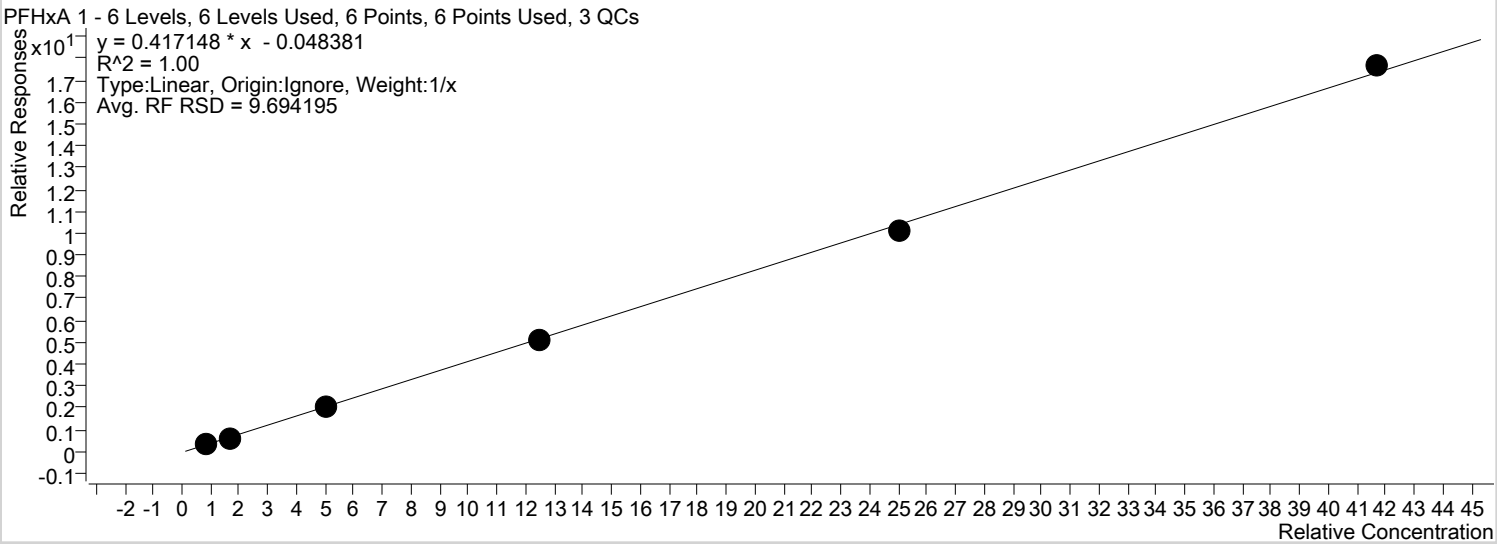
**Analyte:** PFBS 1
**Internal Standard:** MPFHxS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.92 | 671 | 0.5143 | 93 | 111.3 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.44 | 1069 | 0.3898 | 122 | 84.5 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 5.27 | 3685 | 0.4855 | 91 | 105.4 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 13.21 | 8679 | 0.4866 | 649 | 105.7 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 21.89 | 16004 | 0.4031 | 295 | 87.6 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 43.99 | 31202 | 0.4856 | 151 | 105.5 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

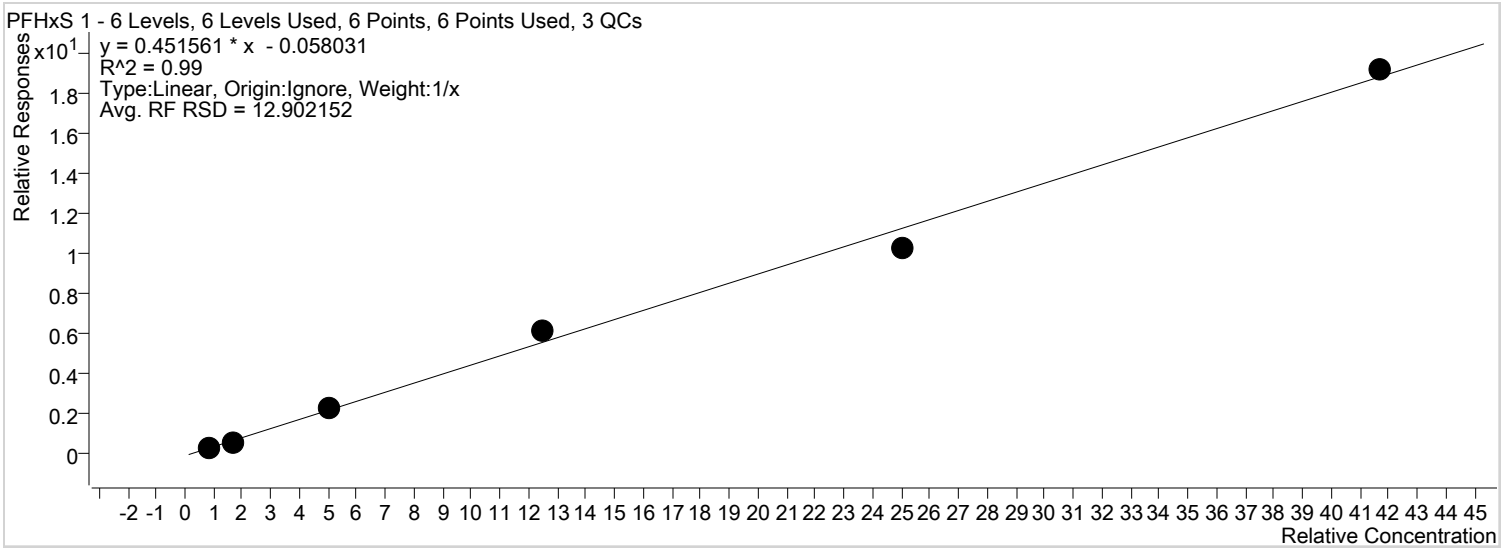
**Analyte:** PFHxA 1
**Internal Standard:** MPFHxA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.97 | 2012 | 0.4291 | 132 | 116.8 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.43 | 3269 | 0.3231 | 280 | 84.3 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 4.99 | 12687 | 0.4064 | 1116 | 99.8 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 12.44 | 30119 | 0.4113 | 2486 | 99.5 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 24.45 | 60745 | 0.4060 | 4432 | 97.8 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 42.45 | 111030 | 0.4235 | 10263 | 101.8 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

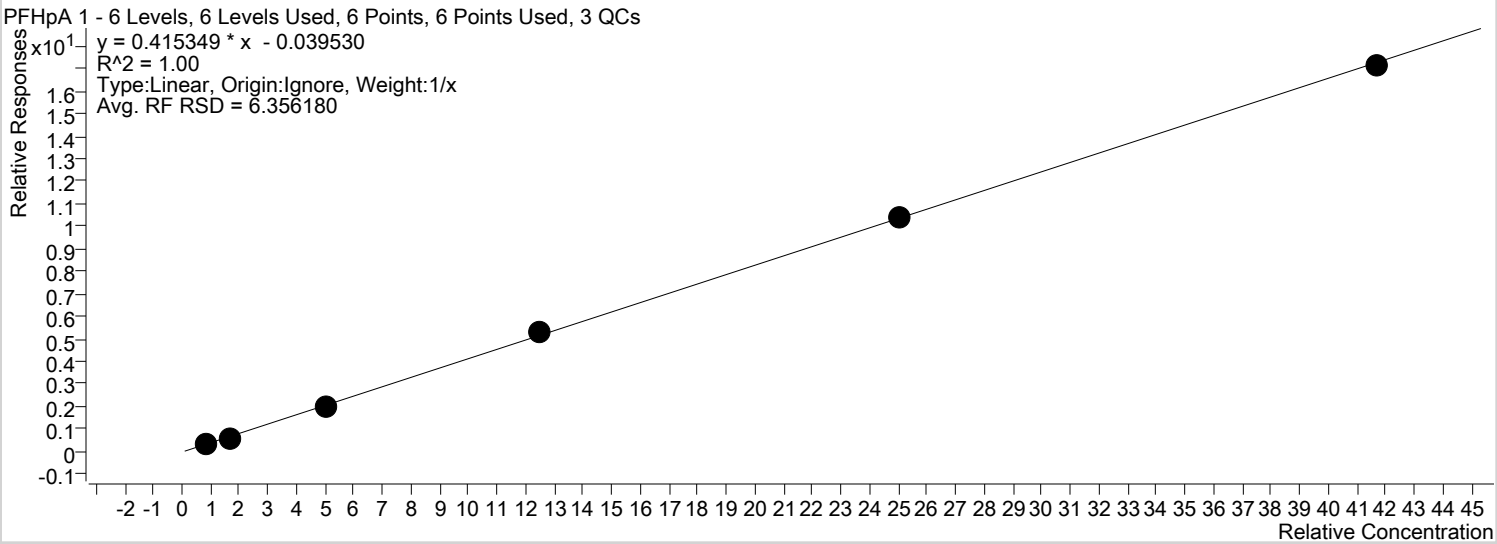
**Analyte:** PFHxS 1
**Internal Standard:** MPFHxS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.90 | 549 | 0.4208 | 78 | 108.7 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.39 | 918 | 0.3348 | 106 | 81.7 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 5.32 | 3558 | 0.4688 | 312 | 106.4 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 13.71 | 8749 | 0.4905 | 532 | 109.6 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 22.93 | 16354 | 0.4119 | 1056 | 91.7 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 42.48 | 29470 | 0.4586 | 2241 | 101.9 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

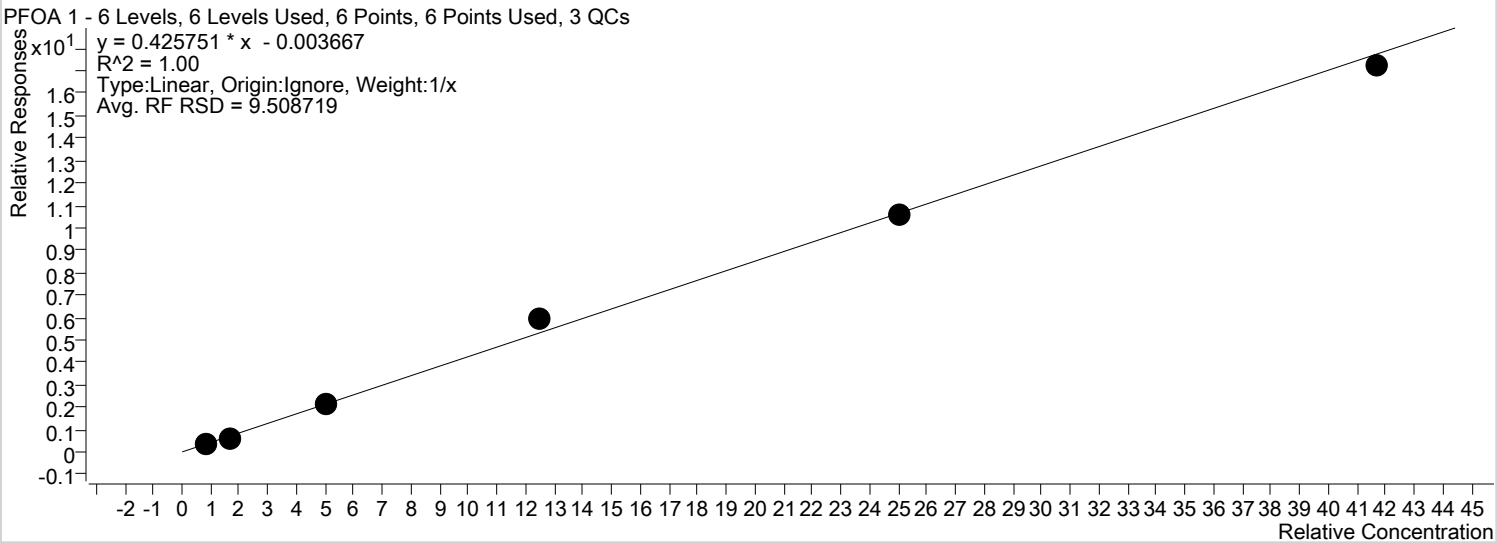
**Analyte:** PFHpA 1
**Internal Standard:** MPFHpA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.91 | 2767 | 0.4081 | 25 | 109.7 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.56 | 4633 | 0.3577 | 38 | 91.7 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 4.74 | 16651 | 0.3857 | 135 | 94.8 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 12.98 | 41071 | 0.4283 | 259 | 103.9 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 25.19 | 80239 | 0.4170 | 255 | 100.8 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 41.34 | 138947 | 0.4109 | 299 | 99.1 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

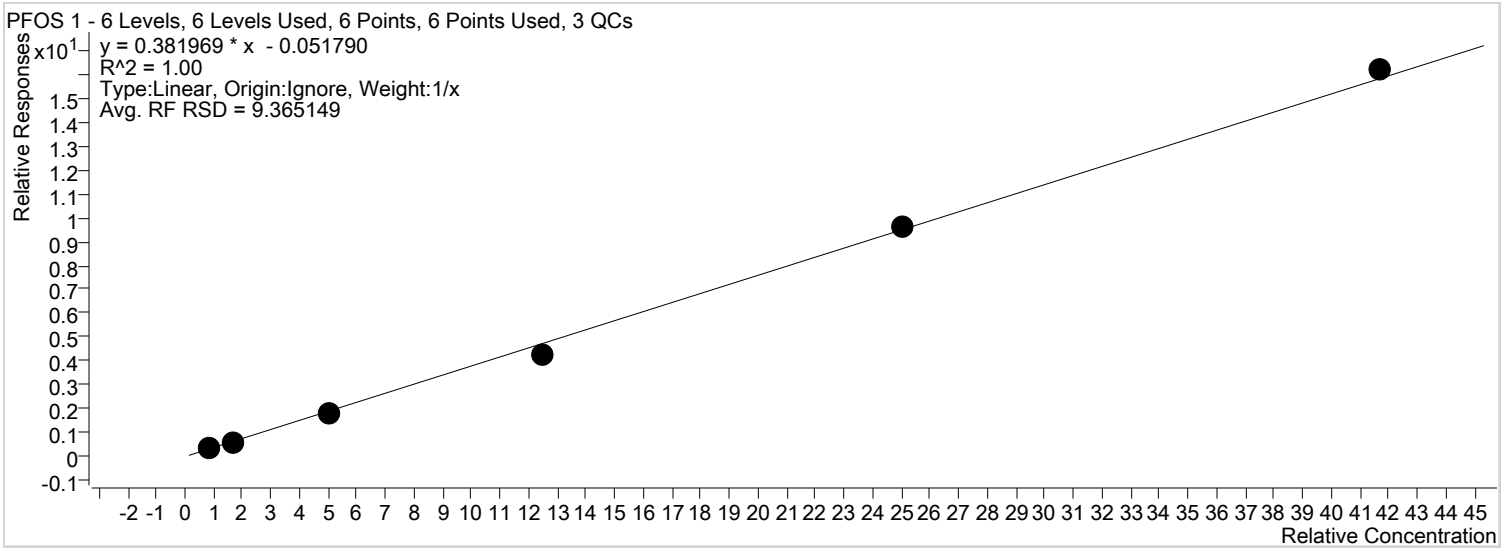
**Analyte:** PFOA 1
**Internal Standard:** MPFOA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.88 | 3259 | 0.4479 | 39 | 106.2 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.42 | 5039 | 0.3532 | 67 | 83.5 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 5.12 | 19009 | 0.4353 | 231 | 102.4 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 13.87 | 46159 | 0.4720 | 514 | 110.9 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 24.97 | 88474 | 0.4251 | 1281 | 99.9 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 40.47 | 158054 | 0.4131 | 1590 | 97.1 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

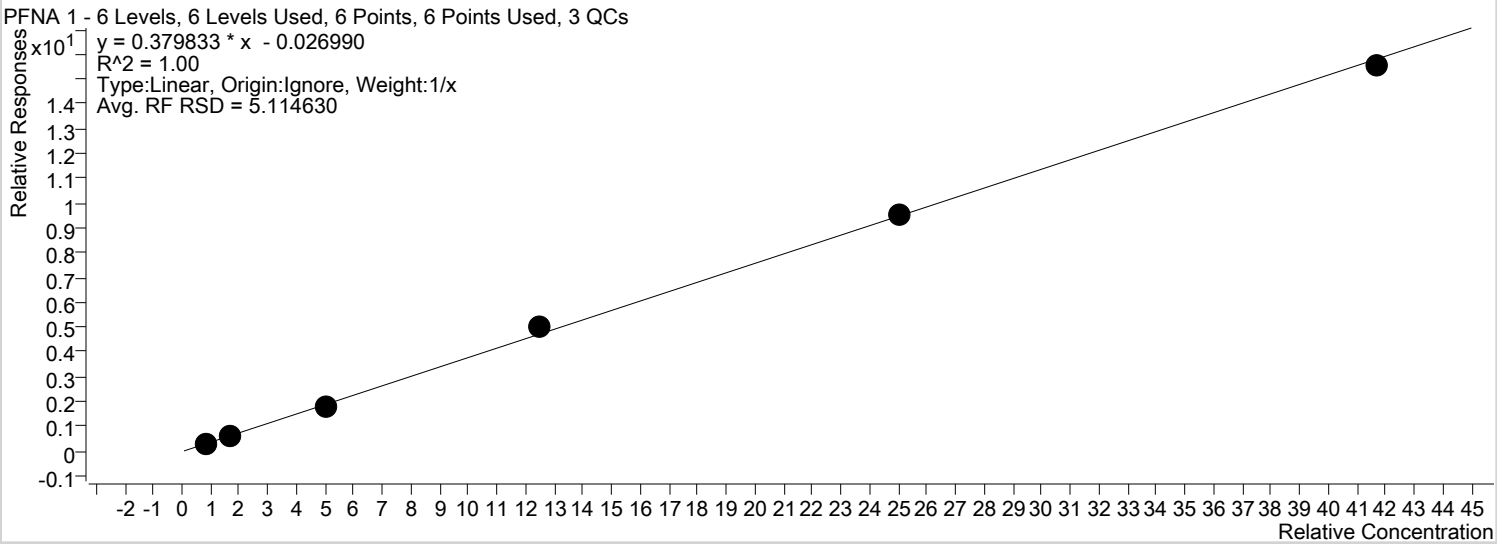
**Analyte:** PFOS 1
**Internal Standard:** MPFOS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 1.00 | 595 | 0.3974 | 77 | 120.4 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.51 | 1026 | 0.3090 | 123 | 88.9 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 4.80 | 3653 | 0.3566 | 162 | 96.1 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 11.34 | 8207 | 0.3425 | 141 | 90.8 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 25.40 | 16958 | 0.3861 | 195 | 101.6 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 42.67 | 30641 | 0.3896 | 263 | 102.3 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

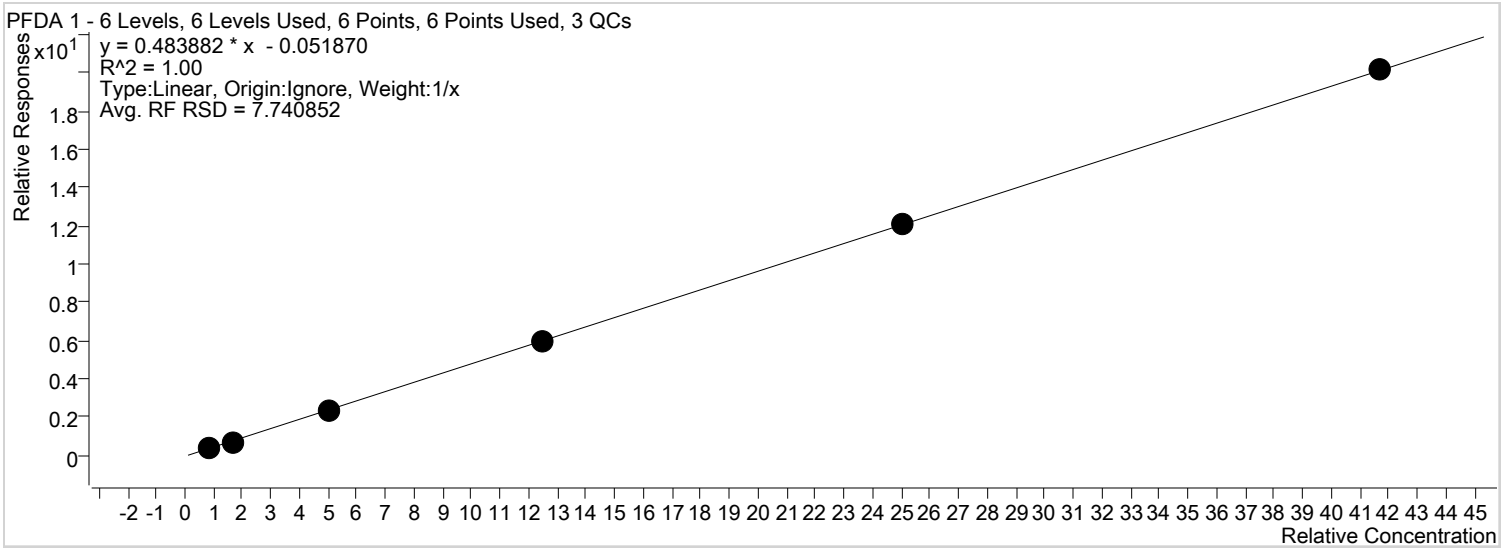
**Analyte:** PFNA 1
**Internal Standard:** MPFNA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.86 | 2670 | 0.3590 | 33 | 103.1 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.61 | 5021 | 0.3438 | 73 | 94.7 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 4.88 | 16269 | 0.3654 | 314 | 97.6 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 13.18 | 40186 | 0.3985 | 584 | 105.5 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 25.21 | 79008 | 0.3820 | 1193 | 100.9 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 40.99 | 137642 | 0.3727 | 1979 | 98.3 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

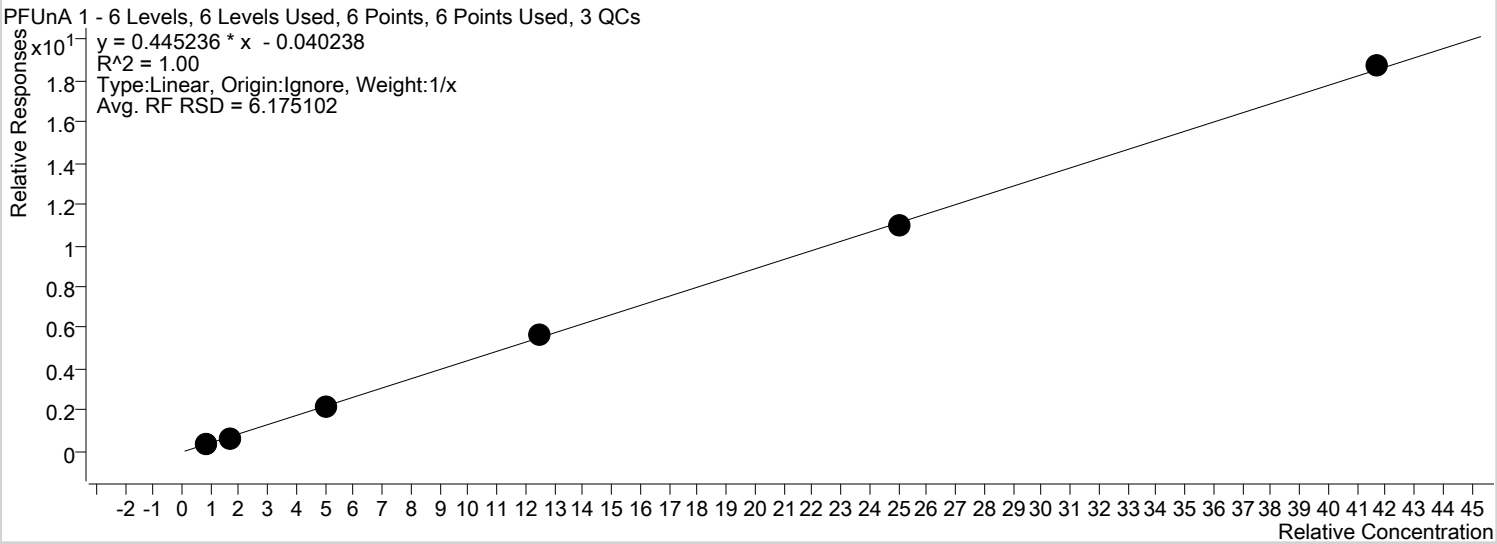
**Analyte:** PFDA 1
**Internal Standard:** MPFDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.94 | 2811 | 0.4849 | 37 | 113.1 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.49 | 4944 | 0.3928 | 54 | 87.5 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 4.96 | 17521 | 0.4697 | 232 | 99.2 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 12.43 | 43587 | 0.4771 | 534 | 99.5 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 25.13 | 83684 | 0.4844 | 1022 | 100.5 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 41.78 | 153798 | 0.4836 | 946 | 100.2 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

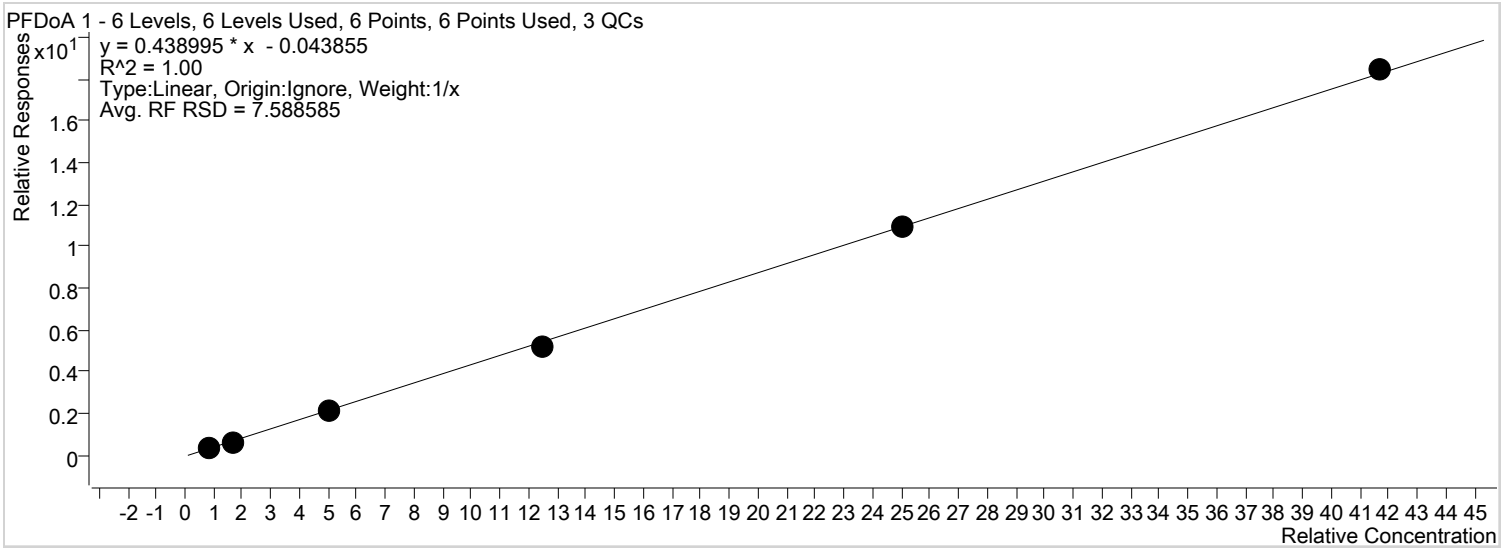
**Analyte:** PFUnA 1
**Internal Standard:** MPFUnA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.93 | 3172 | 0.4478 | 29 | 111.5 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.54 | 5409 | 0.3809 | 55 | 90.9 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 4.84 | 18843 | 0.4225 | 133 | 96.7 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 12.69 | 47185 | 0.4489 | 266 | 101.5 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 24.59 | 89716 | 0.4363 | 296 | 98.4 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 42.14 | 167796 | 0.4490 | 299 | 101.1 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

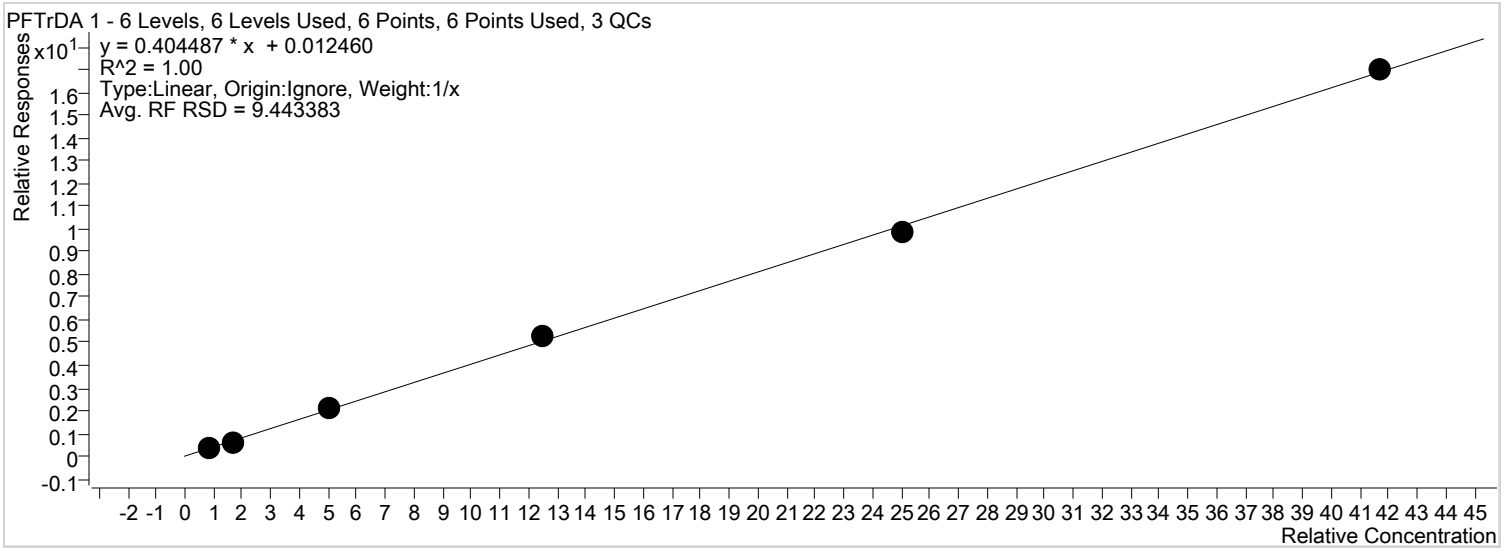
**Analyte:** PFDoA 1
**Internal Standard:** MPFDoA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.95 | 4275 | 0.4501 | 205 | 114.6 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.50 | 6898 | 0.3618 | 197 | 88.3 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 4.96 | 24541 | 0.4264 | 652 | 99.1 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 12.05 | 60873 | 0.4195 | 2479 | 96.4 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 25.16 | 115272 | 0.4401 | 2957 | 100.7 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 42.11 | 213116 | 0.4423 | 4821 | 101.0 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

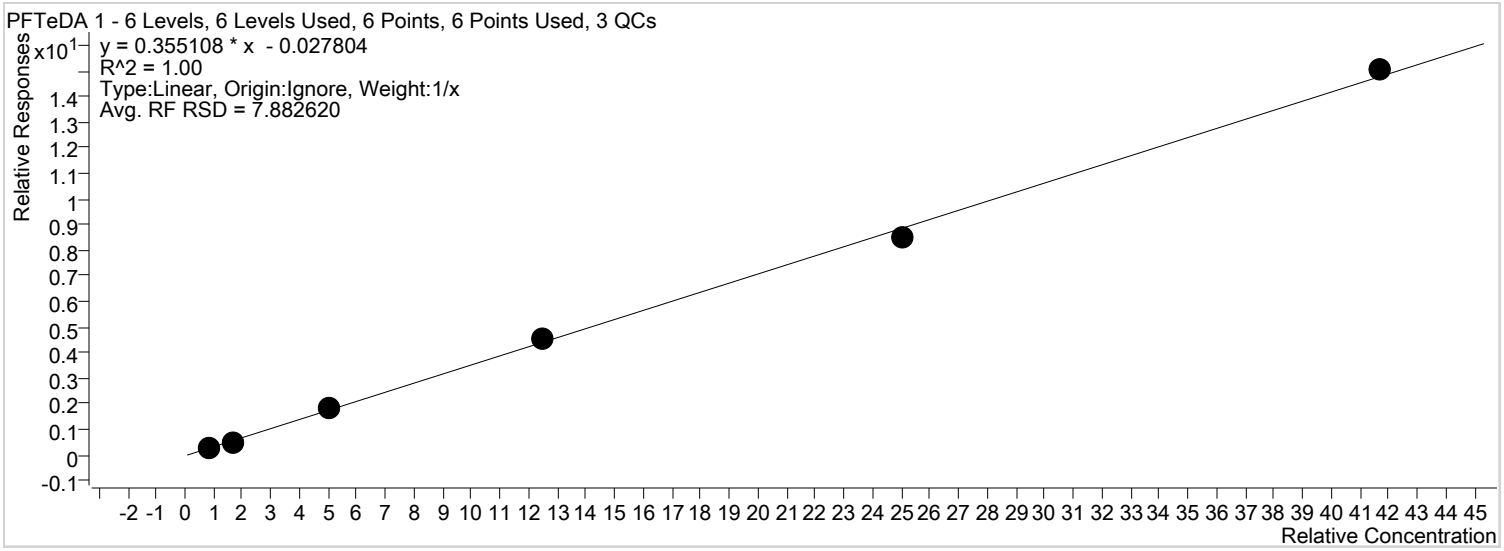
**Analyte:** PFTrDA 1
**Internal Standard:** MPFTeDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.93 | 5032 | 0.4661 | 40 | 111.5 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.43 | 7954 | 0.3478 | 56 | 84.2 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 5.13 | 27534 | 0.4178 | 100 | 102.7 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 12.98 | 66039 | 0.4209 | 127 | 103.8 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 24.30 | 126598 | 0.3937 | 162 | 97.2 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 41.96 | 234625 | 0.4073 | 143 | 100.6 |

**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics.batch.bin
**Last Calib Update** 2018/02/21 10:53:42 AM
**Instrument:** LCMS04

**Analyte:** PFTeDA 1
**Internal Standard:** MPFTeDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/09 12:02:22 AM | 0.83 | 0.91 | 3842 | 0.3559 | 15 | 109.6 |
| STD 2 | STD 2 | x | 2018/02/09 12:07:17 AM | 1.70 | 1.48 | 6692 | 0.2926 | 27 | 87.0 |
| STD 3 | STD 3 | x | 2018/02/09 12:12:13 AM | 5.00 | 5.18 | 23878 | 0.3623 | 86 | 103.6 |
| STD 4 | STD 4 | x | 2018/02/09 12:17:10 AM | 12.50 | 12.78 | 56621 | 0.3609 | 129 | 102.2 |
| STD 5 | STD 5 | x | 2018/02/09 12:22:06 AM | 25.00 | 23.92 | 108923 | 0.3387 | 121 | 95.7 |
| STD 6 | STD 6 | x | 2018/02/09 12:27:02 AM | 41.70 | 42.46 | 207867 | 0.3609 | 144 | 101.8 |

# By Compound Report

Agilent Technologies

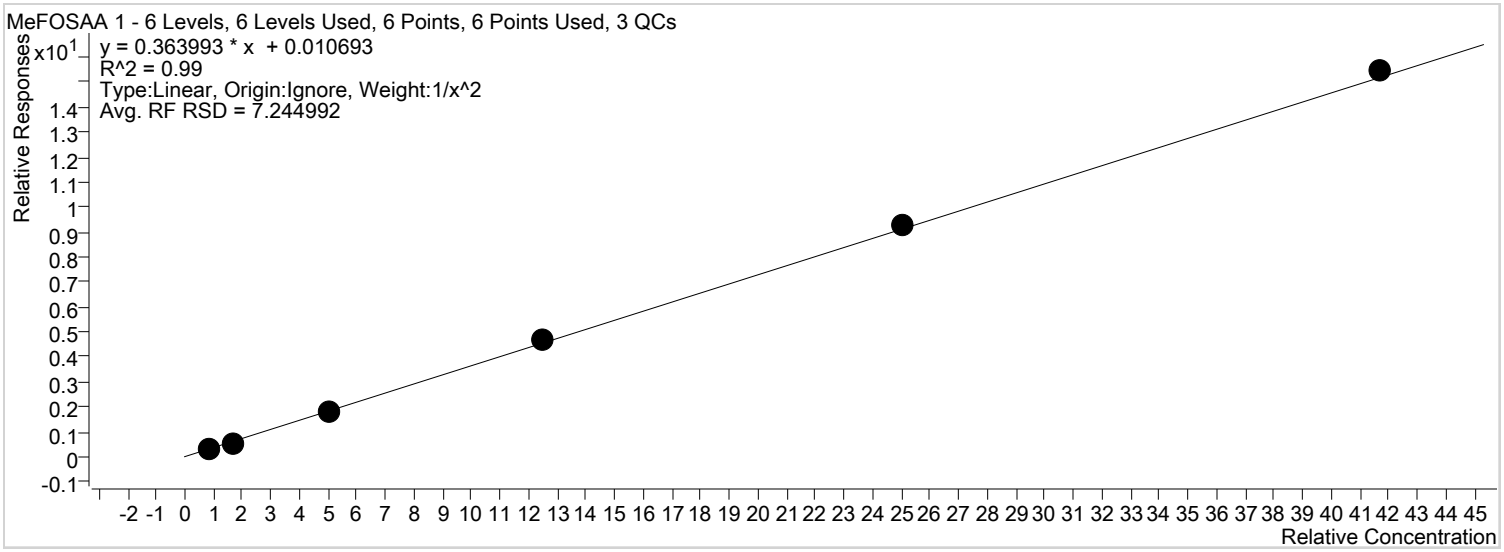
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/21 1:00:12 PM

**Instrument:** LCMS04

**Analyte:** MeFOSAA 1

**Internal Standard:** D3-MeFOSAA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 6:03:55 PM | 0.83 | 0.88 | 646 | 0.4002 | 186 | 106.4 |
| STD 2 | STD 2 | x | 2018/02/08 6:06:20 PM | 1.70 | 1.46 | 1054 | 0.3186 | 194 | 85.8 |
| STD 3 | STD 3 | x | 2018/02/08 6:08:45 PM | 5.00 | 5.08 | 3499 | 0.3718 | 235 | 101.6 |
| STD 4 | STD 4 | x | 2018/02/08 6:11:11 PM | 12.50 | 12.84 | 8486 | 0.3749 | 241 | 102.8 |
| STD 5 | STD 5 | x | 2018/02/08 6:13:35 PM | 25.00 | 25.43 | 16326 | 0.3706 | 222 | 101.7 |
| STD 6 | STD 6 | x | 2018/02/08 6:16:01 PM | 41.70 | 42.44 | 27826 | 0.3707 | 231 | 101.8 |

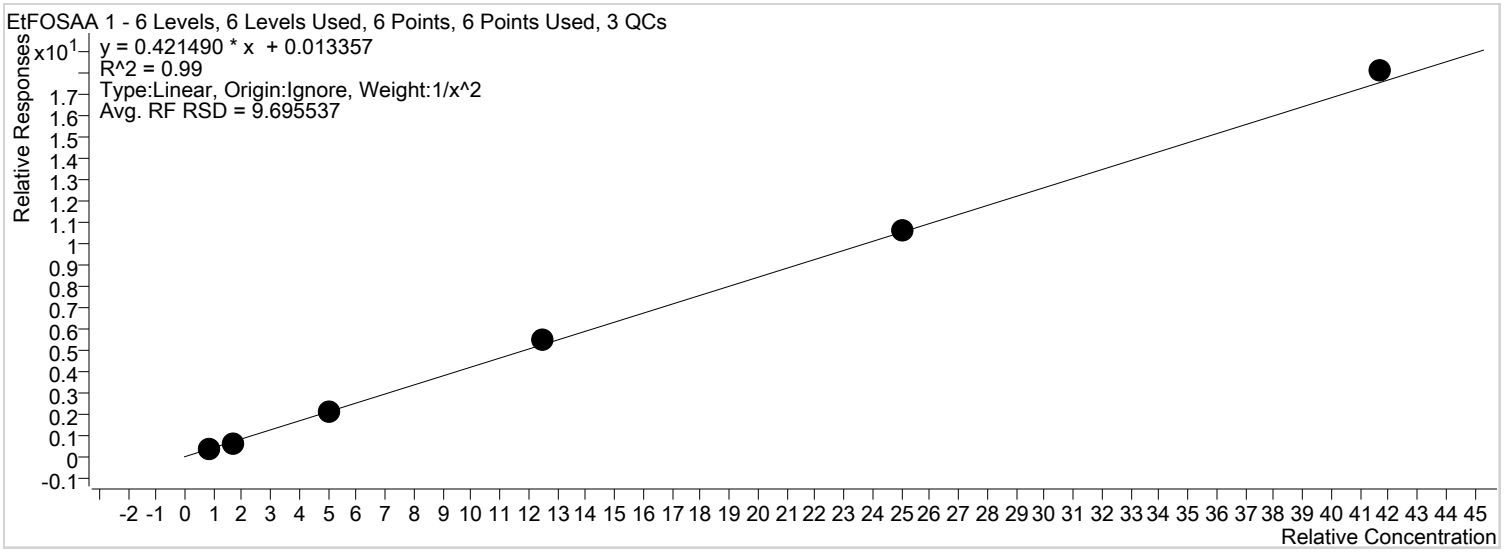
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_EToxics.batch.bin

**Last Calib Update** 2018/02/21 1:00:12 PM

**Instrument:** LCMS04

**Analyte:** EtFOSAA 1

**Internal Standard:** D5-EtFOSAA IS



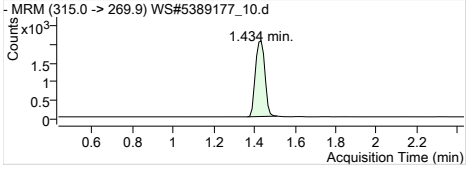

| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/08 6:03:55 PM | 0.83 | 0.90 | 675 | 0.4736 | 132 | 108.6 |
| STD 2 | STD 2 | x | 2018/02/08 6:06:20 PM | 1.70 | 1.38 | 1039 | 0.3488 | 193 | 80.9 |
| STD 3 | STD 3 | x | 2018/02/08 6:08:45 PM | 5.00 | 5.13 | 3674 | 0.4348 | 537 | 102.5 |
| STD 4 | STD 4 | x | 2018/02/08 6:11:11 PM | 12.50 | 12.97 | 9022 | 0.4385 | 792 | 103.8 |
| STD 5 | STD 5 | x | 2018/02/08 6:13:35 PM | 25.00 | 25.27 | 17565 | 0.4266 | 1076 | 101.1 |
| STD 6 | STD 6 | x | 2018/02/08 6:16:01 PM | 41.70 | 43.02 | 30083 | 0.4351 | 2752 | 103.2 |

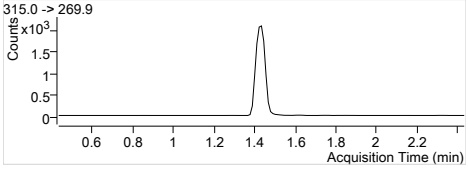
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A2 |
| **Acq. Date** | 2018/02/09 12:41:49 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

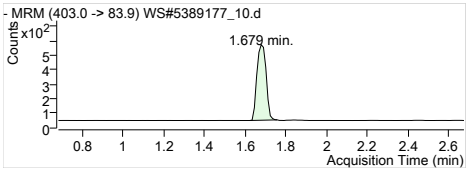
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6608 | 1.43 | 1 µg/L | | |
| MPFHxS | 1651 | 1.68 | 1 µg/L | | |
| MPFHpA | 8514 | 1.69 | 1 µg/L | | |
| MPFOA | 9098 | 1.88 | 1 µg/L | | |
| MPFOS | 1988 | 1.98 | 1 µg/L | | |
| MPFNA | 8860 | 2.01 | 1 µg/L | | |
| MPFDA | 7645 | 2.14 | 1 µg/L | | |
| MPFUnA | 9022 | 2.23 | 1 µg/L | | |
| MPFDoA | 12079 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13175 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 24034 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 32777 | 2.13 | 1 µg/L | | |

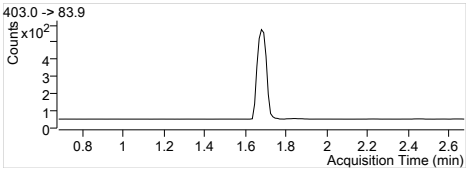
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 667 | 1.09 | 0.83 | 0.87 µg/L | 105.33 |
| PFHxA 1 | 2126 | 1.42 | 0.83 | 0.89 µg/L | 106.90 |
| PFHxS 1 | 697 | 1.68 | 0.83 | 1.06 µg/L | 128.12 |
| PFHpA 1 | 3018 | 1.69 | 0.83 | 0.95 µg/L | 114.29 |
| PFOA 1 | 3316 | 1.88 | 0.83 | 0.86 µg/L | 104.18 |
| PFOS 1 | 629 | 1.97 | 0.83 | 0.96 µg/L | 116.14 |
| PFNA 1 | 2806 | 2.01 | 0.83 | 0.90 µg/L | 109.02 |
| PFDA 1 | 3425 | 2.14 | 0.83 | 1.03 µg/L | 124.46 |
| PFUnA 1 | 3775 | 2.23 | 0.83 | 1.03 µg/L | 124.11 |
| PFDoA 1 | 4282 | 2.32 | 0.83 | 0.91 µg/L | 109.33 |
| PFTrDA 1 | 5201 | 2.40 | 0.83 | 0.95 µg/L | 113.87 |
| PFTeDA 1 | 4548 | 2.47 | 0.83 | 1.05 µg/L | 126.55 |
| 13C2-PFHxA | 6608 | 1.43 | 100.00 | 98.07 µg/L | 98.07 |
| 18O2-PFHxS | 1651 | 1.68 | 100.00 | 95.10 µg/L | 95.10 |
| 13C4-PFHpA | 8514 | 1.69 | 100.00 | 94.99 µg/L | 94.99 |
| 13C4-PFOA | 9098 | 1.88 | 100.00 | 94.87 µg/L | 94.87 |
| 13C4-PFOS | 1988 | 1.98 | 100.00 | 93.39 µg/L | 93.39 |
| 13C5-PFNA | 8861 | 2.01 | 100.00 | 91.66 µg/L | 91.66 |
| 13C2-PFDA | 7557 | 2.14 | 100.00 | 91.53 µg/L | 91.53 |
| 13C2-PFUnA | 9022 | 2.23 | 100.00 | 91.63 µg/L | 91.63 |
| 13C2-PFDoA | 12079 | 2.32 | 100.00 | 92.99 µg/L | 92.99 |
| 13C2-PFTeDA | 13518 | 2.47 | 100.00 | 86.95 µg/L | 86.95 |
| 13C6-PFHxA | 24034 | 1.43 | 100.00 | 112.26 µg/L | 112.26 |
| 13C9-PFDA | 32777 | 2.13 | 100.00 | 114.69 µg/L | 114.69 |



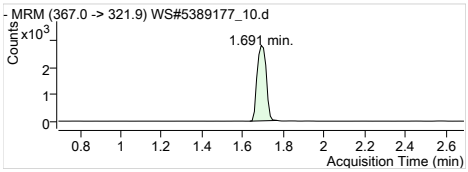



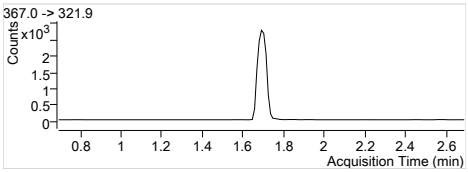

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



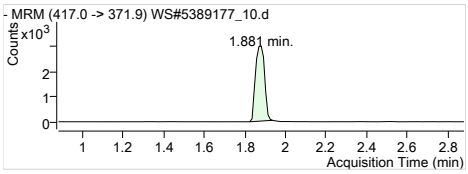



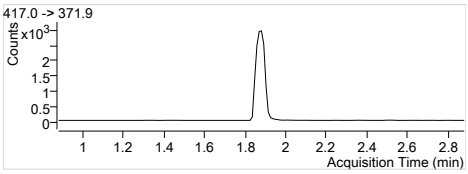

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: CC



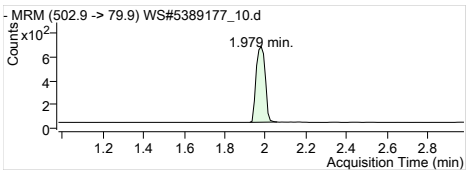



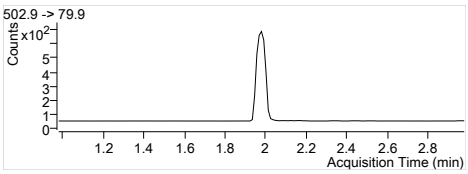

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: CC



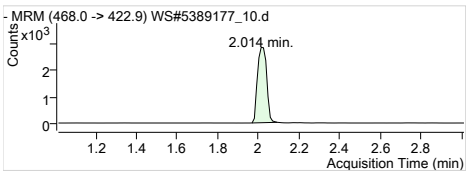



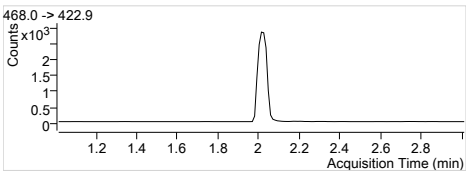

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



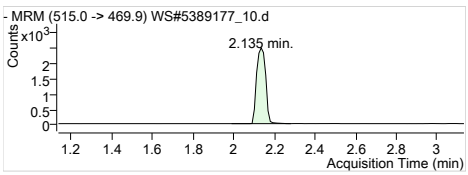



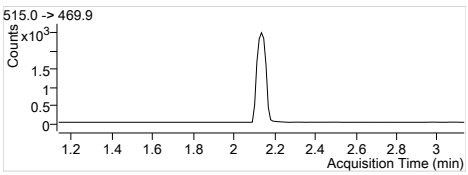

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



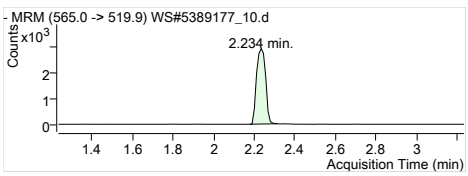



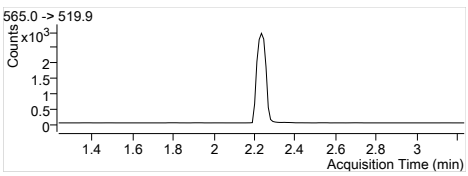

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: CC



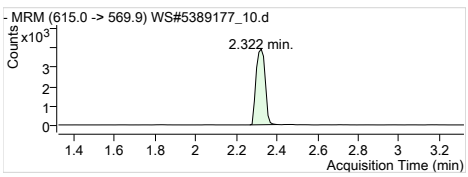



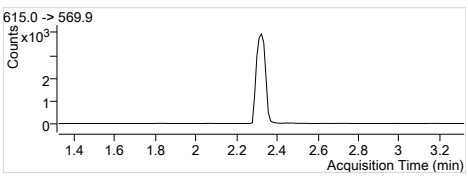

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



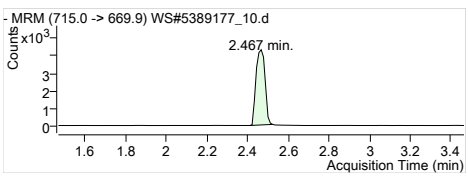



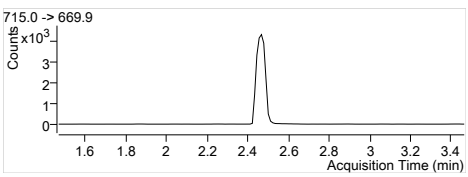

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: CC



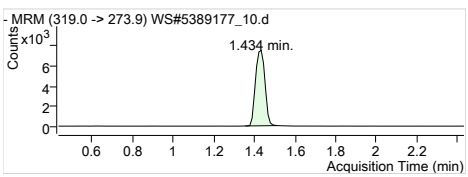



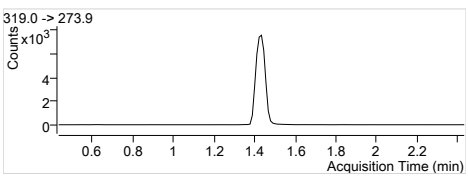

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



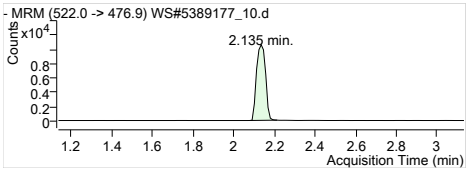



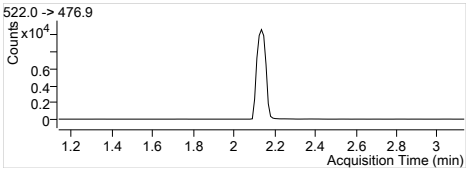

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



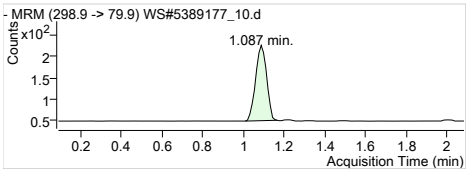



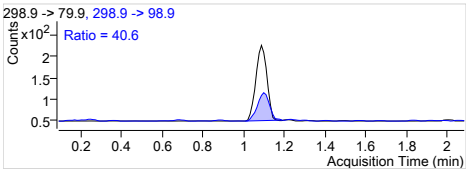

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



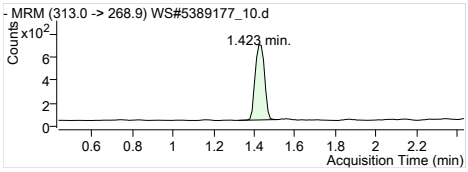



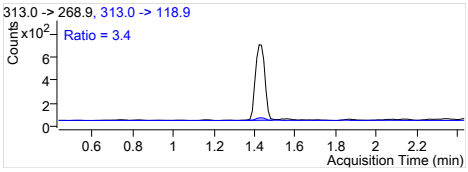

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



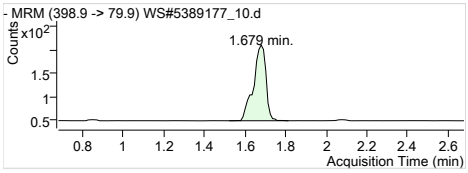



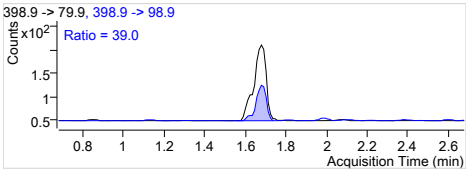

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 0.87 µg/L
Area ratio: 0.40400
Sample type: CC



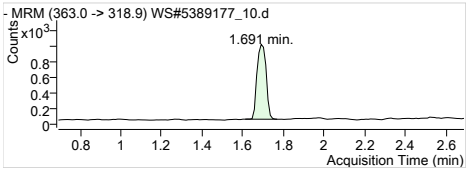



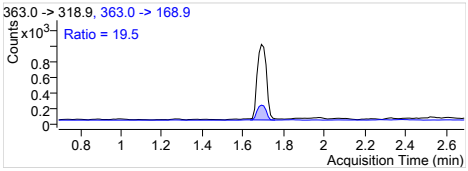

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.434)
Calc. conc. 0.89 µg/L
Area ratio: 0.32173
Sample type: CC



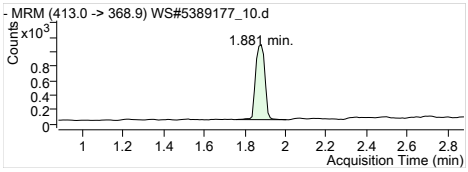



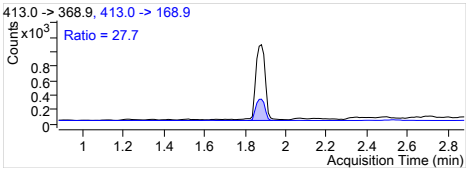

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 1.06 µg/L
Area ratio: 0.42217
Sample type: CC



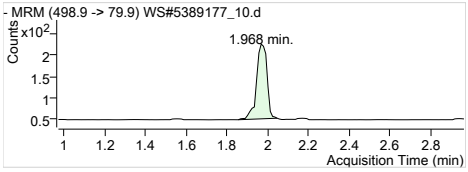



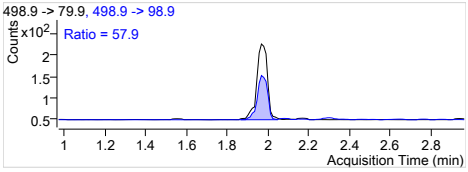

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.95 µg/L
Area ratio: 0.35447
Sample type: CC



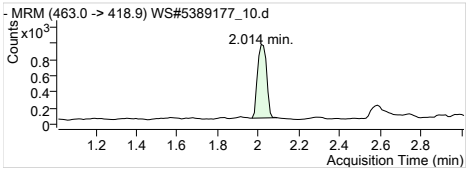



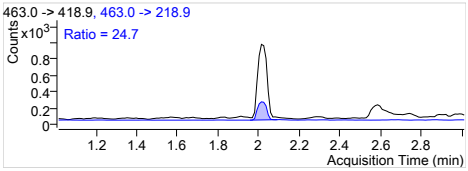

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 0.86 µg/L
Area ratio: 0.36448
Sample type: CC



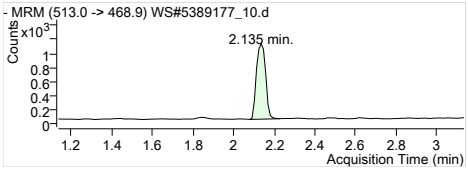



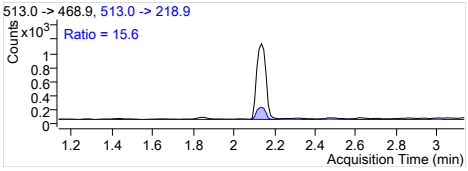

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 0.96 µg/L
Area ratio: 0.31640
Sample type: CC



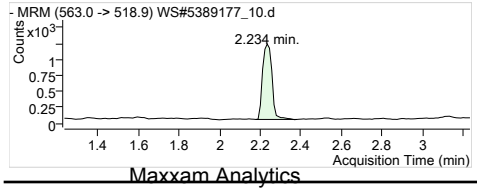



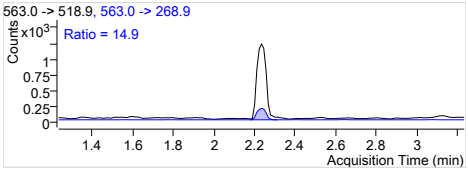

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 0.90 µg/L
Area ratio: 0.31670
Sample type: CC



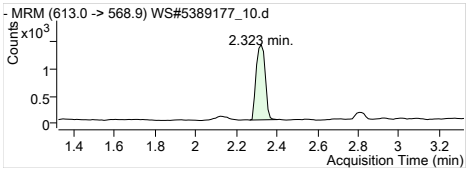



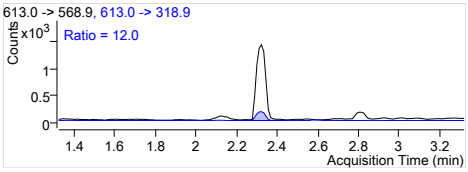

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 1.03 µg/L
Area ratio: 0.44801
Sample type: CC



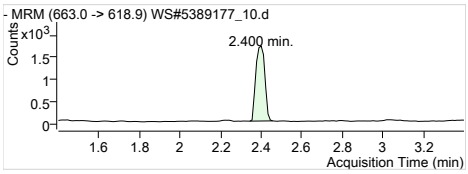



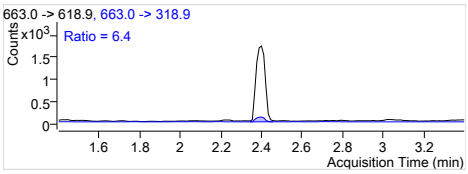

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 1.03 µg/L
Area ratio: 0.41842
Sample type: CC



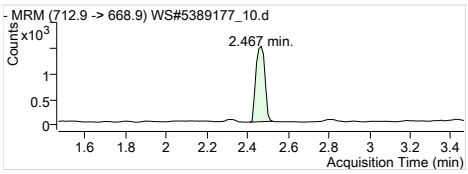



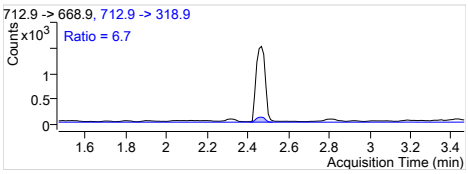

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.91 µg/L
Area ratio: 0.35450
Sample type: CC



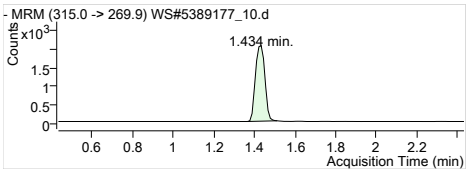



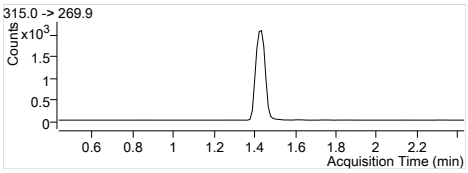

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.95 µg/L
Area ratio: 0.39476
Sample type: CC



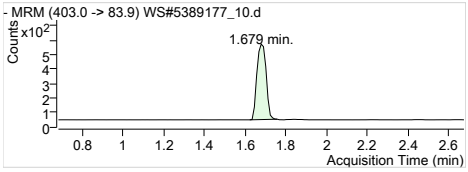



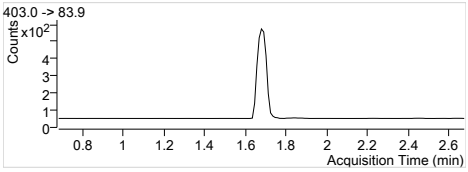

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 1.05 µg/L
Area ratio: 0.34520
Sample type: CC



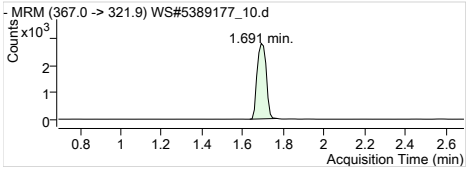



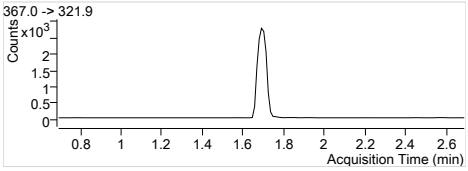

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 98.07 µg/L
Area ratio: 0.27494
Sample type: CC



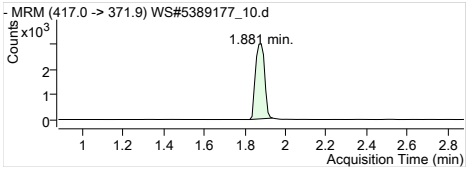



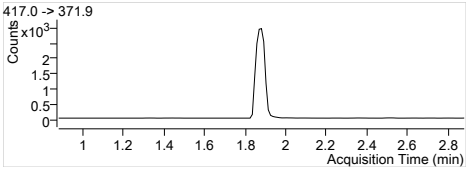

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 95.10 µg/L
Area ratio: 0.06869
Sample type: CC



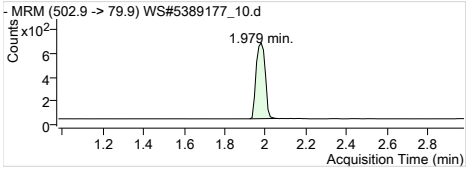



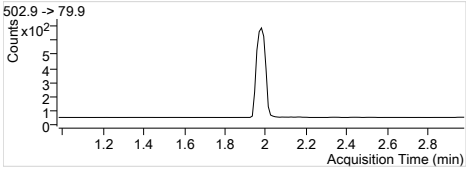

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 94.99 µg/L
Area ratio: 0.35425
Sample type: CC



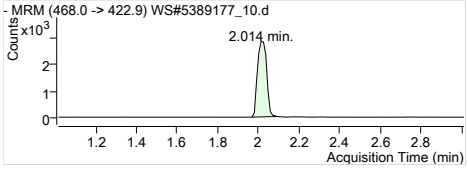



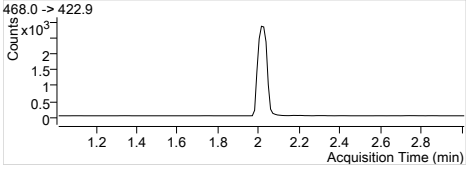

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 94.87 µg/L
Area ratio: 0.37855
Sample type: CC



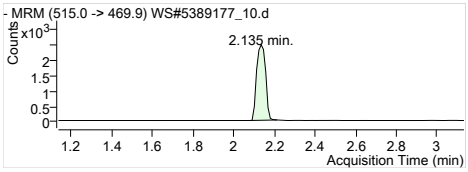



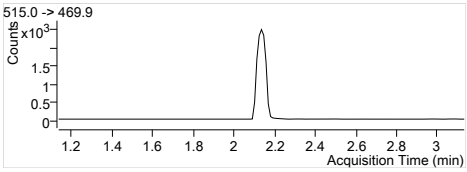

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 93.39 µg/L
Area ratio: 0.08272
Sample type: CC



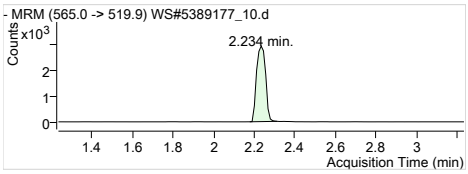



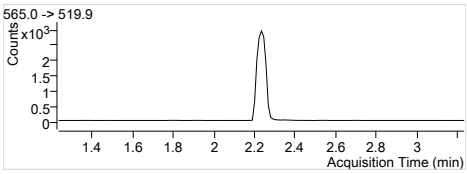

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 91.66 µg/L
Area ratio: 0.36869
Sample type: CC



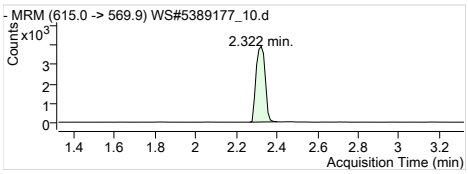



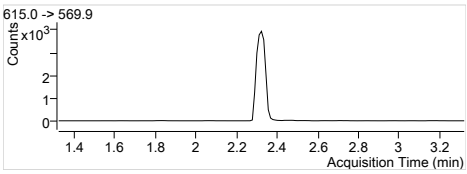

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 91.53 µg/L
Area ratio: 0.23056
Sample type: CC



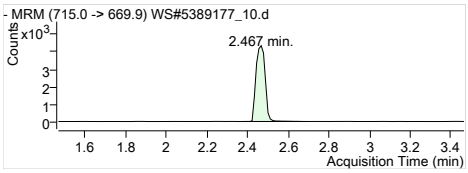



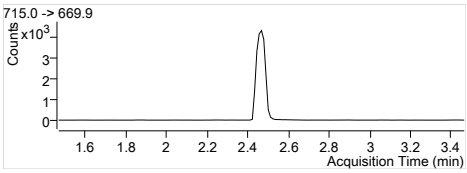

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 91.63 µg/L
Area ratio: 0.27525
Sample type: CC



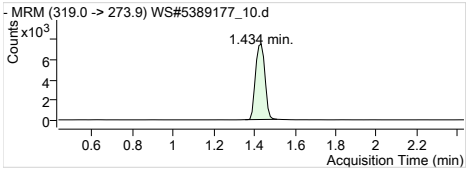



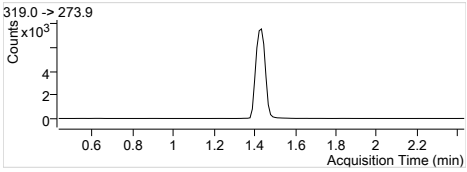

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 92.99 µg/L
Area ratio: 0.36852
Sample type: CC



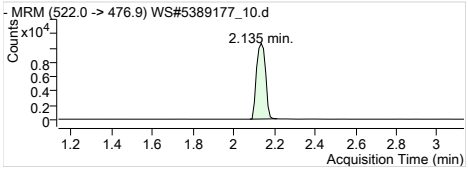



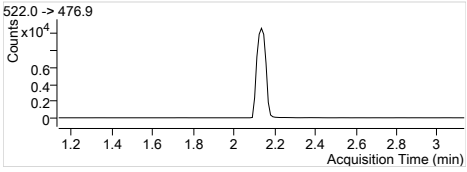

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 86.95 µg/L
Area ratio: 0.41242
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 112.26 µg/L
Area ratio: 0
Sample type: CC



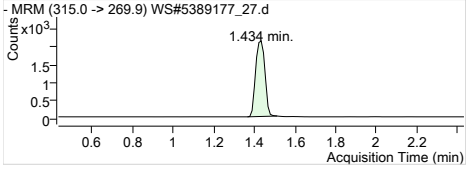

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 114.69 µg/L
Area ratio: 0
Sample type: CC

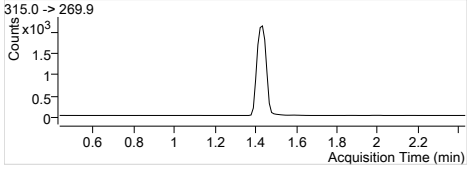
**Batch Path** T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_27.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A5 |
| **Acq. Date** | 2018/02/09 2:05:41 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

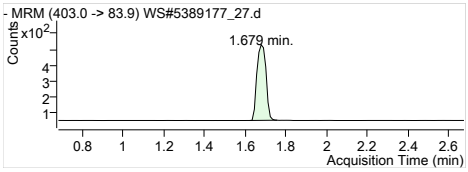
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6691 | 1.43 | 1 µg/L | | |
| MPFHxS | 1496 | 1.68 | 1 µg/L | | |
| MPFHpA | 8064 | 1.69 | 1 µg/L | | |
| MPFOA | 8652 | 1.88 | 1 µg/L | | |
| MPFOS | 1882 | 1.98 | 1 µg/L | | |
| MPFNA | 8928 | 2.01 | 1 µg/L | | |
| MPFDA | 7464 | 2.14 | 1 µg/L | | |
| MPFUnA | 8542 | 2.23 | 1 µg/L | | |
| MPFDoA | 11193 | 2.32 | 1 µg/L | | |
| MPFTeDA | 12706 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 22921 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 30245 | 2.13 | 1 µg/L | | |

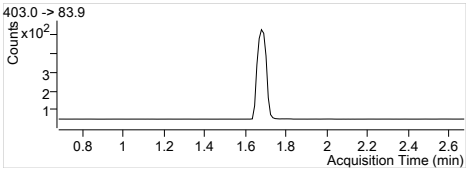
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 9306 | 1.09 | 12.50 | 13.51 µg/L | 108.10 |
| PFHxA 1 | 33244 | 1.43 | 12.50 | 12.03 µg/L | 96.21 |
| PFHxS 1 | 8576 | 1.68 | 12.50 | 12.82 µg/L | 102.59 |
| PFHpA 1 | 42668 | 1.69 | 12.50 | 12.83 µg/L | 102.67 |
| PFOA 1 | 46397 | 1.88 | 12.50 | 12.60 µg/L | 100.83 |
| PFOS 1 | 9274 | 1.97 | 12.50 | 13.04 µg/L | 104.29 |
| PFNA 1 | 41896 | 2.01 | 12.50 | 12.43 µg/L | 99.40 |
| PFDA 1 | 43455 | 2.14 | 12.50 | 12.14 µg/L | 97.11 |
| PFUnA 1 | 51071 | 2.23 | 12.50 | 13.52 µg/L | 108.15 |
| PFDoA 1 | 61193 | 2.32 | 12.50 | 12.55 µg/L | 100.43 |
| PFTrDA 1 | 70770 | 2.40 | 12.50 | 13.74 µg/L | 109.91 |
| PFTeDA 1 | 60793 | 2.47 | 12.50 | 13.55 µg/L | 108.42 |
| 13C2-PFHxA | 6691 | 1.43 | 100.00 | 104.12 µg/L | 104.12 |
| 18O2-PFHxS | 1496 | 1.68 | 100.00 | 90.36 µg/L | 90.36 |
| 13C4-PFHpA | 8064 | 1.69 | 100.00 | 94.34 µg/L | 94.34 |
| 13C4-PFOA | 8652 | 1.88 | 100.00 | 94.60 µg/L | 94.60 |
| 13C4-PFOS | 1882 | 1.98 | 100.00 | 92.70 µg/L | 92.70 |
| 13C5-PFNA | 8929 | 2.01 | 100.00 | 96.84 µg/L | 96.84 |
| 13C2-PFDA | 7396 | 2.14 | 100.00 | 97.08 µg/L | 97.08 |
| 13C2-PFUnA | 8542 | 2.23 | 100.00 | 94.01 µg/L | 94.01 |
| 13C2-PFDoA | 11193 | 2.32 | 100.00 | 93.38 µg/L | 93.38 |
| 13C2-PFTeDA | 12997 | 2.47 | 100.00 | 90.60 µg/L | 90.60 |
| 13C6-PFHxA | 22921 | 1.43 | 100.00 | 107.06 µg/L | 107.06 |
| 13C9-PFDA | 30245 | 2.13 | 100.00 | 105.83 µg/L | 105.83 |



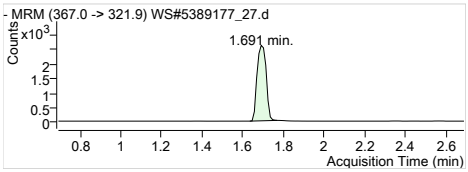



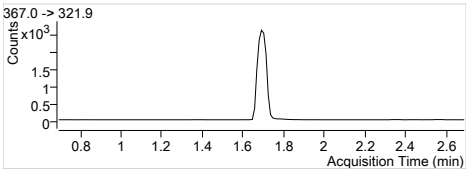

**MPFHxA** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



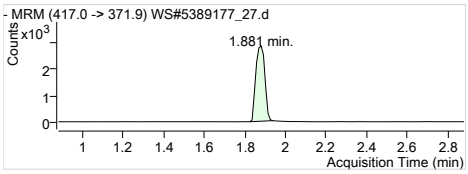



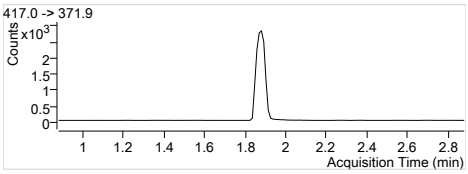

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: CC



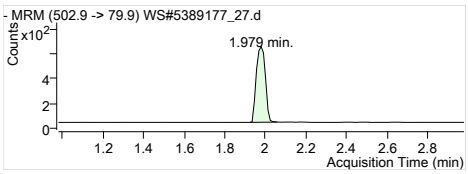



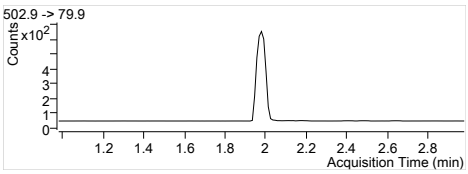

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: CC



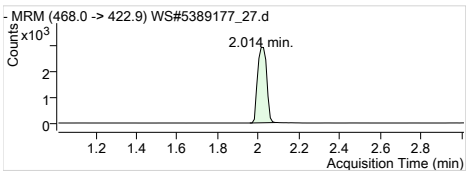



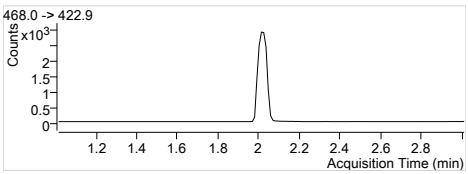

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



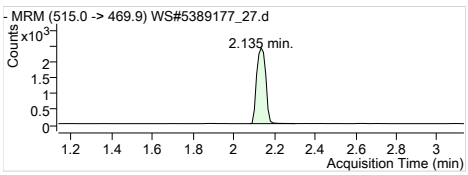



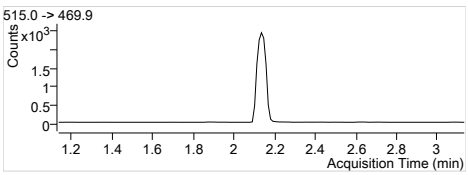

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



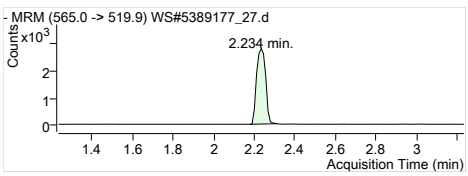



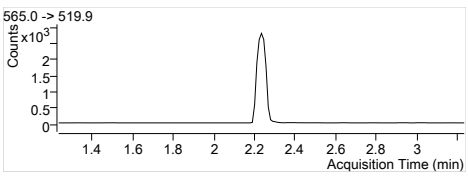

**MPFNA** Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: CC



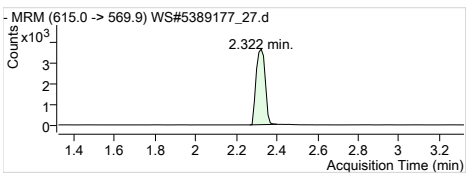



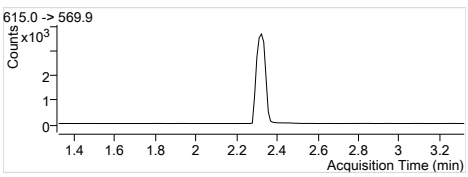

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



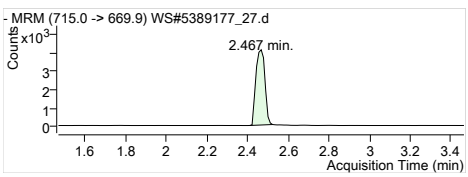



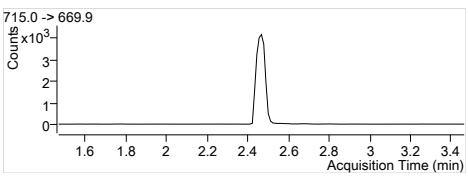

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: CC



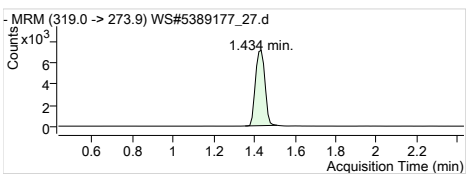



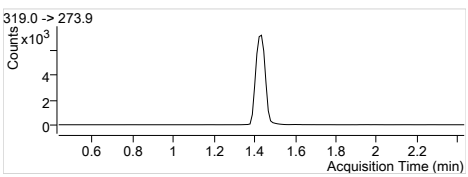

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



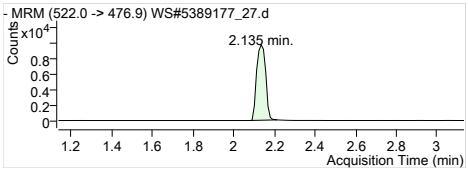



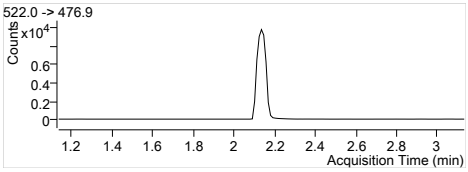

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



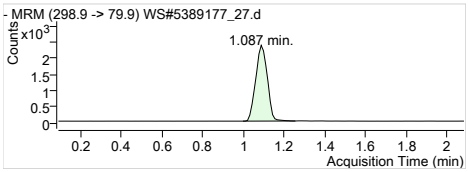



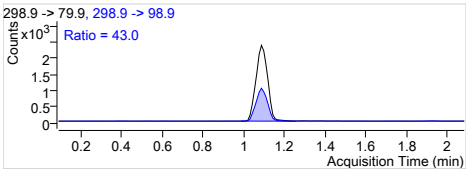

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



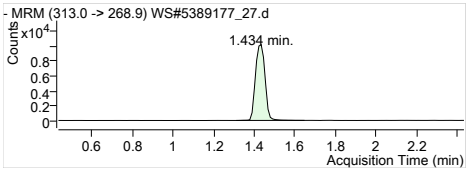



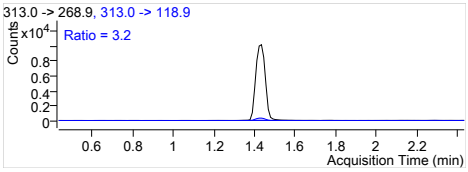

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



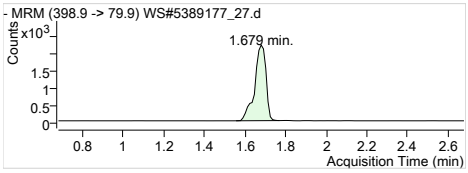



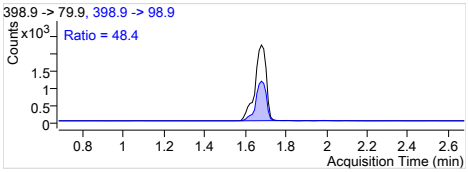

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 13.51 µg/L
Area ratio: 6.22059
Sample type: CC



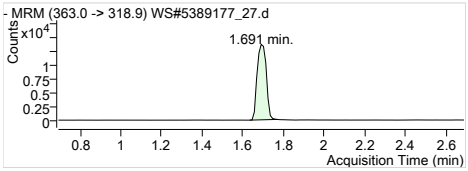



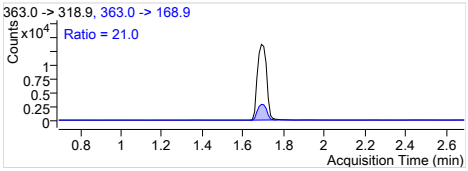

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 12.03 µg/L
Area ratio: 4.96847
Sample type: CC



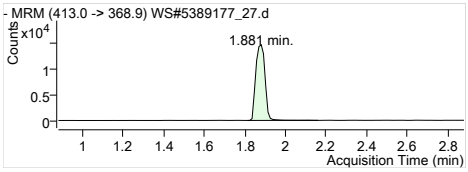



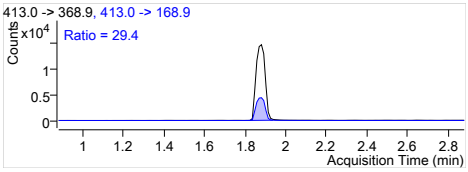

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 12.82 µg/L
Area ratio: 5.73262
Sample type: CC



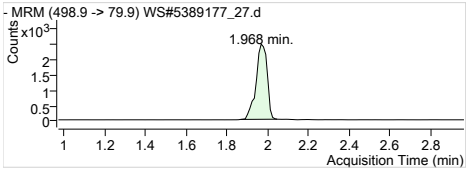



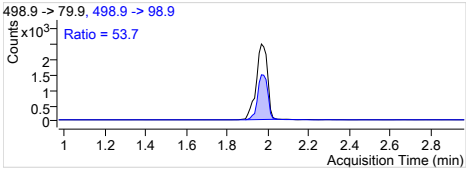

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.83 µg/L
Area ratio: 5.29117
Sample type: CC



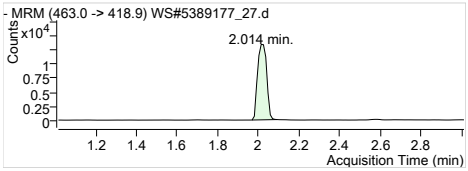



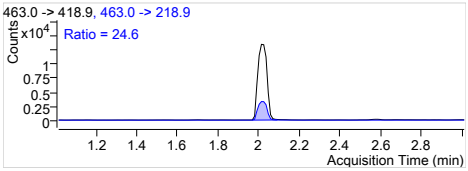

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 12.60 µg/L
Area ratio: 5.36258
Sample type: CC



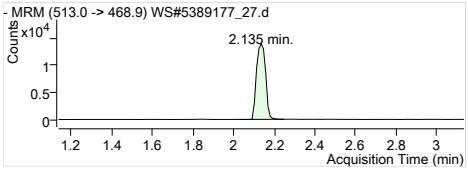



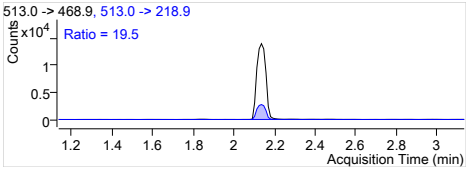

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 13.04 µg/L
Area ratio: 4.92774
Sample type: CC



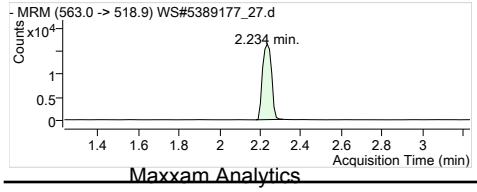



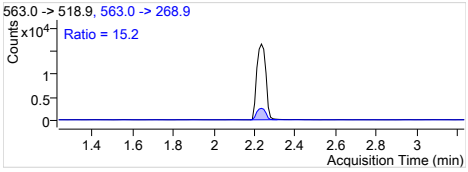

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 12.43 µg/L
Area ratio: 4.69265
Sample type: CC



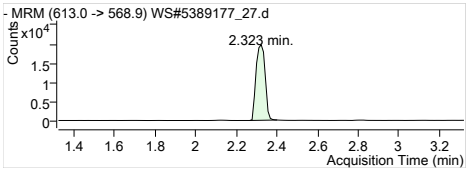



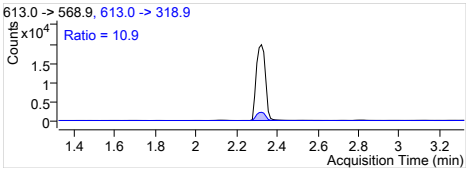

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 12.14 µg/L
Area ratio: 5.82195
Sample type: CC



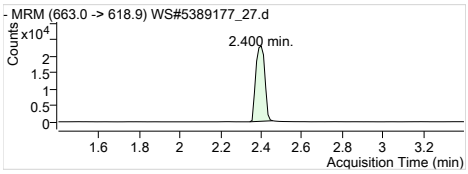



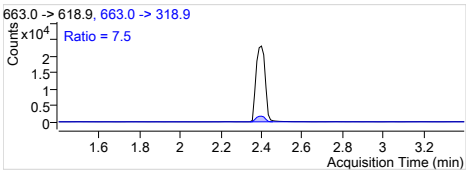

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 13.52 µg/L
Area ratio: 5.97881
Sample type: CC



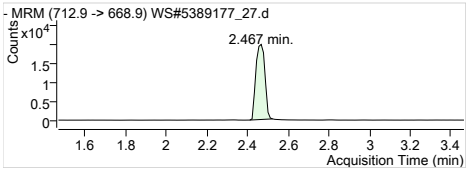



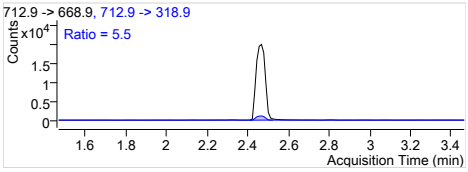

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 12.55 µg/L
Area ratio: 5.46708
Sample type: CC



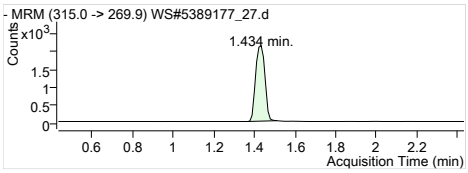



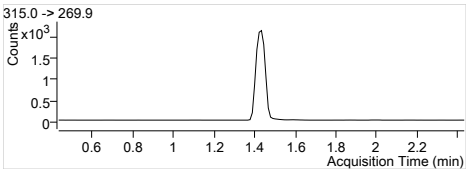

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 13.74 µg/L
Area ratio: 5.56981
Sample type: CC



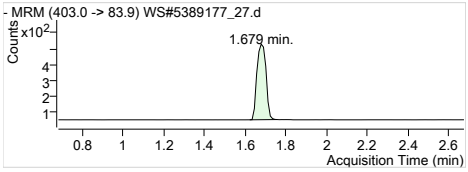



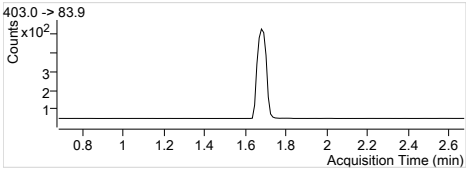

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 13.55 µg/L
Area ratio: 4.78459
Sample type: CC



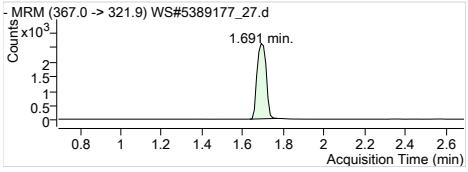



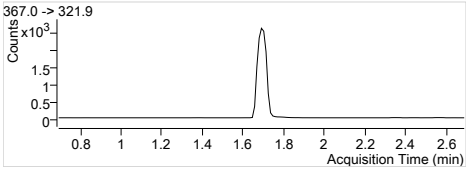

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 104.12 µg/L
Area ratio: 0.29192
Sample type: CC



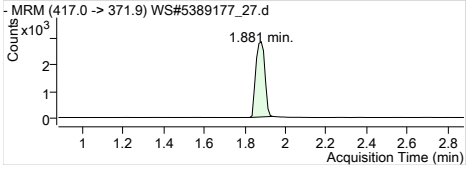



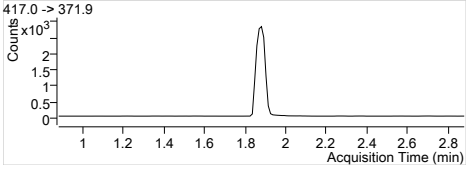

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 90.36 µg/L
Area ratio: 0.06527
Sample type: CC



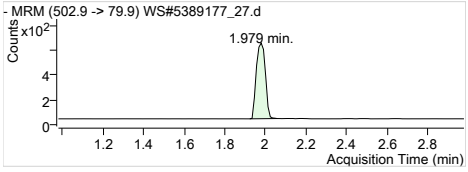



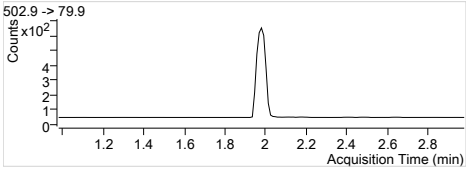

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 94.34 µg/L
Area ratio: 0.35182
Sample type: CC



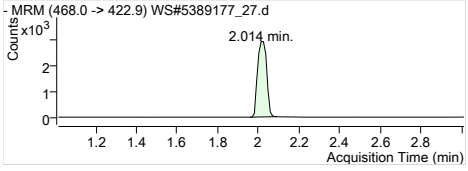



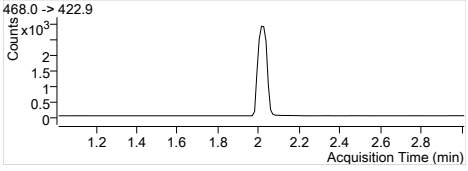

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 94.60 µg/L
Area ratio: 0.37747
Sample type: CC



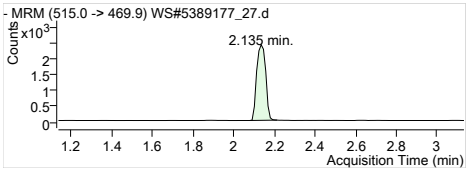



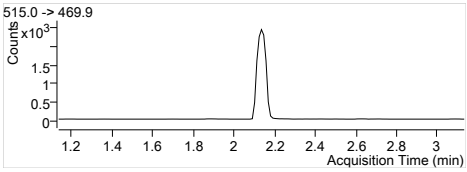

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 92.70 µg/L
Area ratio: 0.08211
Sample type: CC



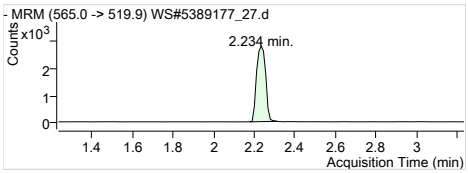



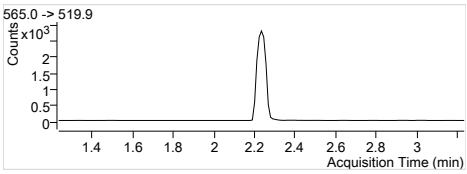

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 96.84 µg/L
Area ratio: 0.38956
Sample type: CC



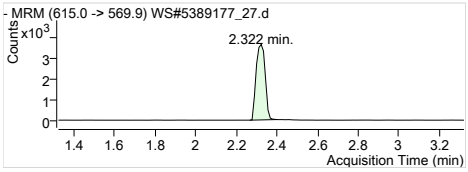



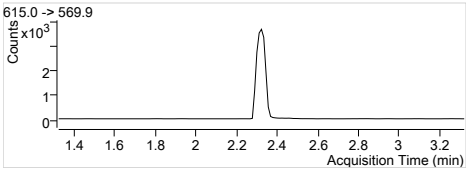

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 97.08 µg/L
Area ratio: 0.24454
Sample type: CC



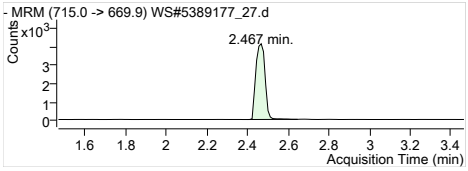



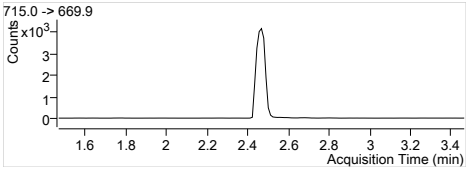

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 94.01 µg/L
Area ratio: 0.28243
Sample type: CC



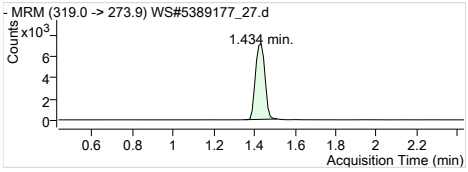



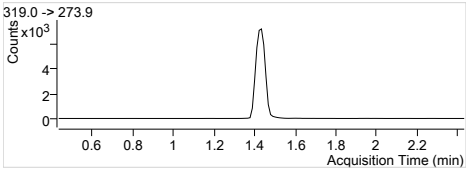

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 93.38 µg/L
Area ratio: 0.37008
Sample type: CC



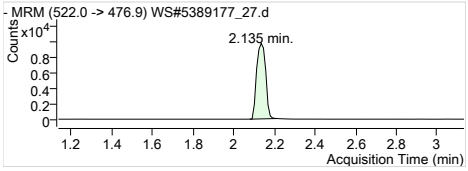



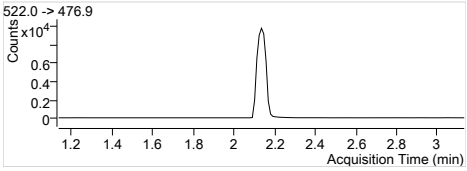

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 90.60 µg/L
Area ratio: 0.42972
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 107.06 µg/L
Area ratio: 0
Sample type: CC



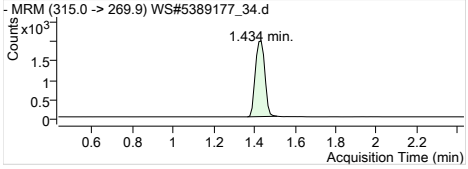

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 105.83 µg/L
Area ratio: 0
Sample type: CC

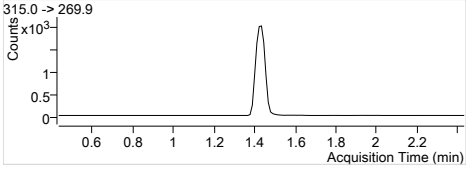
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177\QuantResults\PFC_Water_Low_180208_WS#5389177_EToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_34.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P3-A5 |
| **Acq. Date** | 2018/02/09 2:40:13 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

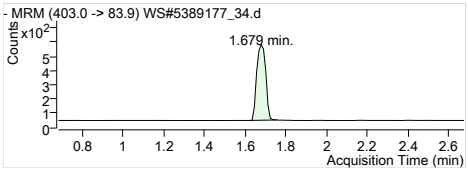
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6392 | 1.43 | 1 µg/L | | |
| MPFHxS | 1641 | 1.68 | 1 µg/L | | |
| MPFHpA | 8167 | 1.69 | 1 µg/L | | |
| MPFOA | 9017 | 1.88 | 1 µg/L | | |
| MPFOS | 1964 | 1.98 | 1 µg/L | | |
| MPFNA | 8662 | 2.02 | 1 µg/L | | |
| MPFDA | 6972 | 2.14 | 1 µg/L | | |
| MPFUnA | 8506 | 2.23 | 1 µg/L | | |
| MPFDoA | 11795 | 2.32 | 1 µg/L | | |
| MPFTeDA | 13090 | 2.47 | 1 µg/L | | |
| 13C6-PFHxA IS | 23371 | 1.43 | 1 µg/L | | |
| 13C9-PFDA IS | 30394 | 2.13 | 1 µg/L | | |

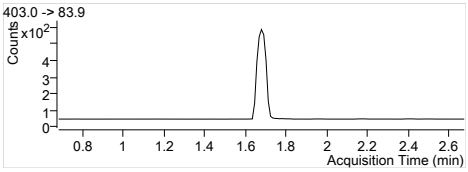
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 8590 | 1.09 | 12.50 | 11.37 µg/L | 90.96 |
| PFHxA 1 | 33063 | 1.43 | 12.50 | 12.52 µg/L | 100.13 |
| PFHxS 1 | 8736 | 1.68 | 12.50 | 11.92 µg/L | 95.34 |
| PFHpA 1 | 43035 | 1.69 | 12.50 | 12.78 µg/L | 102.25 |
| PFOA 1 | 47570 | 1.88 | 12.50 | 12.40 µg/L | 99.20 |
| PFOS 1 | 9087 | 1.97 | 12.50 | 12.25 µg/L | 97.99 |
| PFNA 1 | 41263 | 2.01 | 12.50 | 12.61 µg/L | 100.90 |
| PFDA 1 | 45094 | 2.14 | 12.50 | 13.47 µg/L | 107.79 |
| PFUnA 1 | 49938 | 2.23 | 12.50 | 13.28 µg/L | 106.21 |
| PFDoA 1 | 64421 | 2.32 | 12.50 | 12.54 µg/L | 100.33 |
| PFTrDA 1 | 70006 | 2.40 | 12.50 | 13.19 µg/L | 105.53 |
| PFTeDA 1 | 60170 | 2.47 | 12.50 | 13.02 µg/L | 104.18 |
| 13C2-PFHxA | 6392 | 1.43 | 100.00 | 97.55 µg/L | 97.55 |
| 18O2-PFHxS | 1641 | 1.68 | 100.00 | 97.20 µg/L | 97.20 |
| 13C4-PFHpA | 8167 | 1.69 | 100.00 | 93.71 µg/L | 93.71 |
| 13C4-PFOA | 9017 | 1.88 | 100.00 | 96.70 µg/L | 96.70 |
| 13C4-PFOS | 1964 | 1.98 | 100.00 | 94.88 µg/L | 94.88 |
| 13C5-PFNA | 8662 | 2.02 | 100.00 | 92.14 µg/L | 92.14 |
| 13C2-PFDA | 6891 | 2.14 | 100.00 | 90.01 µg/L | 90.01 |
| 13C2-PFUnA | 8506 | 2.23 | 100.00 | 93.16 µg/L | 93.16 |
| 13C2-PFDoA | 11795 | 2.32 | 100.00 | 97.92 µg/L | 97.92 |
| 13C2-PFTeDA | 13281 | 2.47 | 100.00 | 92.13 µg/L | 92.13 |
| 13C6-PFHxA | 23371 | 1.43 | 100.00 | 109.17 µg/L | 109.17 |
| 13C9-PFDA | 30394 | 2.13 | 100.00 | 106.35 µg/L | 106.35 |



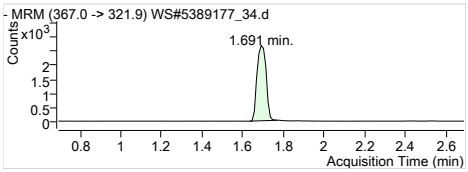



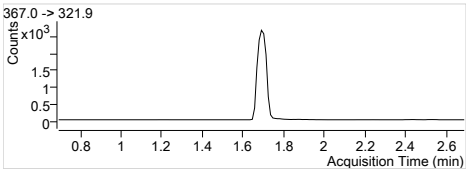

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.434 (1.434) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



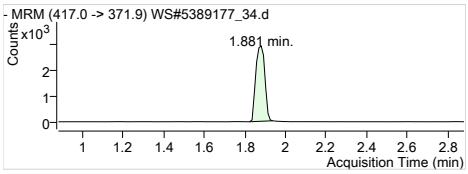



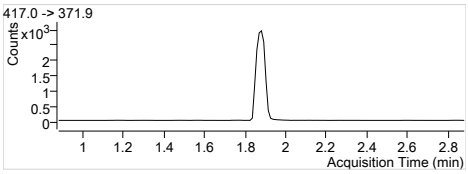

**MPFHxS** Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: CC



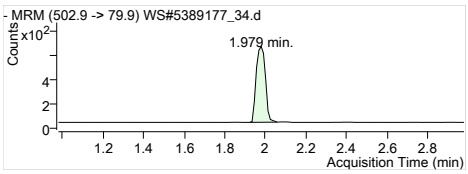



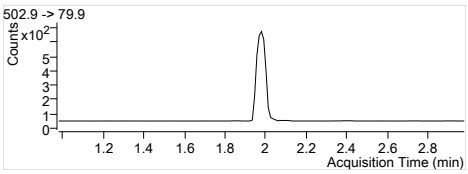

**MPFHpA** Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: CC



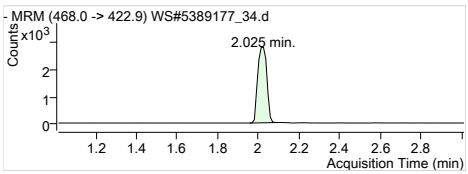



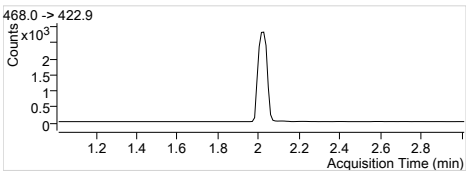

**MPFOA** Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



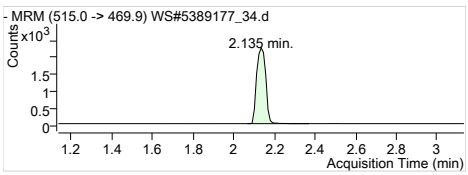



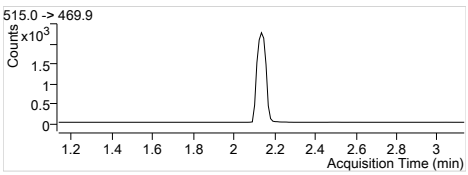

**MPFOS** Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



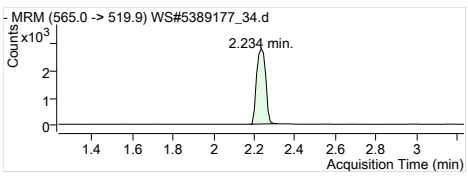



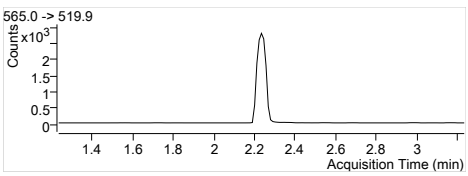

**MPFNA** Internal Standard
RT (Exp. RT): 2.025 (2.014)
Concentration: 1 µg/L
Sample type: CC



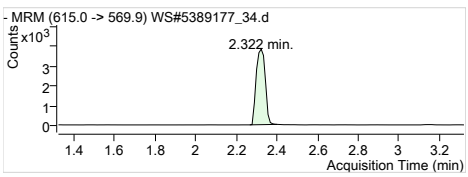



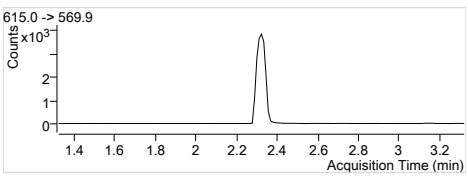

**MPFDA** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



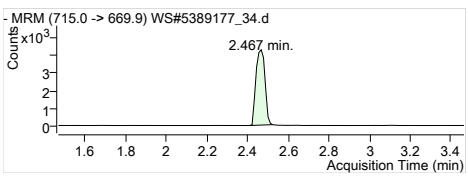



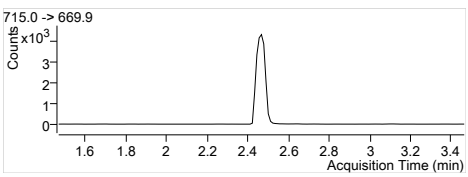

**MPFUnA** Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: CC



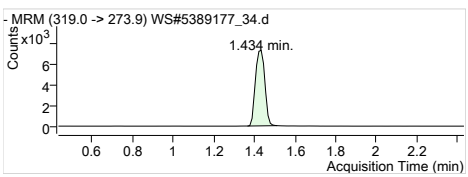



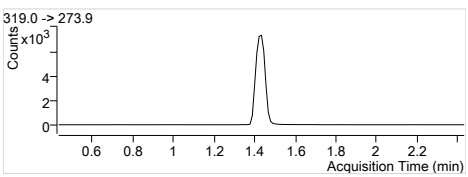

**MPFDoA** Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



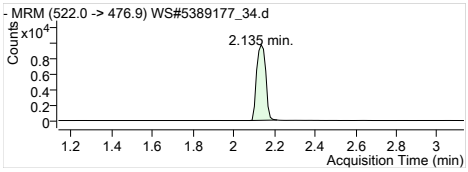



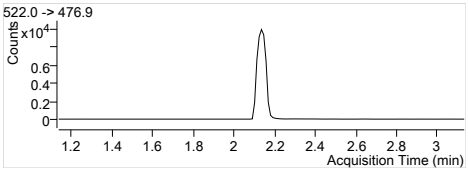

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



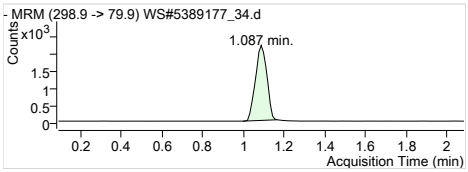



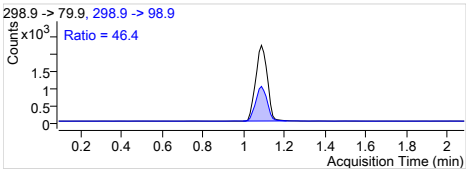

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.434 (1.434)
Concentration: 1 µg/L
Sample type: CC



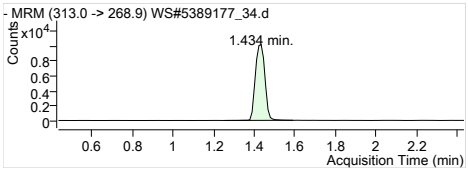



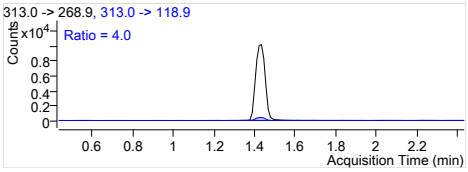

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



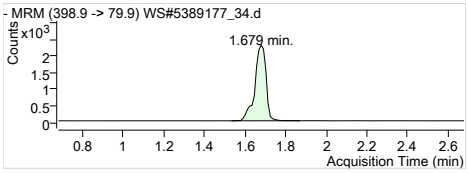



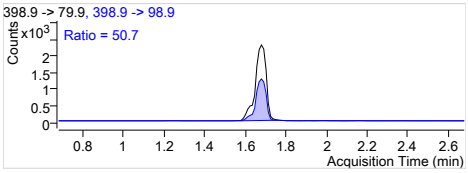

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 11.37 µg/L
Area ratio: 5.23461
Sample type: CC



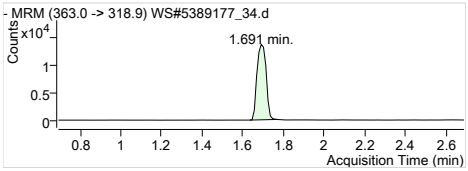



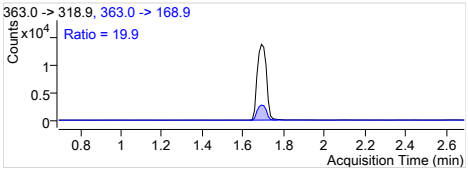

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 12.52 µg/L
Area ratio: 5.17256
Sample type: CC



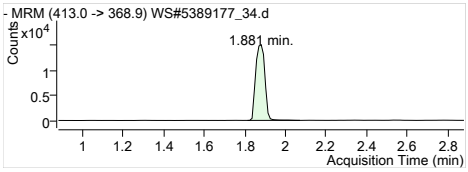



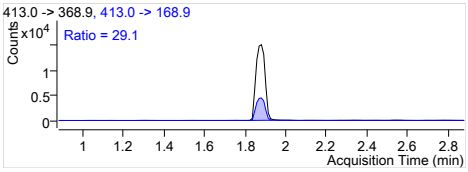

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 11.92 µg/L
Area ratio: 5.32358
Sample type: CC



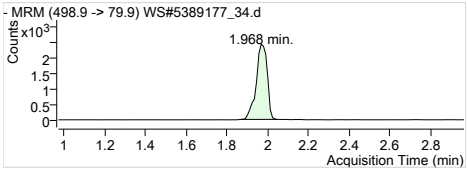



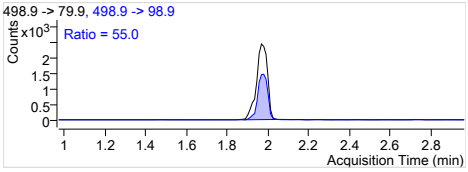

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.78 µg/L
Area ratio: 5.26938
Sample type: CC



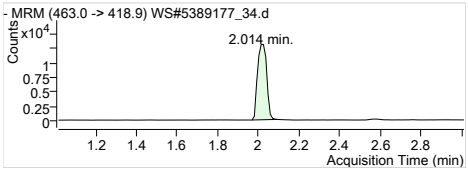



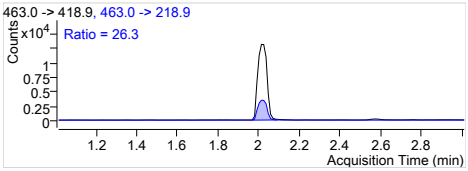

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 12.40 µg/L
Area ratio: 5.27559
Sample type: CC



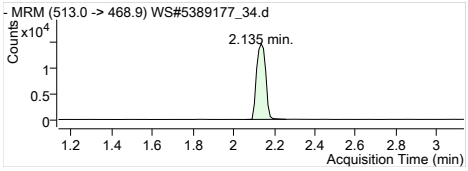



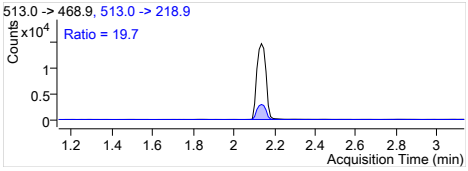

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 12.25 µg/L
Area ratio: 4.62678
Sample type: CC



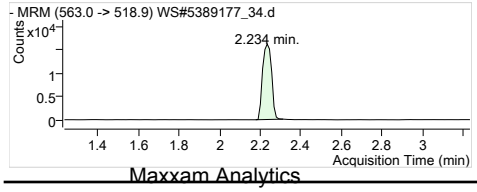



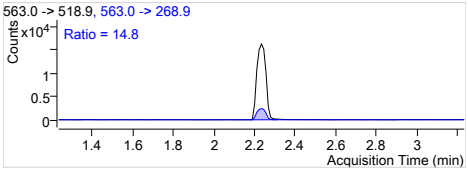

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 12.61 µg/L
Area ratio: 4.76368
Sample type: CC



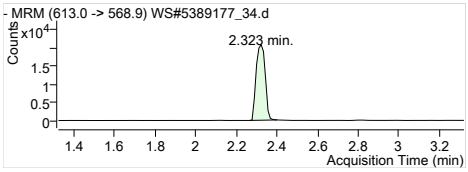



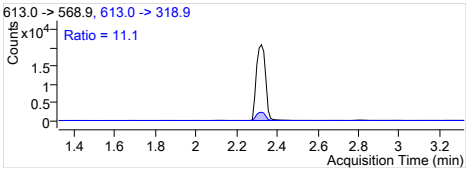

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 13.47 µg/L
Area ratio: 6.46787
Sample type: CC



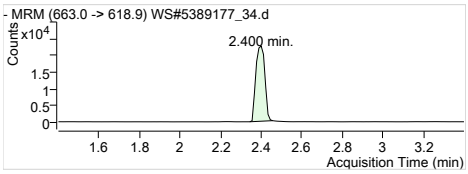



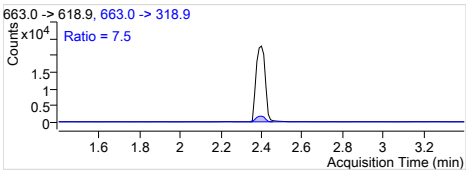

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 13.28 µg/L
Area ratio: 5.87091
Sample type: CC



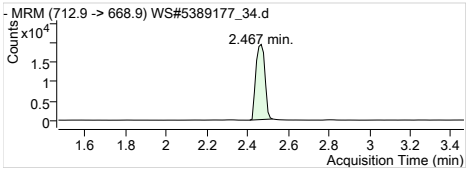



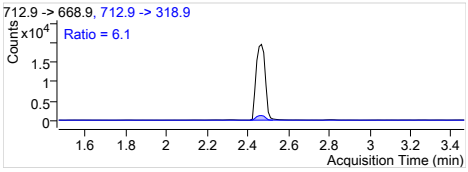

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 12.54 µg/L
Area ratio: 5.46172
Sample type: CC



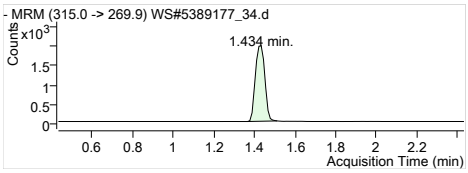



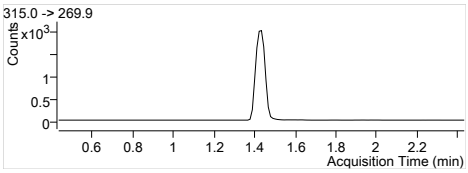

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 13.19 µg/L
Area ratio: 5.34805
Sample type: CC



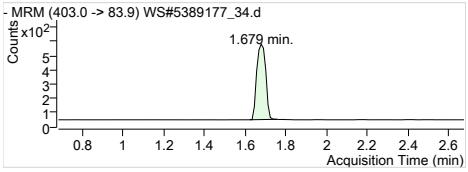



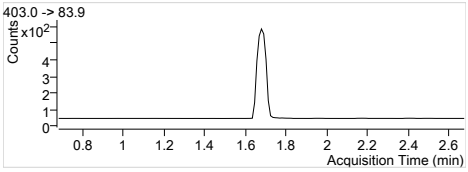

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 13.02 µg/L
Area ratio: 4.59664
Sample type: CC



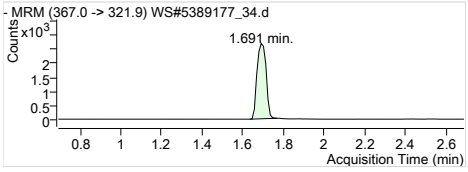



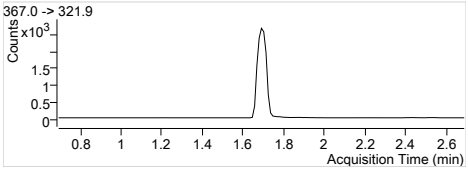

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 97.55 µg/L
Area ratio: 0.27350
Sample type: CC



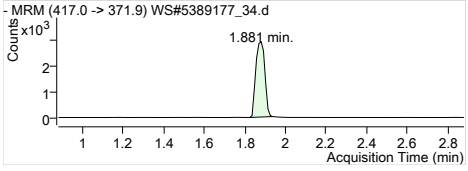



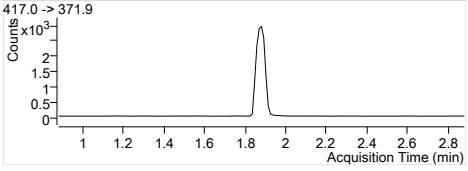

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 97.20 µg/L
Area ratio: 0.07022
Sample type: CC



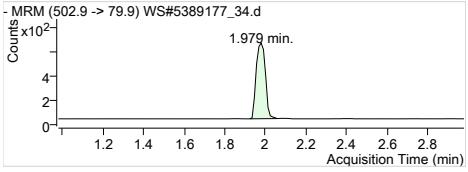



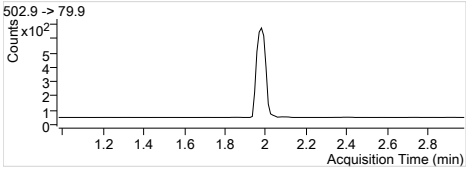

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 93.71 µg/L
Area ratio: 0.34945
Sample type: CC



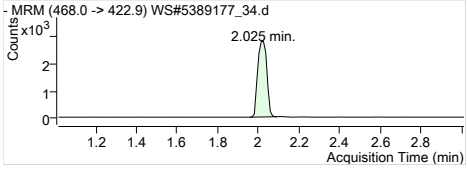



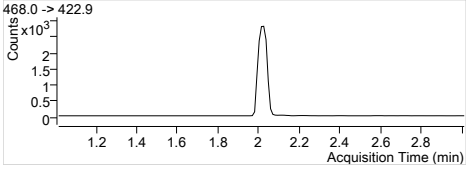

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 96.70 µg/L
Area ratio: 0.38582
Sample type: CC



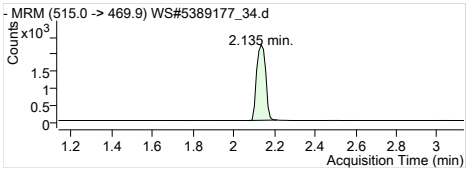



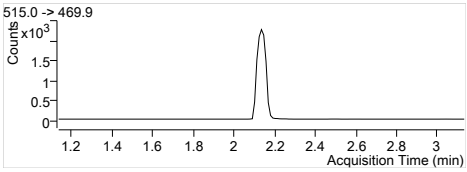

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 94.88 µg/L
Area ratio: 0.08404
Sample type: CC



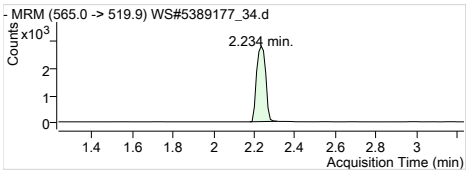



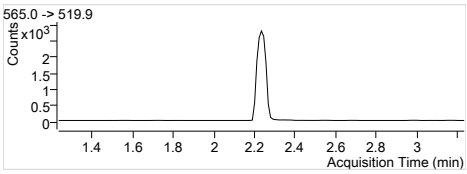

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.025 (2.014)
Calc. conc. 92.14 µg/L
Area ratio: 0.37063
Sample type: CC



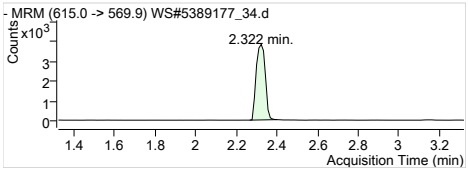



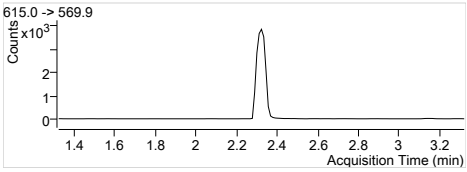

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 90.01 µg/L
Area ratio: 0.22672
Sample type: CC



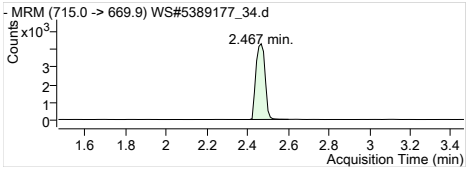



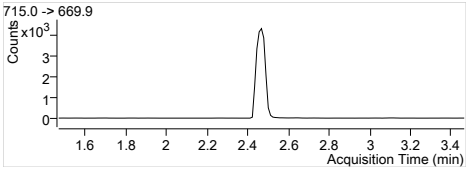

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 93.16 µg/L
Area ratio: 0.27986
Sample type: CC



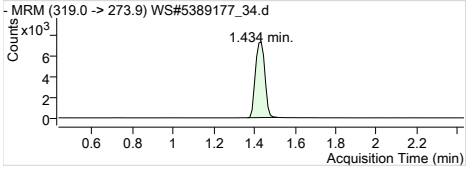



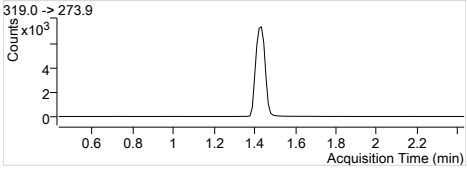

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 97.92 µg/L
Area ratio: 0.38807
Sample type: CC



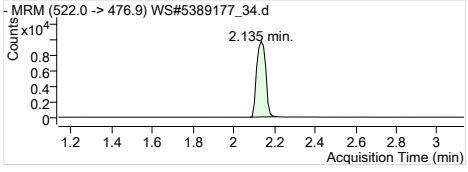



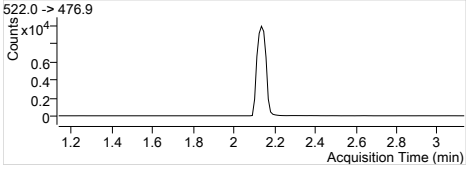

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 92.13 µg/L
Area ratio: 0.43696
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.434 (1.434)
Calc. conc. 109.17 µg/L
Area ratio: 0
Sample type: CC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 106.35 µg/L
Area ratio: 0
Sample type: CC

# Quantitation Results

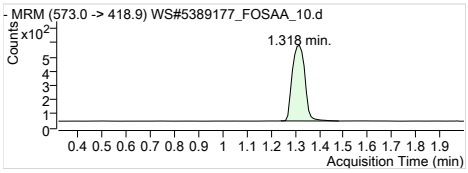
Agilent Technologies

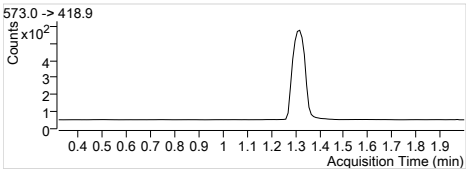
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A2 |
| **Acq. Date** | 2018/02/08 6:23:15 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

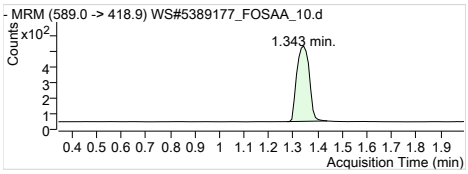
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1934 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1726 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 24330 | 0.91 | 1 µg/L | | |

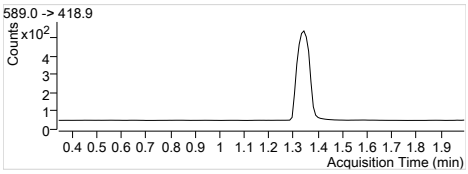
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 654 | 1.31 | 0.83 | 0.90 µg/L | 108.39 |
| EtFOSAA 1 | 657 | 1.34 | 0.83 | 0.87 µg/L | 104.99 |
| D3-MeFOSAA | 1932 | 1.32 | 100.00 | 95.32 µg/L | 95.32 |
| D5-EtFOSAA | 1750 | 1.34 | 100.00 | 94.78 µg/L | 94.78 |
| 13C9-PFDA | 23423 | 0.91 | 100.00 | 108.17 µg/L | 108.17 |



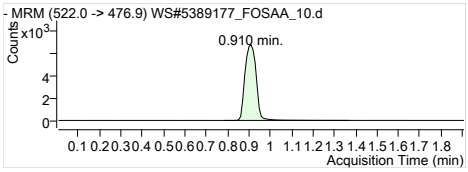



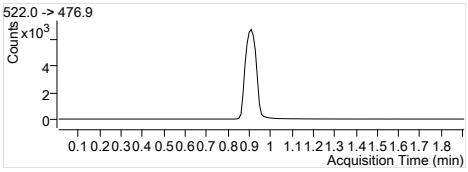

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: CC



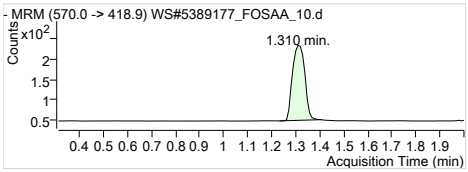



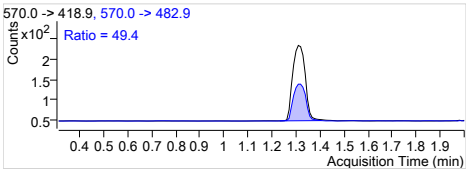

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: CC



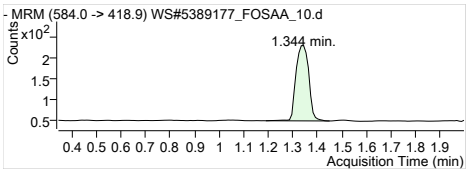



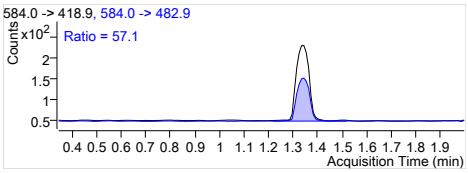

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: CC



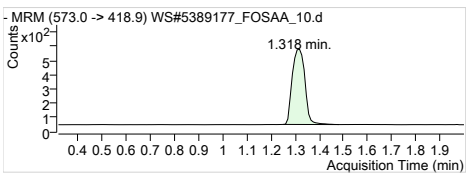



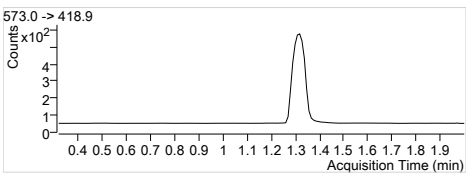

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 0.90 µg/L
Area ratio: 0.33816
Sample type: CC



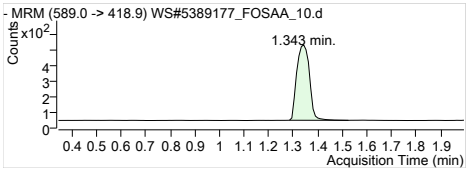



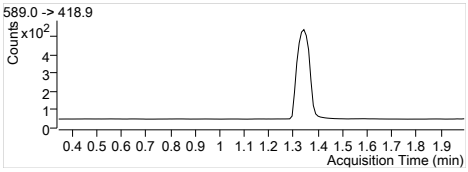

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.344 (1.344)
Calc. conc. 0.87 µg/L
Area ratio: 0.38065
Sample type: CC



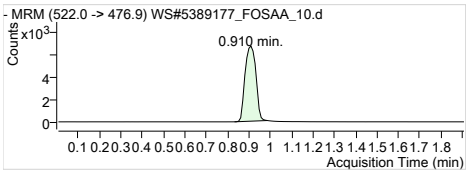



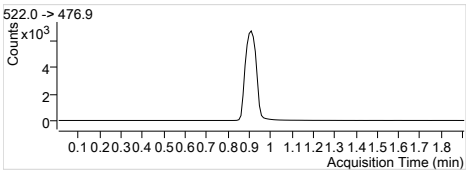

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 95.32 µg/L
Area ratio: 0.07941
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 94.78 µg/L |
| Area ratio: | 0.07193 |
| Sample type: | CC |



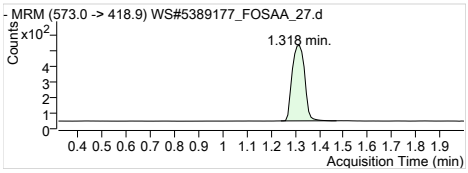

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 108.17 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

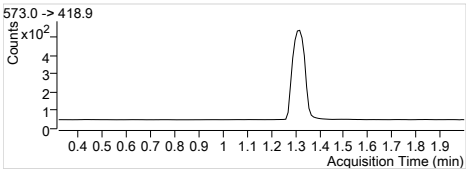
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_27.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A5 |
| **Acq. Date** | 2018/02/08 7:04:09 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

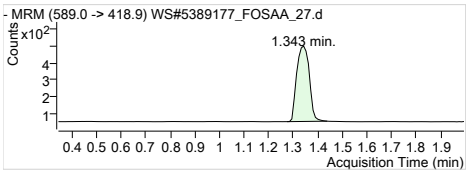
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1752 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1604 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 22437 | 0.91 | 1 µg/L | | |

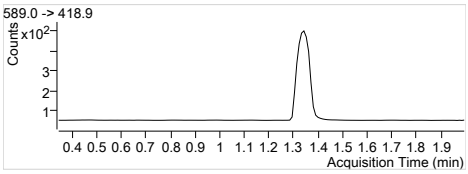
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 8245 | 1.31 | 12.50 | 12.90 µg/L | 103.20 |
| EtFOSAA 1 | 8848 | 1.33 | 12.50 | 13.06 µg/L | 104.45 |
| D3-MeFOSAA | 1754 | 1.32 | 100.00 | 93.84 µg/L | 93.84 |
| D5-EtFOSAA | 1623 | 1.34 | 100.00 | 95.32 µg/L | 95.32 |
| 13C9-PFDA | 21696 | 0.91 | 100.00 | 100.20 µg/L | 100.20 |



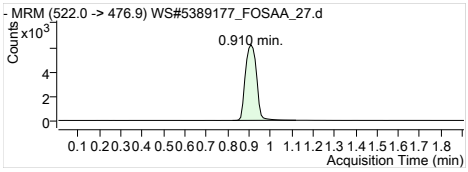



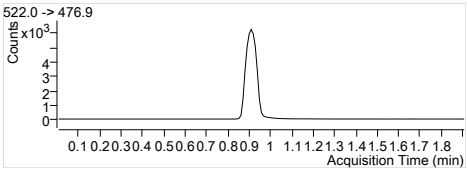

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: CC



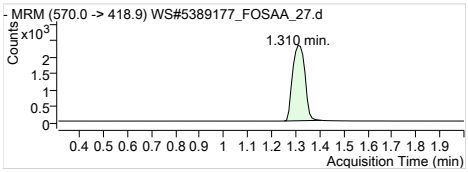



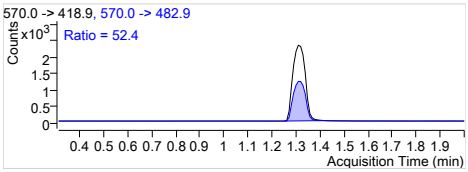

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: CC



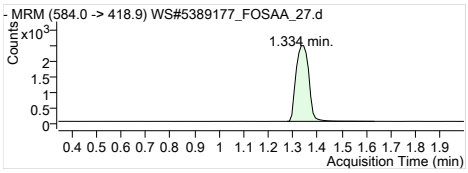



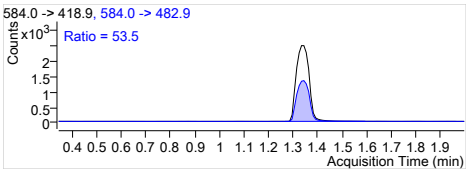

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: CC



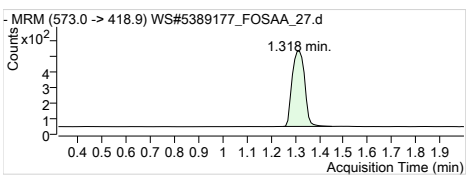



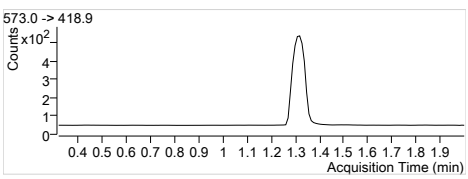

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 12.90 µg/L
Area ratio: 4.70605
Sample type: CC



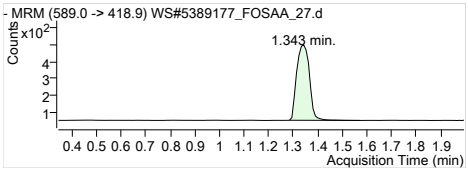



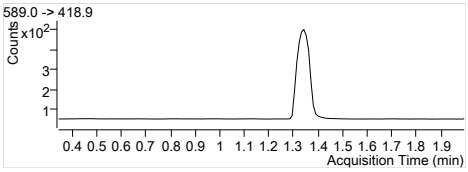

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.344)
Calc. conc. 13.06 µg/L
Area ratio: 5.51621
Sample type: CC



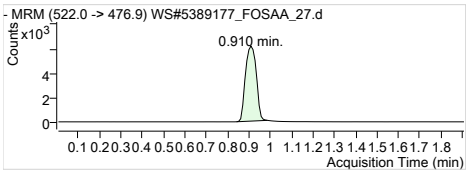



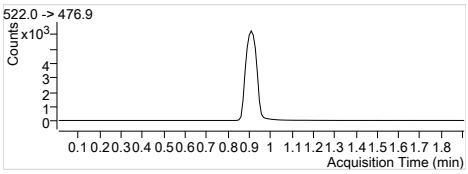

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 93.84 µg/L
Area ratio: 0.07817
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.343 (1.343) |
| Calc. conc. | 95.32 µg/L |
| Area ratio: | 0.07234 |
| Sample type: | CC |



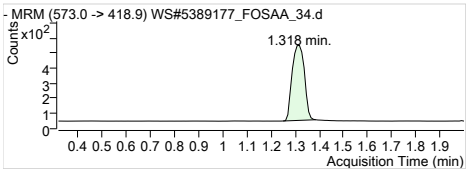

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 0.910 (0.910) |
| Calc. conc. | 100.20 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

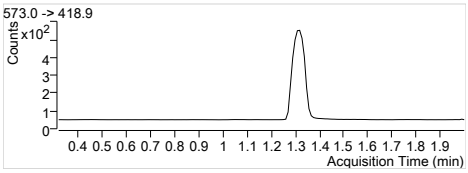
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180208\WS#5389177_FOSAA\QuantResults\PFC_Water_Low_180207_WS#5389177_FOSAA_ETOxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5389177_FOSAA_34.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P3-A5 |
| **Acq. Date** | 2018/02/08 7:21:00 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

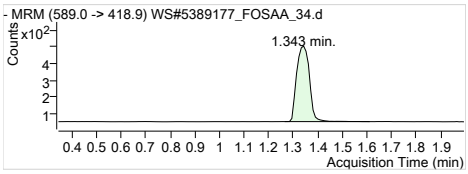
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1770 | 1.32 | 1 µg/L | | |
| D5-EtFOSAA IS | 1647 | 1.34 | 1 µg/L | | |
| 13C9-PFDA IS | 22407 | 0.91 | 1 µg/L | | |

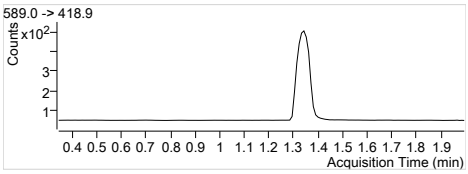
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 8302 | 1.31 | 12.50 | 12.86 µg/L | 102.85 |
| EtFOSAA 1 | 8688 | 1.33 | 12.50 | 12.48 µg/L | 99.87 |
| D3-MeFOSAA | 1815 | 1.32 | 100.00 | 97.23 µg/L | 97.23 |
| D5-EtFOSAA | 1630 | 1.34 | 100.00 | 95.86 µg/L | 95.86 |
| 13C9-PFDA | 21686 | 0.91 | 100.00 | 100.15 µg/L | 100.15 |



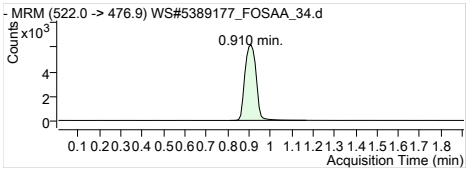



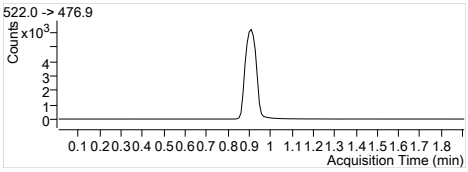

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.318 (1.318)
Concentration: 1 µg/L
Sample type: CC



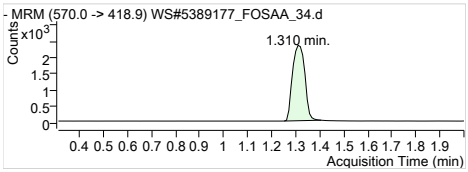



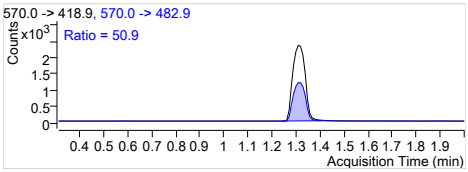

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.343 (1.343)
Concentration: 1 µg/L
Sample type: CC



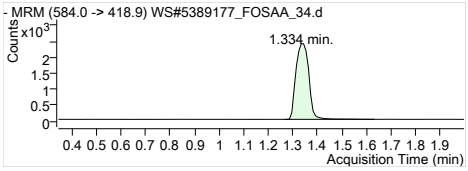



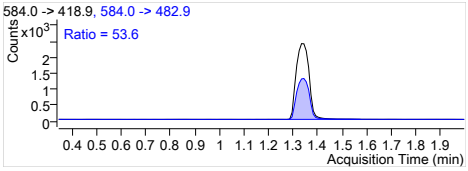

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 0.910 (0.910)
Concentration: 1 µg/L
Sample type: CC



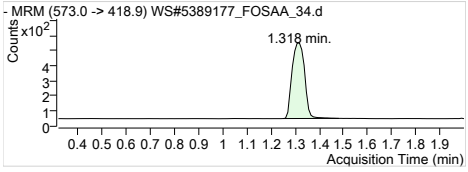



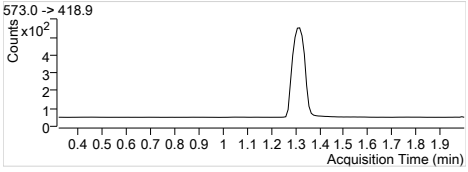

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 12.86 µg/L
Area ratio: 4.69040
Sample type: CC




**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.344)
Calc. conc. 12.48 µg/L
Area ratio: 5.27505
Sample type: CC




**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.318 (1.318)
Calc. conc. 97.23 µg/L
Area ratio: 0.08100
Sample type: CC

## DoD Projects - Internal Data Validation Checklist

Run date: 2018/02/15

Worksheet # (s): 53966 99

Analysis: PFOSALCM-W

| | Primary review by the analyst - 1st 100 % analysis review | 1st 100% review yes | no | n/a | *2nd 100% review |
|---|---|---|---|---|---|
| 1 | Sample analyses meet hold time criteria 2018/02/20 QR | X | ✓ | | ✓ |
| 2 | Analysis set-up meets method criteria | ✓ | | | ✓ |
| 3 | Tuning and correct calibration used - criteria meets method criteria | ✓ | | | ✓ |
| 4 | SQC/Control Charts updated, analysis in statistical/method control | ✓ | | | ✓ |
| 5 | Internal area counts checked (if applicable) | ✓ | | | ✓ |
| 6 | LCS, SRM are within acceptance criteria | ✓ | | | ✓ |
| 7 | Surrogate Recovery(s) is within acceptance criteria | ✓ | | | ✓ |
| 8 | Method Blank meets acceptance criteria | ✓ | | | ✓ |
| 9 | Matrix Spike recovery(s) meets acceptance criteria | ✓ | | | ✓ |
| 10 | Duplicate precision meets acceptance criteria | ✓ | | | ✓ |
| 11 | QC is documented on the run logs | ✓ | | | ✓ |
| 12 | Runs checked for carryover | ✓ | | | ✓ |
| 13 | Prep log / worksheet(s) are present, signed / dated by a prep / instrument analysts | ✓ | | | ✓ |
| 14 | Initial weights, splits, impringer volumes (where applicable) are documented | ✓ | | | ✓ |
| 15 | Standards and reagents traceable to Certificates of Analysis | ✓ | | | ✓ |
| 16 | Samples above calibration range diluted and reanalyzed | | | ✓ | ✓ |
| 17 | Dilution factors (where justified) have been checked for correctness and entered | ✓ | | | ✓ |
| 18 | Analytical observations/anomalies documented in LIMS | ✓ | | | ✓ |
| 19 | Random calculation checked and in correct units | ✓ | | | ✓ |
| 20 | If corrective actions were applied they are documented, initialed & dated | | | ✓ | ✓ |
| 21 | Manual integration – before & after data with a reason included, initialed & dated | | | ✓ | ✓ |
| 22 | Transferred data is validated in LIMS for correctness | ✓ | | | ✓ |
| 23 | Data package assembled (where required) | ✓ | | | ✓ |

Reviewed by: MEP Date: 2018/02/16

Comments:

| | Secondary Supervisor/Qualified Data Review Staff - 2nd 100% verification review | yes | no | n/a |
|---|---|---|---|---|
| 1 | Repeats documented and referenced | | | ✓ |
| 2 | Method and sample deviations noted, anomalies described (if applicable) | | | ✓ |
| 3 | Data and QC validated in LIMS | ✓ | | |
| 4 | Random calculation checked | ✓ | | |
| 5 | Benchsheet (s) signed and dated | ✓ | | |
| 6 | Data Package (if required) checked for completeness | ✓ | | |

Reviewed by: [signature] Date: 2018/02/16

Comments:

***Note: 2nd 100% verification review documented by secondary qualified data review***
***Primary and Secondary Internal Data Review Check must be performed by a different person***

# Worksheet Data Validation Checklist - Extractable Organics

Worksheet # PFOSALCM-W | Testcode: 5396699

| Sample Preparation | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Samples extracted within hold time | • | | |
| 2 | Client sample ID verified against Lab ID (waters & oils) | | | ✓ |
| 3 | Parameter list and Client comments reviewed, (Spiking solutions matched to parameter list) | ✓ | | |
| 4 | Height of sediment or if sample was decanted, recorded on worksheet | ✓ | | |
| 5 | Method required QC processed with samples, maximum batch size = 20 client samples. | ✓ | | |
| 6 | Sample, duplicate, matrix spike appear similar, initial sample as well as final extract | ✓ | | |
| 7 | Sample weight or initial volume and extract final volume, aliquot factor clearly recorded. | ✓ | | |
| 8 | If performed any additional dilution clearly recorded | ✓ | | |
| 9 | Matrix spike / Duplicate performed on IOL samples if present | | | ✓ |
| 10 | Spiking solutions valid (haven't expired), ID and volume used clearly identified on worksheet | ✓ | | |
| 11 | Spiking process witnessed and signed off | ✓ | | |
| 12 | Extraction type recorded (N3A2B = neutral, 3 x acidic, 2 x basic) | | | ✓ |
| 13 | Sample prep deviations documented within CompliantPro as a Policy Deviation | | | ✓ |
| 14 | Job Remarks reviewed on 2nd page of worksheet. | ✓ | | |
| 15 | Worksheet and reagent tracking record completed and authorized. | ✓ | | |

Reviewed by: [signature] | Date: 2018/2/13

Comments:

| Worksheet Approval | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Verified the position of the vials in autosampler against sequence list; signed off sequence list | | | |
| 2 | Calibration and CCV standards valid ( haven't expired) | | | |
| 3 | Initial calibration curve and DFTPP tune (if applicable) acceptable | | | |
| 4 | Continuing and Final CCV and DFTPP tune (if applicable) acceptable | | | |
| 5 | System performance check acceptable (if applicable) | | | |
| 6 | Internal standard responses acceptable | | | |
| 7 | Method blank meets acceptance criteria | | | |
| 8 | Lab Control Samples recoveries meets acceptance criteria | | | |
| 9 | Duplicate RPD meets acceptance criteria | | | |
| 10 | Matrix spike recoveries meets acceptance criteria | | | |
| 11 | Surrogate recoveries meets acceptance criteria | | | |
| 12 | Appropriate control charts updated | | | |
| 13 | Samples above calibration range diluted and reanalyzed | | | |
| 14 | Dilutions clearly documented on tracking record, inst file and verified during data upload | | | |
| 15 | Samples following high level samples checked for carryover. | | | |
| 16 | Mass spectra ion ratios acceptable for positive results, hardcopy in file. | | | |
| 17 | Analytical observations / anomalies documented | | | |
| 18 | DQW comments entered in LIMS, hardcopy in file | | | |
| 19 | Sample Prep section (above) reviewed and verified. | | | |
| 20 | WS Approval performed in LIMS | | | |

Reviewed by: | Date:

Comments:

| Worksheet Validation | | yes | no | n/a |
|---|---|---|---|---|
| 1 | Calibration, QC and sample results reviewed and determined acceptable | | | |
| 2 | Manual integrations verified | | | |
| 3 | Random calculation checked | | | |
| 4 | Data and QC validated in LIMS | | | |
| 5 | Comments reviewed for appropriateness | | | |
| 6 | Reworks / relogs documented in file | | | |
| 7 | Worksheet signed and dated, | | | |
| 8 | Worksheet approved and validated within LIMS | | | |

Reviewed by: | Date:

Comments:

Helper - TO
BBL - FCD-00002
2018/02/14

**WS# : 5396699**

Page #: 1/2

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Tuesday, February 13, 2018

Assigned to : Shahbaz Ahmad

Test Code : PFOSALCM-W

Instrument Id:

Test Description : PFOS and PFOA in water by LC-MS/MS

sediment cm ml ml SAD 2018/02/13

| Job Number | Sample Number | D | Sample ID | F | % Moisture | Wt or Vol | Final Vol | DF or AF | # Cont | Expiry Date | Test DeadLine | Criteria | Extract Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MTRX SPK | 0 | PFC-W FZA786-01 | | 0.2 | 125 | 3 | 1X | | | | | 2018/02/13 |
| | MTRX SPK | 1 | PFC-W FZA786-01 | | 0.2 | 125 | 3 | 1X | | | | | 2018/02/13 |
| | SPIKE | | PFC-W | | 0 | 125 | 3 | 1X | | | | | 2018/02/13 |
| | BLANK | | | | 0 | 125 | 3 | 1X | | | | | 2018/02/13 |
| B818419 | *FZA783-01R | | OLD-002-51A-0118 | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA784-01R | | OLD-002-51A-0118* | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA785-01R | | OLD-002-11A-0118 | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA786-01R | | OLD-002-03A-0118 | | 0.2 | 125 | 3 | 1X | 6 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA788-01R | | EB-GW-012218-1 | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA789-01R | | FB-OLD-012218-1 | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA790-01R | | FB-OLD-012218-2 | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA791-01R | | EB-WC-012218-1 | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA792-01R | | EB-DPT-012218-1 | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B818419 | *FZA802-01R | | EB-WC-012318-2 | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/07 23:00 | DOD | 2018/02/13 |
| B819794 | *FZH332-01R | | [redacted] | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B819794 | *FZH334-01R | | [redacted] | | <0.1 | ~~125~~ 125 SAD 2018/2/16 | 3 | ~~1X~~ 10X SAD 2018/2/16 | 6 | 2018/02/06 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B819794 | *FZH336-01R | | [redacted] | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B819794 | *FZH338-01R | | C[redacted] | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B819794 | *FZH339-01R | | [redacted] | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B819794 | *FZH340-01R | | [redacted] | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B819794 | *FZH341-01R | | [redacted] | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B819794 | *FZH342-01R | | [redacted] | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B819794 | *FZH343-01R | | [redacted] | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/05 | 2018/02/09 18:00 | DOD | 2018/02/13 |
| B820260 | *FZJ934-01R | | [redacted] | | <0.1 | 125 | 3 | 1X | 2 | 2018/02/06 | 2018/02/09 23:00 | DOD | 2018/02/13 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

SAD 2017/02/13

Remarks:

Samples extracted by: Shahbaz Ahmad SAD 2017/02/13

Instrumentation performed by: AD Date: 2018/02/15

Calculations performed by: [signature] Date: 2018/02/16

Validated by: [signature] Date: 2018/02/16

| Job No. | Rep / Client Name / Remarks | Contact | Client Tier | National |
|---|---|---|---|---|
| GB818419 | SP8 Earth Toxics Inc | Rick Carr | Tier 5 (Enviro.) | AECOM |
| | NREG. PFOSALCM-W MS/MSD required on FZA786, Level IV Package and TetraTech EDD required Project #: JM11 NTC Orlando | | | |
| GB819794 | [redacted] | | | |
| GB820260 | | | | |

SAD 2013/3/13

| Job | Sample | Lab Comments |
|---|---|---|
| | MTRX SPK | |
| | MTRX SPK | |
| | SPIKE | |
| | BLANK | |
| B818419 | FZA783-01R | |
| B818419 | FZA784-01R | |
| B818419 | FZA785-01R | |
| B818419 | FZA786-01R | |
| B818419 | FZA788-01R | |
| B818419 | FZA789-01R | |
| B818419 | FZA790-01R | |
| B818419 | FZA791-01R | |
| B818419 | FZA792-01R | |
| B818419 | FZA802-01R | |
| B819794 | FZH332-01R | |
| B819794 | FZH334-01R | |
| B819794 | FZH336-01R | |
| B819794 | FZH338-01R | |
| B819794 | FZH339-01R | |
| B819794 | FZH340-01R | |
| B819794 | FZH341-01R | |
| B819794 | FZH342-01R | |
| B819794 | FZH343-01R | |
| B820260 | FZJ934-01R | |

S1 2825 25
S2 2800 50
S3 2700 15
} SK 7377 2/3

S4 2813 37.5
S5 2775 75
S6 2725 125
} I-5297 2/3

ICV 2788 62.5 — I-5299 2/3
ICB 2850 —

## Worksheet Reagent Tracking Record

Worksheet # 539 6698

Volume (µL)

| Surrogate/Spike solutions | √ | Solution ID # | Conc. | Blk-Spk | | MS | | Samples | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Solid | Liquid | Solid | Liquid | Solid | Liquid |
| DGT Spike | | | 100 ug/mL | 60 | 30 | 60 | 30 | NA | NA |
| Diquat Dibromide | | | 50 ug/mL | NA | 350 | NA | 350 | NA | NA |
| Explosives Spiking solution A | | | 20 ug/mL | 250 | 100 | 250 | 100 | NA | NA |
| Explosives Spiking solution B | | | 20/80 ug/mL | 250 | 100 | 250 | 100 | NA | NA |
| Formaldehyde Spike | | | 100 ug/mL | 25 | 25 | 25 | 25 | NA | NA |
| Glyphosate Spike | | | 25 ug/mL | 500 | 20 | 500 | 20 | NA | NA |
| Nonylphenol Ethoxylate Spike | | | 100 ug/mL | 100 | 100 | 100 | 100 | NA | NA |
| Nonylphenol Spike | | | 10 ug/mL | 100 | 100 | 100 | 100 | NA | NA |
| Paraquat Cl Tetrahydrate | | | 20 ug/mL | NA | 125 | NA | 125 | NA | NA |
| Perchlorate Standard Spike | | | 10 ng/mL | NA | 100 | NA | 100 | NA | NA |
| Perchlorate Standard Spike | | | 500 ng/mL | 40 | NA | 40 | NA | NA | NA |
| Perchlorate O-18 Internal Standard | | | 0.10 ng/uL | 20 | 20 | 20 | 20 | 20 | 20 |
| Morpholine Second Source Working Std | | | 2500 ug/L | NA | 80 | NA | 80 | NA | NA |
| Morpholine-D8 Internal Standard | | | 10 ug/mL | NA | 50 | NA | 50 | NA | 50 |
| Steril Second Source Spiking Solution | | | NA | 20 | NA | 20 | NA | NA | NA |
| Sterilants Comp. IS Working Solution | | | 3 ug/mL | 50 | NA | 50 | NA | 50 | NA |
| Comp. PFC Working Solution A | ✓ | I-5299 1/3 DM3 | 1ug/mL | 75 | 21 (62.5) | 75 | 21 (62.5) | NA | NA |
| PFC Internal Standard Solution | ✓ | SI 6801 1/4 DM3 | 50/125 ng/mL | 200 | 100 (150) | 200 | 100 (150) | 200 | 100 (150) |
| PFC Injection IS | ✓ | SI 6770 1/2 | 400 ng/mL | 20 | 20 | 20 | 20 | 20 | 20 |
| ICV | ✓ | I-5299 1/3 | | | | | | | |

| Solvent/Reagent | √ | Lot No. | Date Opened | Solvent/Reagent | √ | Lot No. | Date Opened/ Prepared |
|---|---|---|---|---|---|---|---|
| DCM | | | | 50% NaOH | | | |
| Ottawa Sand | | | | o-Phosphoric Acid | | | |
| Methanol | ✓ | SHBJ5451 | 2018/2/13 | Borax | | | |
| 2-Propanol (IPA) | | | | Calcium Chloride | | | |
| Acetonitrile | | | | EDTA | | | |
| Sodium Sulfate | | | | Phosphate Buffer | | | |
| 70:30 Methanol: Water | | | | Sodium Thiosulphate | | | |
| 60:40 Water: Methanol | ✓ | PRLPE 108-348 | | DNPH | | | |
| DCM:Ethyl Ether (75:25) | | | | FMOC | | | |
| Hexane:IPA (98:2) | | | | 5M Acetate Buffer | | | |
| 2% Formic Acid | ✓ | PRLPE 108-342 | | 0.2% $NH_4OH$ | ✓ | PRLPE 108-357 | |
| 0.2% Formic Acid | | | | Leachate Fluid | | | |
| 0.05M KOH | | | | Reagent Water | ✓ | 57297 | 2018/2/13 |
| 0.05M HCl | | | | | | | |
| | | | | | | | |
| | | | | | | | |

*Spiked by: SM

Spike Date: 2018/2/13

Spike Syringe/Pipette ID#: G24390G

Int. Std Syringe/Pipette ID#: MM1011F

*Spiking Witnessed by: DM3

Final pH:

| Equipment & ID | √ | Equipment | ID# | √ | Equipment | Lot # |
|---|---|---|---|---|---|---|
| Pipettor K39732F K55791G | | SPE Cartridge | | | QC Balance ID | |
| | | Filter | | | Thermometer ID &Temp | |
| Dispenser | | Centrifuge | | | | |
| | | Sonicator | | | | |

Bottle Tracking

Bottle# 18801

Cap# 18778

Systems plus Lot#: 18-01-31

Comments:

* - SPIKING OF QC's & SAMPLES MUST BE WITNESSED AT ALL TIMES.

Worksheet Number: **5396699**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | Units | MTRX SPK | MTRX SPK Dup1 | SPIKE | BLANK | B818419 FZA783 ReWork | B818419 FZA784 ReWork |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 8:2 Fluorotelomer sulfonate | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-ethylperfluorooctane sulfonamide | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| EtFOSAA | ug/L | 81.89152 | 86.50419 | 81.46990 | 0 | 0 | 0 |
| N-ethylperfluorooctane sulfonamidoe | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-methylperfluorooctane sulfonamide | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| MeFOSAA | ug/L | 83.77645 | 86.49321 | 81.82236 | 0 | 0 | 0 |
| N-methylperfluorooctanesulfonamidol | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorobutanoic acid | ug/L | 78.26734 | 103.01333 | 87.10518 | 0 | N/A******* | N/A******* |
| Perfluorobutane Sulfonate (PFBS) | ug/L | 78.12860 | 77.27161 | 78.72710 | 0 | N/A******* | N/A******* |
| Perfluorodecane Sulfonate | ug/L | 76.26618 | 84.69740 | 80.33875 | 0 | N/A******* | N/A******* |
| Perfluoroheptanoic Acid (PFHpA) | ug/L | 79.13409 | 88.59966 | 78.03500 | 0 | N/A******* | N/A******* |
| Perfluoroheptane sulfonate | ug/L | 82.49752 | 93.31286 | 75.51033 | 0 | N/A******* | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | ug/L | 81.24347 | 83.85384 | 81.89415 | 0 | N/A******* | N/A******* |
| Perfluorohexane Sulfonate (PFHxS) | ug/L | 76.67552 | 80.40450 | 83.83048 | 0 | N/A******* | N/A******* |
| Perfluorononanoic Acid (PFNA) | ug/L | 80.81356 | 90.14536 | 84.08254 | 0 | N/A******* | N/A******* |
| Perfluorooctane Sulfonamide (PFOSA) | ug/L | 86.80263 | 93.38657 | 82.92819 | 0 | N/A******* | N/A******* |
| Perfluoropentanoic Acid (PFPeA) | ug/L | 85.39121 | 86.76922 | 81.35779 | 0 | N/A******* | N/A******* |
| Perfluorotetradecanoic Acid | ug/L | 86.09162 | 94.91401 | 75.46730 | 0 | 0 | 0 |
| Perfluorotridecanoic Acid | ug/L | 93.21887 | 100.76268 | 86.16368 | 0 | N/A******* | N/A******* |
| Perfluoroundecanoic Acid (PFUnA) | ug/L | 80.90519 | 93.00632 | 87.65415 | 0 | 0 | 0 |
| Perfluorodecanoic Acid (PFDA) | ug/L | 85.91489 | 90.77759 | 86.05988 | 0 | N/A******* | N/A******* |
| Perfluorododecanoic Acid (PFDoA) | ug/L | 87.89923 | 89.00862 | 88.97405 | 0 | 0 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | ug/L | 77.51000 | 79.68264 | 91.63664 | 0 | N/A******* | N/A******* |
| Perfluorooctane Sulfonate (PFOS) | ug/L | 78.88293 | 92.28659 | 88.34139 | 0 | N/A******* | N/A******* |
| 13C2-6:2 Fluorotelomer sulfonate | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-8:2 Fluorotelomer sulfonate | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-perfluorotetradecanoic acid | ug/L | 103.046183 | 90.3397531 | 99.5678759 | 72.6292907 | N/A******* | N/A******* |
| 13C4-Perfluorobutanoic acid | ug/L | 125.361650 | 104.403913 | 115.446888 | 65.1426527 | N/A******* | N/A******* |
| D3-MeFOSAA | ug/L | 119.063633 | 114.503326 | 96.5012287 | 60.0697015 | 112.272968 | 104.452849 |
| D5-EtFOSAA | ug/L | 118.064890 | 110.938028 | 92.2373381 | 57.7412796 | 112.233101 | 102.901171 |
| N-methyl-d3-perfluorooctane sulfona | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | ug/L | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-Perfluorodecanoic acid | ug/L | 118.240681 | 102.594706 | 107.799043 | 93.5404483 | N/A******* | N/A******* |
| 13C2-Perfluorododecanoic acid | ug/L | 109.471290 | 101.202650 | 94.6627859 | 69.0291760 | 106.162006 | 90.8643354 |
| 13C2-Perfluorohexanoic acid | ug/L | 119.939338 | 112.984723 | 109.935692 | 85.8754293 | N/A******* | N/A******* |
| 13C2-Perfluoroundecanoic acid | ug/L | 120.165429 | 102.823242 | 104.756638 | 78.4780291 | 104.811742 | 99.1997934 |
| 13C4-Perfluoroheptanoic acid | ug/L | 128.677245 | 111.899795 | 117.173752 | 105.346681 | N/A******* | N/A******* |
| 13C5-Perfluorononanoic acid | ug/L | 127.505332 | 115.357178 | 108.561941 | 103.363673 | N/A******* | N/A******* |
| 13C4-Perfluorooctanoic acid | ug/L | 131.923293 | 125.628386 | 105.393126 | 113.731104 | N/A******* | N/A******* |
| 13C4-Perfluorooctanesulfonate | ug/L | 130.302284 | 113.843161 | 104.337259 | 77.6255263 | N/A******* | N/A******* |
| 13C5-Perfluoropentanoic acid | ug/L | 125.935081 | 113.762432 | 117.771111 | 72.3004986 | N/A******* | N/A******* |
| 13C8-Perfluorooctane Sulfonamide | ug/L | 106.312620 | 91.1177078 | 100.357118 | 92.9518459 | N/A******* | N/A******* |
| 18O2-Perfluorohexanesulfonate | ug/L | 128.181971 | 125.624796 | 104.025069 | 53.6290853 | N/A******* | N/A******* |

2018/02/16

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | B818419 FZA785 ReWork | B818419 FZA786 ReWork | B818419 FZA788 ReWork | B818419 FZA789 ReWork | B818419 FZA790 ReWork | B818419 FZA791 ReWork | B818419 FZA792 ReWork |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-ethylperfluorooctane sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| EtFOSAA | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N-ethylperfluorooctane sulfonamidoe | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-methylperfluorooctane sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| MeFOSAA | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N-methylperfluorooctanesulfonamidol | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorobutanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorobutane Sulfonate (PFBS) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorodecane Sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluoroheptanoic Acid (PFHpA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluoroheptane sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorohexane Sulfonate (PFHxS) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorononanoic Acid (PFNA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorooctane Sulfonamide (PFOSA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluoropentanoic Acid (PFPeA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorotetradecanoic Acid | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perfluorotridecanoic Acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluoroundecanoic Acid (PFUnA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perfluorodecanoic Acid (PFDA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorododecanoic Acid (PFDoA) | 0 | 0 | N/A******* | 0 | 0 | 0 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| Perfluorooctane Sulfonate (PFOS) | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-perfluorotetradecanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C4-Perfluorobutanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| D3-MeFOSAA | 107.531370 | 115.522418 | 105.837881 | 100.439078 | 123.455838 | 116.938915 | 75.8042349 |
| D5-EtFOSAA | 104.113013 | 112.664482 | 99.1097756 | 96.6985420 | 122.200455 | 117.064133 | 71.5399115 |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-Perfluorodecanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-Perfluorododecanoic acid | 93.5890020 | 93.1097997 | 89.0640359 | 94.2925682 | 110.548580 | 106.289973 | 99.9867732 |
| 13C2-Perfluorohexanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C2-Perfluoroundecanoic acid | 102.241785 | 98.8544832 | 97.2867603 | 96.5175337 | 117.290987 | 120.393256 | 110.039307 |
| 13C4-Perfluoroheptanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C5-Perfluorononanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C4-Perfluorooctanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C4-Perfluorooctanesulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C5-Perfluoropentanoic acid | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 13C8-Perfluorooctane Sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |
| 18O2-Perfluorohexanesulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* |

Worksheet Number: **5396699**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | B818419 FZA802 ReWork | B819794 FZH332 ReWork | DL | B819794 FZH334 ReWork | DL | B819794 FZH336 ReWork | B819794 FZH338 ReWork |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | N/A******* |
| 8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | N/A******* |
| N-ethylperfluorooctane sulfonamide | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | N/A******* |
| EtFOSAA | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | 0 |
| N-ethylperfluorooctane sulfonamidoe | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | N/A******* |
| N-methylperfluorooctane sulfonamide | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | N/A******* |
| MeFOSAA | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | 0 |
| N-methylperfluorooctanesulfonamidol | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | N/A******* | N/A******* |
| Perfluorobutanoic acid | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorobutane Sulfonate (PFBS) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorodecane Sulfonate | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluoroheptanoic Acid (PFHpA) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluoroheptane sulfonate | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorohexanoic Acid (PFHxA) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorohexane Sulfonate (PFHxS) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorononanoic Acid (PFNA) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorooctane Sulfonamide (PFOSA) | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluoropentanoic Acid (PFPeA) | N/A******* | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorotetradecanoic Acid | 0 | 0 | 0.02 | 0 | 0.2 | 0 | 0 |
| Perfluorotridecanoic Acid | 0 | 0 | 0.02 | 0 | 0.2 | 0 | N/A******* |
| Perfluoroundecanoic Acid (PFUnA) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | 0 |
| Perfluorodecanoic Acid (PFDA) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorododecanoic Acid (PFDoA) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | 0 |
| Perfluoro-n-Octanoic Acid (PFOA) | 0 | N/A******* | 0.02 | N/A******* | 0.2 | 0 | N/A******* |
| Perfluorooctane Sulfonate (PFOS) | 0 | N/A******* | 0.02 | 0 | 0.2 | 0 | N/A******* |
| 13C2-6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | | N/A******* | | N/A******* | N/A******* |
| 13C2-8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | | N/A******* | | N/A******* | N/A******* |
| 13C2-perfluorotetradecanoic acid | 77.0240495 | 92.9612321 | | 57.4026368 | | 83.0777780 | N/A******* |
| 13C4-Perfluorobutanoic acid | N/A******* | N/A******* | | N/A******* | | 86.9854758 | N/A******* |
| D3-MeFOSAA | 90.5648970 | N/A******* | | N/A******* | | 82.0972833 | 116.170591 |
| D5-EtFOSAA | 87.6515096 | N/A******* | | N/A******* | | 77.9473926 | 115.355592 |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | N/A******* | | N/A******* | | N/A******* | N/A******* |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | N/A******* | | N/A******* | | N/A******* | N/A******* |
| 13C2-Perfluorodecanoic acid | 90.7447894 | N/A******* | | N/A******* | | 91.7117749 | N/A******* |
| 13C2-Perfluorododecanoic acid | 90.6698453 | N/A******* | | N/A******* | | 84.7621637 | 114.198509 |
| 13C2-Perfluorohexanoic acid | 73.1806414 | N/A******* | | N/A******* | | 107.559677 | N/A******* |
| 13C2-Perfluoroundecanoic acid | 97.2108002 | N/A******* | | N/A******* | | 93.0809511 | 106.678973 |
| 13C4-Perfluoroheptanoic acid | 80.4039093 | N/A******* | | N/A******* | | 116.718774 | N/A******* |
| 13C5-Perfluorononanoic acid | 73.8632288 | N/A******* | | N/A******* | | 118.317542 | N/A******* |
| 13C4-Perfluorooctanoic acid | 55.8349474 | N/A******* | | N/A******* | | 111.835769 | N/A******* |
| 13C4-Perfluorooctanesulfonate | 67.4932176 | N/A******* | | N/A******* | | 103.459068 | N/A******* |
| 13C5-Perfluoropentanoic acid | N/A******* | N/A******* | | N/A******* | | 97.0783475 | N/A******* |
| 13C8-Perfluorooctane Sulfonamide | N/A******* | N/A******* | | N/A******* | | 100.122646 | N/A******* |
| 18O2-Perfluorohexanesulfonate | 78.8050133 | N/A******* | | N/A******* | | 81.3020829 | N/A******* |

Worksheet Number: **5396699**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

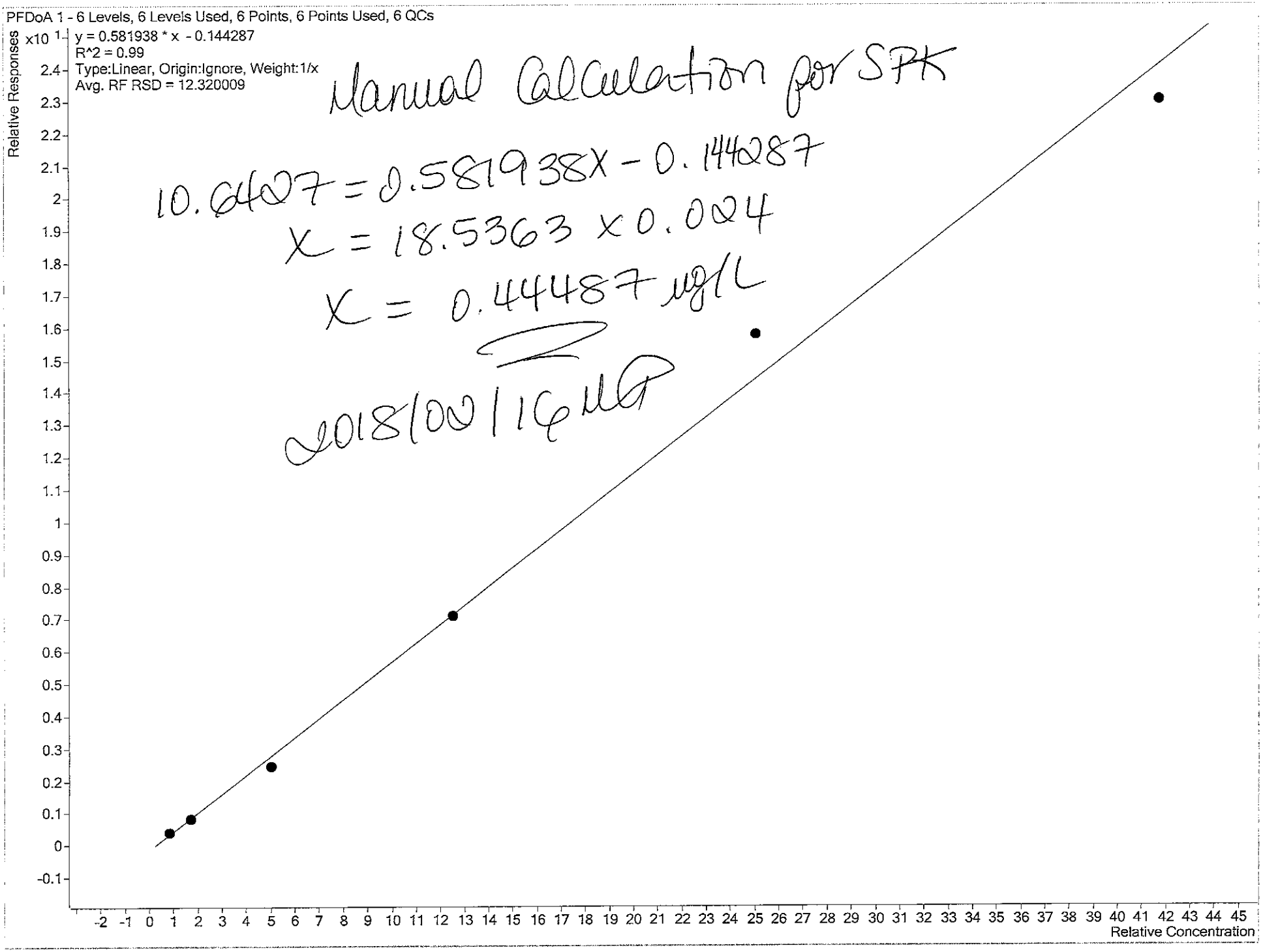
| Parameter Name | B819794 FZH339 ReWork | B819794 FZH340 ReWork | B819794 FZH341 ReWork | B819794 FZH342 ReWork | B819794 FZH343 ReWork | B820260 FZJ934 ReWork | DL |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.02 |
| 8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.02 |
| N-ethylperfluorooctane sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.02 |
| EtFOSAA | 0 | 0 | 0 | 0 | 0 | N/A******* | 0.02 |
| N-ethylperfluorooctane sulfonamidoe | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.02 |
| N-methylperfluorooctane sulfonamide | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.02 |
| MeFOSAA | 0 | 0 | 0 | 0 | 0 | N/A******* | 0.02 |
| N-methylperfluorooctanesulfonamidol | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorobutanoic acid | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorobutane Sulfonate (PFBS) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorodecane Sulfonate | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluoroheptanoic Acid (PFHpA) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluoroheptane sulfonate | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorohexanoic Acid (PFHxA) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorohexane Sulfonate (PFHxS) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorononanoic Acid (PFNA) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorooctane Sulfonamide (PFOSA) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | 0 | 0.02 |
| Perfluoropentanoic Acid (PFPeA) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorotetradecanoic Acid | 0 | 0 | 0 | 0 | 0 | N/A******* | 0.02 |
| Perfluorotridecanoic Acid | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluoroundecanoic Acid (PFUnA) | 0 | 0 | 0 | 0 | 0 | N/A******* | 0.02 |
| Perfluorodecanoic Acid (PFDA) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorododecanoic Acid (PFDoA) | 0 | 0 | 0 | 0 | 0 | N/A******* | 0.02 |
| Perfluoro-n-Octanoic Acid (PFOA) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| Perfluorooctane Sulfonate (PFOS) | N/A******* | N/A******* | 0 | N/A******* | N/A******* | N/A******* | 0.02 |
| 13C2-6:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | |
| 13C2-8:2 Fluorotelomer sulfonate | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | |
| 13C2-perfluorotetradecanoic acid | N/A******* | N/A******* | 102.239044 | N/A******* | N/A******* | 92.4555654 | |
| 13C4-Perfluorobutanoic acid | N/A******* | N/A******* | 93.8043979 | N/A******* | N/A******* | 88.3410084 | |
| D3-MeFOSAA | 114.001256 | 121.836584 | 97.2372780 | 123.007109 | 94.8946549 | N/A******* | |
| D5-EtFOSAA | 107.711261 | 116.757087 | 94.9652990 | 116.407122 | 92.9829425 | N/A******* | |
| N-methyl-d3-perfluorooctane sulfona | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | |
| N-ethyl-d5-perfluorooctane sulfonam | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | N/A******* | |
| 13C2-Perfluorodecanoic acid | N/A******* | N/A******* | 114.604644 | N/A******* | N/A******* | N/A******* | |
| 13C2-Perfluorododecanoic acid | 103.809367 | 106.279044 | 99.9175652 | 100.802308 | 83.8402739 | N/A******* | |
| 13C2-Perfluorohexanoic acid | N/A******* | N/A******* | 112.392232 | N/A******* | N/A******* | N/A******* | |
| 13C2-Perfluoroundecanoic acid | 112.763254 | 102.896259 | 111.901055 | 107.521088 | 94.4960465 | N/A******* | |
| 13C4-Perfluoroheptanoic acid | N/A******* | N/A******* | 125.500412 | N/A******* | N/A******* | N/A******* | |
| 13C5-Perfluorononanoic acid | N/A******* | N/A******* | 136.263843 | N/A******* | N/A******* | N/A******* | |
| 13C4-Perfluorooctanoic acid | N/A******* | N/A******* | 129.782024 | N/A******* | N/A******* | N/A******* | |
| 13C4-Perfluorooctanesulfonate | N/A******* | N/A******* | 104.180629 | N/A******* | N/A******* | N/A******* | |
| 13C5-Perfluoropentanoic acid | N/A******* | N/A******* | 105.035879 | N/A******* | N/A******* | N/A******* | |
| 13C8-Perfluorooctane Sulfonamide | N/A******* | N/A******* | 112.828669 | N/A******* | N/A******* | 94.8368633 | |
| 18O2-Perfluorohexanesulfonate | N/A******* | N/A******* | 87.7307374 | N/A******* | N/A******* | N/A******* | |

Worksheet Number: **5396699**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

| Parameter Name | RDL | MDL | IDL | | | | |
|---|---|---|---|---|---|---|---|
| 6:2 Fluorotelomer sulfonate | 0.02 | 0.0066 | 0 | | | | |
| 8:2 Fluorotelomer sulfonate | 0.02 | 0.0066 | 0 | | | | |
| N-ethylperfluorooctane sulfonamide | 0.02 | 0.01 | 0 | | | | |
| EtFOSAA | 0.02 | 0.0033 | 0 | | | | |
| N-ethylperfluorooctane sulfonamidoe | 0.02 | 0.0079 | 0 | | | | |
| N-methylperfluorooctane sulfonamide | 0.02 | 0.013 | 0 | | | | |
| MeFOSAA | 0.02 | 0.0029 | 0 | | | | |
| N-methylperfluorooctanesulfonamidol | 0.02 | 0.012 | 0 | | | | |
| Perfluorobutanoic acid | 0.02 | 0.0055 | 0 | | | | |
| Perfluorobutane Sulfonate (PFBS) | 0.02 | 0.0054 | 0 | | | | |
| Perfluorodecane Sulfonate | 0.02 | 0.006 | 0 | | | | |
| Perfluoroheptanoic Acid (PFHpA) | 0.02 | 0.0074 | 0 | | | | |
| Perfluoroheptane sulfonate | 0.02 | 0.008 | 0 | | | | |
| Perfluorohexanoic Acid (PFHxA) | 0.02 | 0.0035 | 0 | | | | |
| Perfluorohexane Sulfonate (PFHxS) | 0.02 | 0.0056 | 0 | | | | |
| Perfluorononanoic Acid (PFNA) | 0.02 | 0.0087 | 0 | | | | |
| Perfluorooctane Sulfonamide (PFOSA) | 0.02 | 0.0034 | 0 | | | | |
| Perfluoropentanoic Acid (PFPeA) | 0.02 | 0.0075 | 0 | | | | |
| Perfluorotetradecanoic Acid | 0.02 | 0.0027 | 0 | | | | |
| Perfluorotridecanoic Acid | 0.02 | 0.0038 | 0 | | | | |
| Perfluoroundecanoic Acid (PFUnA) | 0.02 | 0.0025 | 0 | | | | |
| Perfluorodecanoic Acid (PFDA) | 0.02 | 0.0061 | 0 | | | | |
| Perfluorododecanoic Acid (PFDoA) | 0.02 | 0.005 | 0 | | | | |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.02 | 0.0033 | 0 | | | | |
| Perfluorooctane Sulfonate (PFOS) | 0.02 | 0.006 | 0 | | | | |
| 13C2-6:2 Fluorotelomer sulfonate | | | | | | | |
| 13C2-8:2 Fluorotelomer sulfonate | | | | | | | |
| 13C2-perfluorotetradecanoic acid | | | | | | | |
| 13C4-Perfluorobutanoic acid | | | | | | | |
| D3-MeFOSAA | | | | | | | |
| D5-EtFOSAA | | | | | | | |
| N-methyl-d3-perfluorooctane sulfona | | | | | | | |
| N-ethyl-d5-perfluorooctane sulfonam | | | | | | | |
| 13C2-Perfluorodecanoic acid | | | | | | | |
| 13C2-Perfluorododecanoic acid | | | | | | | |
| 13C2-Perfluorohexanoic acid | | | | | | | |
| 13C2-Perfluoroundecanoic acid | | | | | | | |
| 13C4-Perfluoroheptanoic acid | | | | | | | |
| 13C5-Perfluorononanoic acid | | | | | | | |
| 13C4-Perfluorooctanoic acid | | | | | | | |
| 13C4-Perfluorooctanesulfonate | | | | | | | |
| 13C5-Perfluoropentanoic acid | | | | | | | |
| 13C8-Perfluorooctane Sulfonamide | | | | | | | |
| 18O2-Perfluorohexanesulfonate | | | | | | | |



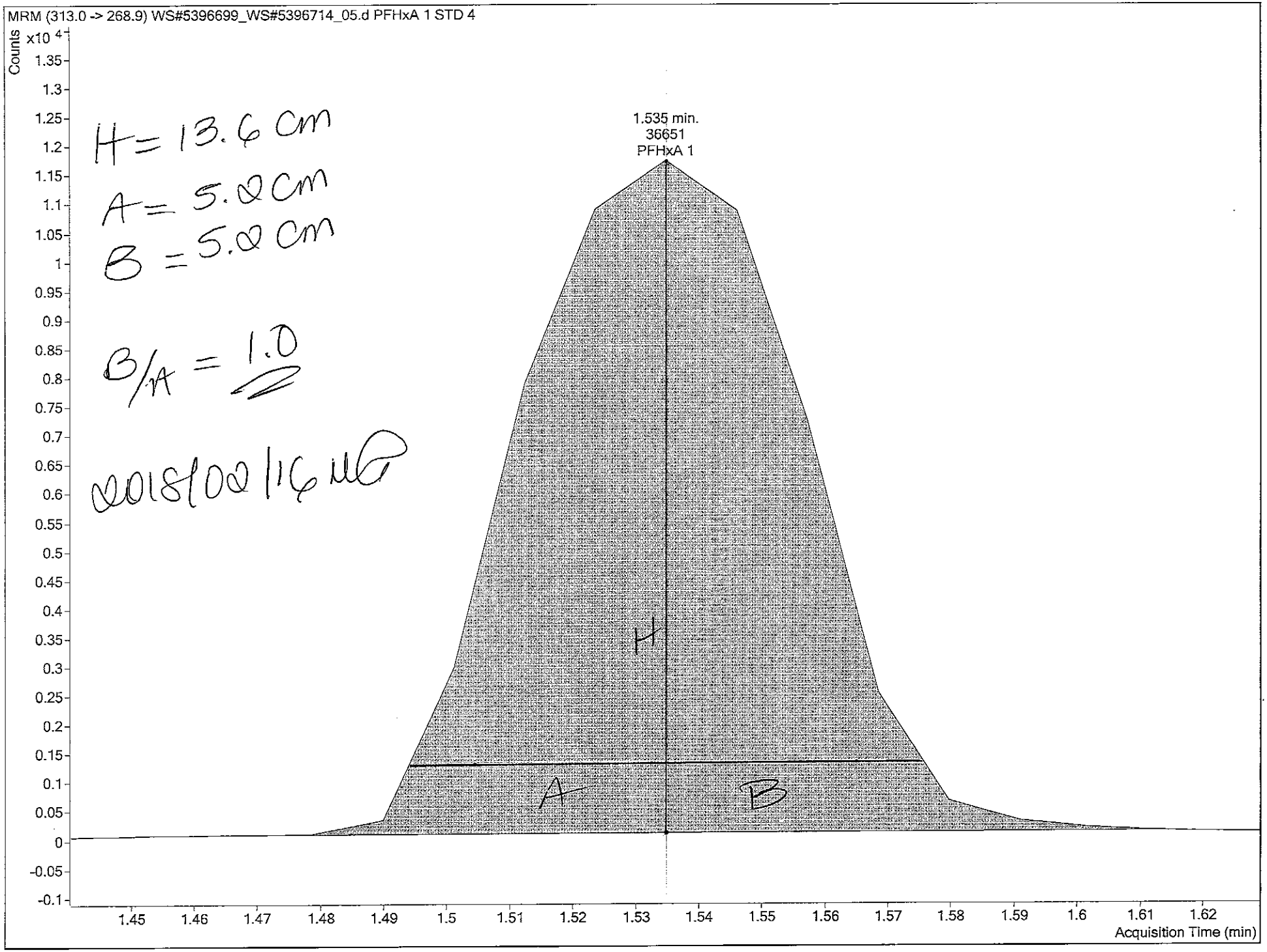

Manual Calculation for SPK

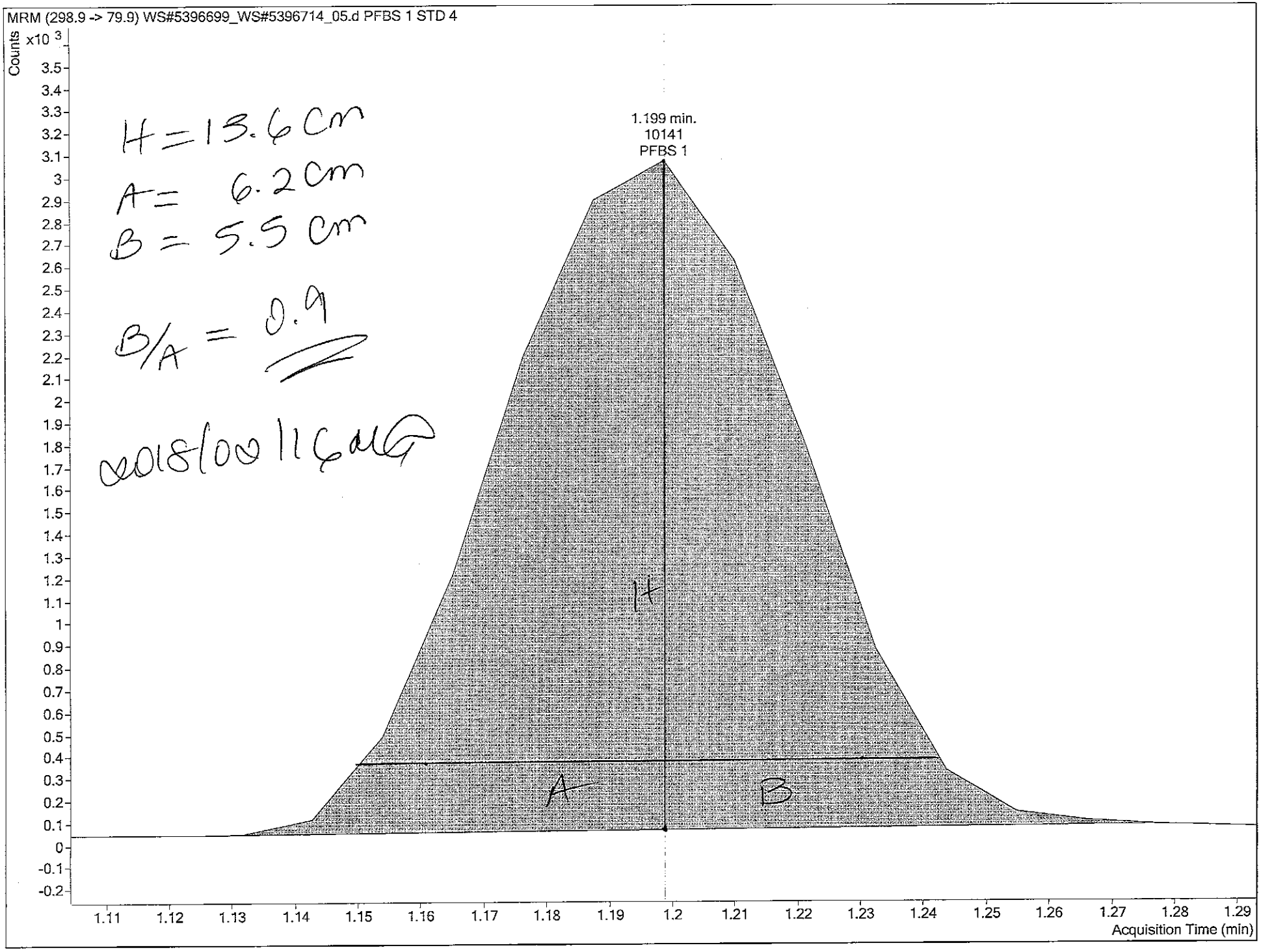
$10.6407 = 0.581938X - 0.144287$

$X = 18.5363 \times 0.024$

$X = 0.44487\ \mu g/L$

2018/09/16 MG


MRM (313.0 -> 268.9) WS#5396699_WS#5396714_05.d PFHxA 1 STD 4
Counts
x10 4
1.535 min.
36651
PFHxA 1
H= 13.6 cm
A= 5.0 cm
B = 5.0 cm
B/A = 1.0
0.0185/0.0216 ng
H
A
B
Acquisition Time (min)


MRM (298.9 -> 79.9) WS#5396699_WS#5396714_05.d PFBS 1 STD 4
Counts
x10 3
1.199 min.
10141
PFBS 1
H = 13.6 cm
A = 6.2 cm
B = 5.5 cm
B/A = 0.9
0.018/0.011 ng/mL
H
A
B
Acquisition Time (min)

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/13

Test Code: **PFOSALCM-W**

Worksheet Number: **5396699**

| Sample Number | Parameter Code | Parameter | |
|---|---|---|---|
| FZA783-01 | ETFOSAA | EtFOSAA | * |
| FZA784-01 | MEFOSAA | MeFOSAA | * |
| FZA785-01 | PFTEDA | Perfluorotetradecanoic Acid | |
| FZA786-01 | PFUNA | Perfluoroundecanoic Acid (PFUnA) | |
| FZA789-01 | PFDOA | Perfluorododecanoic Acid (PFDoA) | |
| FZA790-01 | | | |
| FZA791-01 | | | |
| FZA792-01 | | | |
| FZH338-01 | | | |
| FZH339-01 | | | |
| FZH340-01 | | | |
| FZH342-01 | | | |
| FZH343-01 | | | |
| FZA788-01 | ETFOSAA | EtFOSAA | * |
| | MEFOSAA | MeFOSAA | * |
| | PFTEDA | Perfluorotetradecanoic Acid | |
| | PFUNA | Perfluoroundecanoic Acid (PFUnA) | |
| FZA802-01 | ETFOSAA | EtFOSAA | * |
| | MEFOSAA | MeFOSAA | * |
| | PFBS | Perfluorobutane Sulfonate (PFBS) | |
| | PFHPA | Perfluoroheptanoic Acid (PFHpA) | |
| | PFHXA | Perfluorohexanoic Acid (PFHxA) | |
| | PFHXS | Perfluorohexane Sulfonate (PFHxS) | |
| | PFNA | Perfluorononanoic Acid (PFNA) | |
| | PFTEDA | Perfluorotetradecanoic Acid | |
| | PFTRDA | Perfluorotridecanoic Acid | |
| | PFUNA | Perfluoroundecanoic Acid (PFUnA) | |
| | PFDA | Perfluorodecanoic Acid (PFDA) | |
| | PFDOA | Perfluorododecanoic Acid | |

* - This parameter is usually off, but will be reported for this group of samples!

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/13

Test Code: **PFOSALCM-W**

Worksheet Number: **5396699**

| Sample Number | Parameter Code | Parameter |
|---|---|---|
| | | (PFDoA) |
| | PFOA | Perfluoro-n-Octanoic Acid (PFOA) |
| | PFOS | Perfluorooctane Sulfonate (PFOS) |
| FZH332-01 | PFTEDA | Perfluorotetradecanoic Acid |
| FZH334-01 | PFTRDA | Perfluorotridecanoic Acid |
| FZH336-01 | NONE | NONE |
| FZH341-01 | | |
| FZJ934-01 | PFOSA | Perfluorooctane Sulfonamide (PFOSA) |

SAS 2018/02/13

* - This parameter is usually off, but will be reported for this group of samples!

# WorkSheet 5396699 Instrument Sequences

| | | |
|---|---|---|
| 1. | 5396699:MTRX SPK | MTRX SPK |
| 2. | 5396699:MTRX SPK:D1 | MTRX SPK :D1 |
| 3. | 5396699:SPIKE | SPIKE |
| 4. | 5396699:BLANK | BLANK |
| 5. | 5396699:FZA783-01 | OLD-002-51A-0118 |
| 6. | 5396699:FZA784-01 | OLD-002-51A-0118D |
| 7. | 5396699:FZA785-01 | OLD-002-11A-0118 |
| 8. | 5396699:FZA786-01 | OLD-002-03A-0118 |
| 9. | 5396699:FZA788-01 | EB-GW-012218-1 |
| 10. | 5396699:FZA789-01 | FB-OLD-012218-1 |
| 11. | 5396699:FZA790-01 | FB-OLD-012218-2 |
| 12. | 5396699:FZA791-01 | EB-WC-012218-1 |
| 13. | 5396699:FZA792-01 | EB-DPT-012218-1 |
| 14. | 5396699:FZA802-01 | EB-WC-012318-2 |
| 15. | 5396699:FZH332-01 | [redacted] |
| 16. | 5396699:FZH334-01 | [redacted] |
| 17. | 5396699:FZH336-01 | [redacted] |
| 18. | 5396699:FZH338-01 | [redacted] |
| 19. | 5396699:FZH339-01 | [redacted] |
| 20. | 5396699:FZH340-01 | [redacted] |
| 21. | 5396699:FZH341-01 | [redacted] |
| 22. | 5396699:FZH342-01 | [redacted] |
| 23. | 5396699:FZH343-01 | [redacted] |
| 24. | 5396699:FZJ934-01 | [redacted] |

# Worklist Report

Agilent Technologies

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180215_Low.wkl

Maxxam Analytics

AD 2018/02/15

**Operator Name:** ---
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\Data\PFC\20180215\WS#5396699_WS#5396714
**Pre-Worklist Script:** ---
**Post-Worklist Script:** SCP_InstrumentStandby(){MH_Acq_Scripts.exe}
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** Column #~~198~~ 199 AD 2018/02/15
MP A1: Solution# 280 (FSRE18)
MP B: Methanol, SHBJ5451, Sigma

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P2 | |

**Worklist Table**

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Solvent | P2-A1 | PFC_Water_Low.m | WS#5396699_WS#5396714_01.d | Sample | | As Method | - |
| 2 | STD 1 | P2-A2 | PFC_Water_Low.m | WS#5396699_WS#5396714_02.d | Calibration | STD 1 | As Method | - |
| 3 | STD 2 | P2-A3 | PFC_Water_Low.m | WS#5396699_WS#5396714_03.d | Calibration | STD 2 | As Method | - |
| 4 | STD 3 | P2-A4 | PFC_Water_Low.m | WS#5396699_WS#5396714_04.d | Calibration | STD 3 | As Method | - |
| 5 | STD 4 | P2-A5 | PFC_Water_Low.m | WS#5396699_WS#5396714_05.d | Calibration | STD 4 | As Method | - |
| 6 | STD 5 | P2-A6 | PFC_Water_Low.m | WS#5396699_WS#5396714_06.d | Calibration | STD 5 | As Method | - |
| 7 | STD 6 | P2-A7 | PFC_Water_Low.m | WS#5396699_WS#5396714_07.d | Calibration | STD 6 | As Method | - |

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| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 8 | IB | P2-A8 | PFC_Water_Low.m | WS#5396699_WS#5396714_08.d | Sample | | As Method | - |
| 9 | ICV | P2-A9 | PFC_Water_Low.m | WS#5396699_WS#5396714_09.d | QC | ICV | As Method | - |
| 10 | ISC | P2-A2 | PFC_Water_Low.m | WS#5396699_WS#5396714_10.d | ConCal | STD 1 | As Method | - |
| 11 | 5396699:BLANK | P2-B1 | PFC_Water_Low.m | WS#5396699_WS#5396714_11.d | Sample | | As Method | - |
| 12 | 5396699:SPIKE | P2-B2 | PFC_Water_Low.m | WS#5396699_WS#5396714_12.d | QC | ICV | As Method | - |
| 13 | 5396699:MTRX SPK | P2-B3 | PFC_Water_Low.m | WS#5396699_WS#5396714_13.d | QC | ICV | As Method | - |
| 14 | 5396699:MTRX SPK:D1 | P2-B4 | PFC_Water_Low.m | WS#5396699_WS#5396714_14.d | QC | ICV | As Method | - |
| 15 | 5396699:FZA783-01 | P2-B5 | PFC_Water_Low.m | WS#5396699_WS#5396714_15.d | Sample | | As Method | - |
| 16 | 5396699:FZA784-01 | P2-B6 | PFC_Water_Low.m | WS#5396699_WS#5396714_16.d | Sample | | As Method | - |
| 17 | 5396699:FZA785-01 | P2-B7 | PFC_Water_Low.m | WS#5396699_WS#5396714_17.d | Sample | | As Method | - |
| 18 | 5396699:FZA786-01 | P2-B8 | PFC_Water_Low.m | WS#5396699_WS#5396714_18.d | Sample | | As Method | - |
| 19 | 5396699:FZA788-01 | P2-B9 | PFC_Water_Low.m | WS#5396699_WS#5396714_19.d | Sample | | As Method | - |
| 20 | 5396699:FZA789-01 | P2-C1 | PFC_Water_Low.m | WS#5396699_WS#5396714_20.d | Sample | | As Method | - |
| 21 | 5396699:FZA790-01 | P2-C2 | PFC_Water_Low.m | WS#5396699_WS#5396714_21.d | Sample | | As Method | - |
| 22 | 5396699:FZA791-01 | P2-C3 | PFC_Water_Low.m | WS#5396699_WS#5396714_22.d | Sample | | As Method | - |
| 23 | 5396699:FZA792-01 | P2-C4 | PFC_Water_Low.m | WS#5396699_WS#5396714_23.d | Sample | | As Method | - |
| 24 | 5396699:FZA802-01 | P2-C5 | PFC_Water_Low.m | WS#5396699_WS#5396714_24.d | Sample | | As Method | - |
| 25 | CCV | P2-A5 | PFC_Water_Low.m | WS#5396699_WS#5396714_25.d | ConCal | STD 4 | As Method | - |
| 26 | 5396699:FZH332-01 | P2-C6 | PFC_Water_Low.m | WS#5396699_WS#5396714_26.d | Sample | | As Method | - |
| 27 | 5396699:FZH334-01:10x | P2-C7 | PFC_Water_Low.m | WS#5396699_WS#5396714_27.d | Sample | | As Method | - |
| 28 | 5396699:FZH336-01 | P2-C8 | PFC_Water_Low.m | WS#5396699_WS#5396714_28.d | Sample | | As Method | - |
| 29 | 5396699:FZH338-01 | P2-C9 | PFC_Water_Low.m | WS#5396699_WS#5396714_29.d | Sample | | As Method | - |
| 30 | 5396699:FZH339-01 | P2-D1 | PFC_Water_Low.m | WS#5396699_WS#5396714_30.d | Sample | | As Method | - |

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| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 31 | 5396699:FZH340-01 | P2-D2 | PFC_Water_Low.m | WS#5396699_WS#5396714_31.d | Sample | | As Method | - |
| 32 | 5396699:FZH341-01 | P2-D3 | PFC_Water_Low.m | WS#5396699_WS#5396714_32.d | Sample | | As Method | - |
| 33 | 5396699:FZH342-01 | P2-D4 | PFC_Water_Low.m | WS#5396699_WS#5396714_33.d | Sample | | As Method | - |
| 34 | 5396699:FZH343-01 | P2-D5 | PFC_Water_Low.m | WS#5396699_WS#5396714_34.d | Sample | | As Method | - |
| 35 | 5396699:FZJ934-01 | P2-D6 | PFC_Water_Low.m | WS#5396699_WS#5396714_35.d | Sample | | As Method | - |
| 36 | CCV | P2-A5 | PFC_Water_Low.m | WS#5396699_WS#5396714_36.d | ConCal | STD 4 | As Method | - |
| 37 | 5396714:MTRX SPK | P2-D7 | PFC_Water_Low.m | WS#5396699_WS#5396714_37.d | Sample | | As Method | - |
| 38 | 5396714:MTRX SPK:D1 | P2-D8 | PFC_Water_Low.m | WS#5396699_WS#5396714_38.d | Sample | | As Method | - |
| 39 | 5396714:FZH337-01 | P2-D9 | PFC_Water_Low.m | WS#5396699_WS#5396714_39.d | Sample | | As Method | - |
| 40 | CCV | P2-A5 | PFC_Water_Low.m | WS#5396699_WS#5396714_40.d | ConCal | STD 4 | As Method | - |

# Worklist Report

Agilent Technologies

Maxxam Analytics

**Instrument Name:** LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180215_Low_FOSAA.wkl

AD
2018/02/15

**Operator Name:** ---
**Run Type:** Standard Start
**Part of Method to Run:** Acquisition Only
**Execution of Acquisition-DA:** Synchronous
**Acquisition Method Path:** D:\MassHunter\Acquisition Method
**DA Method Path:** D:\MassHunter\methods
**Data File Path:** D:\MassHunter\Data\PFC\20180215\WS#5396699_WS#5396714_FOSAA
**Pre-Worklist Script:** ---
**Post-Worklist Script:** SCP_InstrumentStandby(){MH_Acq_Scripts.exe}
**Acquisition Clean Up Script:** ---
**Overlapped Injection:** Yes
**Clear Sample Selection After Run:** Yes
**Wait Time for Ready(Min):** 10
**Threshold Disk Value(GB):** 10
**Comment:** Column #~~198~~ 199 AD 20180215
MP A1: Solution# 280 (FSRE18)
MP B2:Solution# 284 (FSRE18)

2018/02/15

**Plate Barcode:**

| Plate | Barcode |
|---|---|
| P2 | |

**Worklist Table**

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Solvent | P2-A1 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_01.d | Sample | | As Method | - |
| 2 | STD 1 | P2-A2 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_02.d | Calibration | STD 1 | As Method | - |
| 3 | STD 2 | P2-A3 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_03.d | Calibration | STD 2 | As Method | - |
| 4 | STD 3 | P2-A4 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_04.d | Calibration | STD 3 | As Method | - |
| 5 | STD 4 | P2-A5 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_05.d | Calibration | STD 4 | As Method | - |
| 6 | STD 5 | P2-A6 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_06.d | Calibration | STD 5 | As Method | - |
| 7 | STD 6 | P2-A7 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_07.d | Calibration | STD 6 | As Method | - |
| 8 | IB | P2-A8 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_08.d | Sample | | As Method | - |

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# Worklist Report

Agilent Technologies

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 9 | ICV | P2-A9 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_09.d | QC | ICV | As Method | - |
| 10 | ISC | P2-A2 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_10.d | ConCal | STD 1 | As Method | - |
| 11 | 5396699:BLANK | P2-B1 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_11.d | Sample | | As Method | - |
| 12 | 5396699:SPIKE | P2-B2 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_12.d | QC | ICV | As Method | - |
| 13 | 5396699:MTRX SPK | P2-B3 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_13.d | QC | ICV | As Method | - |
| 14 | 5396699:MTRX SPK:D1 | P2-B4 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_14.d | QC | ICV | As Method | - |
| 15 | 5396699:FZA783-01 | P2-B5 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_15.d | Sample | | As Method | - |
| 16 | 5396699:FZA784-01 | P2-B6 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_16.d | Sample | | As Method | - |
| 17 | 5396699:FZA785-01 | P2-B7 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_17.d | Sample | | As Method | - |
| 18 | 5396699:FZA786-01 | P2-B8 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_18.d | Sample | | As Method | - |
| 19 | 5396699:FZA788-01 | P2-B9 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_19.d | Sample | | As Method | - |
| 20 | 5396699:FZA789-01 | P2-C1 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_20.d | Sample | | As Method | - |
| 21 | 5396699:FZA790-01 | P2-C2 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_21.d | Sample | | As Method | - |
| 22 | 5396699:FZA791-01 | P2-C3 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_22.d | Sample | | As Method | - |
| 23 | 5396699:FZA792-01 | P2-C4 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_23.d | Sample | | As Method | - |
| 24 | 5396699:FZA802-01 | P2-C5 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_24.d | Sample | | As Method | - |
| 25 | CCV | P2-A5 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_25.d | ConCal | STD 4 | As Method | - |
| 26 | 5396699:FZH332-01 | P2-C6 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_26.d | Sample | | As Method | - |
| 27 | 5396699:FZH334-01:10x | P2-C7 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_27.d | Sample | | As Method | - |
| 28 | 5396699:FZH336-01 | P2-C8 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_28.d | Sample | | As Method | - |
| 29 | 5396699:FZH338-01 | P2-C9 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_29.d | Sample | | As Method | - |
| 30 | 5396699:FZH339-01 | P2-D1 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_30.d | Sample | | As Method | - |
| 31 | 5396699:FZH340-01 | P2-D2 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_31.d | Sample | | As Method | - |
| 32 | 5396699:FZH341-01 | P2-D3 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_32.d | Sample | | As Method | - |
| 33 | 5396699:FZH342-01 | P2-D4 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_33.d | Sample | | As Method | - |
| 34 | 5396699:FZH343-01 | P2-D5 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_34.d | Sample | | As Method | - |

| | Sample Name | Sample Position | Method | Data File | Sample Type | Level Name | Inj Vol (µl) | Comment |
|---|---|---|---|---|---|---|---|---|
| 35 | 5396699:FZJ934-01 | P2-D6 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_35.d | Sample | | As Method | - |
| 36 | CCV | P2-A5 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_36.d | ConCal | STD 4 | As Method | - |
| 37 | 5396714:MTRX SPK | P2-D7 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_37.d | Sample | | As Method | - |
| 38 | 5396714:MTRX SPK:D1 | P2-D8 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_38.d | Sample | | As Method | - |
| 39 | 5396714:FZH337-01 | P2-D9 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_39.d | Sample | | As Method | - |
| 40 | CCV | P2-A5 | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_40.d | ConCal | STD 4 | As Method | - |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| STD 1 | - | 2018/02/15 4:15 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_02.d | P2-A2 |
| STD 2 | - | 2018/02/15 4:20 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_03.d | P2-A3 |
| STD 3 | - | 2018/02/15 4:25 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_04.d | P2-A4 |
| STD 4 | - | 2018/02/15 4:30 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_05.d | P2-A5 |
| STD 5 | - | 2018/02/15 4:35 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_06.d | P2-A6 |
| STD 6 | - | 2018/02/15 4:40 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_07.d | P2-A7 |
| IB | - | 2018/02/15 4:45 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_08.d | P2-A8 |
| ICV | - | 2018/02/15 4:50 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_09.d | P2-A9 |
| ISC | - | 2018/02/15 4:55 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_10.d | P2-A2 |
| 5396699:BLANK | - | 2018/02/15 5:00 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_11.d | P2-B1 |
| 5396699:SPIKE | - | 2018/02/15 5:05 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_12.d | P2-B2 |
| 5396699:MTRX SPK | FZA786 | 2018/02/15 5:10 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_13.d | P2-B3 |
| 5396699:MTRX SPK:D1 | FZA786 | 2018/02/15 5:15 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_14.d | P2-B4 |
| 5396699:FZA783-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 5:19 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_15.d | P2-B5 |
| 5396699:FZA784-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 5:24 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_16.d | P2-B6 |
| 5396699:FZA785-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 5:29 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_17.d | P2-B7 |
| 5396699:FZA786-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 5:34 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_18.d | P2-B8 |
| 5396699:FZA788-01 | Reported for PFUnA , PFTeDA only. | 2018/02/15 5:39 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_19.d | P2-B9 |
| 5396699:FZA789-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 5:44 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_20.d | P2-C1 |
| 5396699:FZA790-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 5:49 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_21.d | P2-C2 |
| 5396699:FZA791-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 5:54 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_22.d | P2-C3 |
| 5396699:FZA792-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 5:59 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_23.d | P2-C4 |
| 5396699:FZA802-01 | Reinjected due to low ext IS recovery- Reporte | 2018/02/15 6:04 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_24.d | P2-C5 |
| CCV | - | 2018/02/15 6:09 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_25.d | P2-A5 |
| 5396699:FZH332-01 | Reported for PFTrDA , PFTeDA only. | 2018/02/15 6:14 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_26.d | P2-C6 |
| 5396699:FZH334-01:10x | Reported for PFTrDA , PFTeDA only. | 2018/02/15 6:19 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_27.d | P2-C7 |
| 5396699:FZH336-01 | - | 2018/02/15 6:24 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_28.d | P2-C8 |
| 5396699:FZH338-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 6:29 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_29.d | P2-C9 |
| 5396699:FZH339-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 6:33 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_30.d | P2-D1 |
| 5396699:FZH340-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 6:38 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_31.d | P2-D2 |
| 5396699:FZH341-01 | - | 2018/02/15 6:43 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_32.d | P2-D3 |
| 5396699:FZH342-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 6:48 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_33.d | P2-D4 |
| 5396699:FZH343-01 | Reported for PFDoA, PFUnA , PFTeDA only. | 2018/02/15 6:53 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_34.d | P2-D5 |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| 5396699:FZJ934-01 | Reported for PFOSA only. | 2018/02/15 6:58 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_35.d | P2-D6 |
| CCV | - | 2018/02/15 7:03 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_36.d | P2-A5 |
| CCV | - | 2018/02/15 7:23 PM | PFC_Water_Low.m | WS#5396699_WS#5396714_40.d | P2-A5 |
| ISC | - | 2018/02/16 8:47 AM | PFC_Water_Low.m | WS#5396699_WS#5396714_r_43.d | P2-A2 |
| 5396699:FZA802-01:R | Reported for PFOA | 2018/02/16 8:52 AM | PFC_Water_Low.m | WS#5396699_WS#5396714_r_44.d | P2-C5 |
| CCV | - | 2018/02/16 8:57 AM | PFC_Water_Low.m | WS#5396699_WS#5396714_r_45.d | P2-A5 |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| STD 1 | - | 2018/02/15 10:39 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_02.d | P2-A2 |
| STD 2 | - | 2018/02/15 10:41 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_03.d | P2-A3 |
| STD 3 | - | 2018/02/15 10:44 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_04.d | P2-A4 |
| STD 4 | - | 2018/02/15 10:46 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_05.d | P2-A5 |
| STD 5 | - | 2018/02/15 10:48 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_06.d | P2-A6 |
| STD 6 | - | 2018/02/15 10:51 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_07.d | P2-A7 |
| IB | - | 2018/02/15 10:53 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_08.d | P2-A8 |
| ICV | - | 2018/02/15 10:56 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_09.d | P2-A9 |
| ISC | - | 2018/02/15 10:58 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_10.d | P2-A2 |
| 5396699:BLANK | - | 2018/02/15 11:00 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_11.d | P2-B1 |
| 5396699:SPIKE | - | 2018/02/15 11:03 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_12.d | P2-B2 |
| 5396699:MTRX SPK | FZA786 | 2018/02/15 11:05 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_13.d | P2-B3 |
| 5396699:MTRX SPK:D1 | FZA786 | 2018/02/15 11:08 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_14.d | P2-B4 |
| 5396699:FZA783-01 | - | 2018/02/15 11:10 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_15.d | P2-B5 |
| 5396699:FZA784-01 | - | 2018/02/15 11:12 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_16.d | P2-B6 |
| 5396699:FZA785-01 | - | 2018/02/15 11:15 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_17.d | P2-B7 |
| 5396699:FZA786-01 | - | 2018/02/15 11:17 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_18.d | P2-B8 |
| 5396699:FZA788-01 | - | 2018/02/15 11:20 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_19.d | P2-B9 |
| 5396699:FZA789-01 | - | 2018/02/15 11:22 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_20.d | P2-C1 |
| 5396699:FZA790-01 | - | 2018/02/15 11:25 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_21.d | P2-C2 |
| 5396699:FZA791-01 | - | 2018/02/15 11:27 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_22.d | P2-C3 |
| 5396699:FZA792-01 | - | 2018/02/15 11:29 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_23.d | P2-C4 |
| 5396699:FZA802-01 | - | 2018/02/15 11:32 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_24.d | P2-C5 |
| CCV | - | 2018/02/15 11:34 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_25.d | P2-A5 |
| 5396699:FZH332-01 | - | 2018/02/15 11:37 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_26.d | P2-C6 |
| 5396699:FZH334-01:10x | Not Used | 2018/02/15 11:39 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_27.d | P2-C7 |
| 5396699:FZH336-01 | - | 2018/02/15 11:41 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_28.d | P2-C8 |
| 5396699:FZH338-01 | - | 2018/02/15 11:44 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_29.d | P2-C9 |
| 5396699:FZH339-01 | - | 2018/02/15 11:46 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_30.d | P2-D1 |
| 5396699:FZH340-01 | - | 2018/02/15 11:49 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_31.d | P2-D2 |
| 5396699:FZH341-01 | - | 2018/02/15 11:51 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_32.d | P2-D3 |
| 5396699:FZH342-01 | - | 2018/02/15 11:53 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_33.d | P2-D4 |
| 5396699:FZH343-01 | - | 2018/02/15 11:56 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_34.d | P2-D5 |

## FINAL INJECTION SEQUENCE

| Sample | | | | | |
|---|---|---|---|---|---|
| Name | Comment | Acq. Date-Time | Acq. Method File | Data File | Pos. |
| 5396699:FZJ934-01 | - | 2018/02/15 11:58 AM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_35.d | P2-D6 |
| CCV | - | 2018/02/15 12:01 PM | PFC_Water_Low_FOSAA.m | WS#5396699_WS#5396714_FOSAA_36.d | P2-A5 |

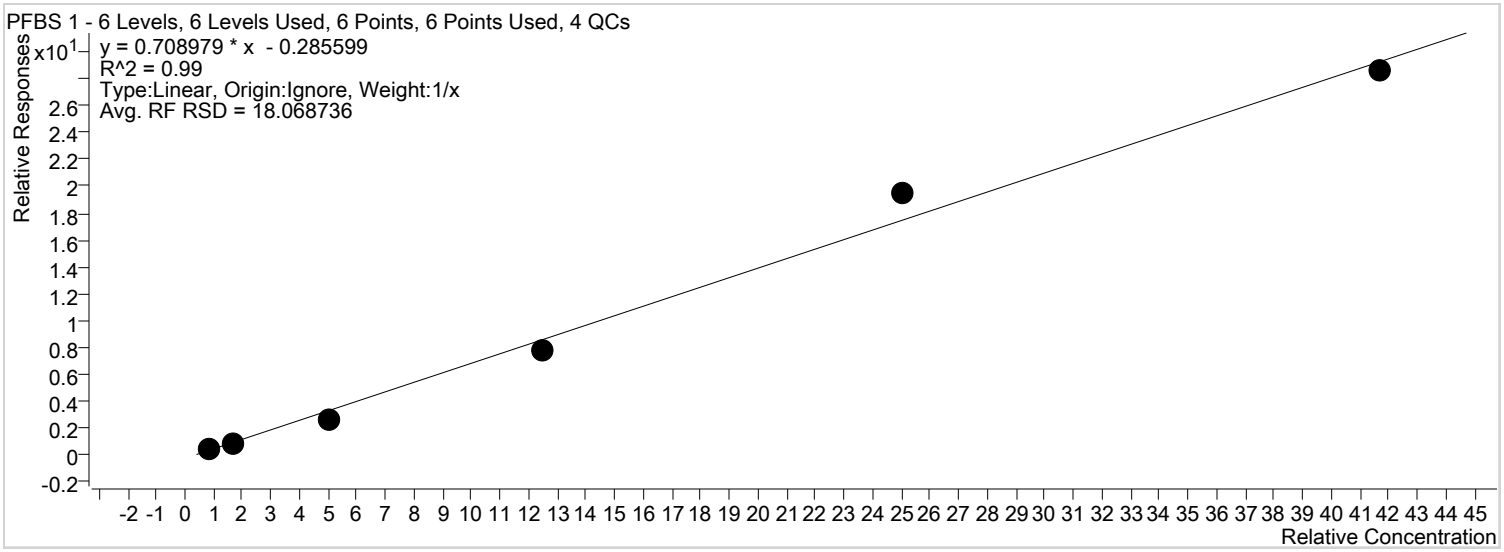
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFBS 1

**Internal Standard:** MPFHxS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 1.03 | 618 | 0.5337 | 94 | 123.8 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.59 | 1211 | 0.4954 | 94 | 93.6 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.12 | 3621 | 0.5271 | 288 | 82.4 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 11.38 | 10141 | 0.6226 | 165 | 91.0 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 27.86 | 23344 | 0.7788 | 240 | 111.5 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 40.75 | 39072 | 0.6859 | 266 | 97.7 |

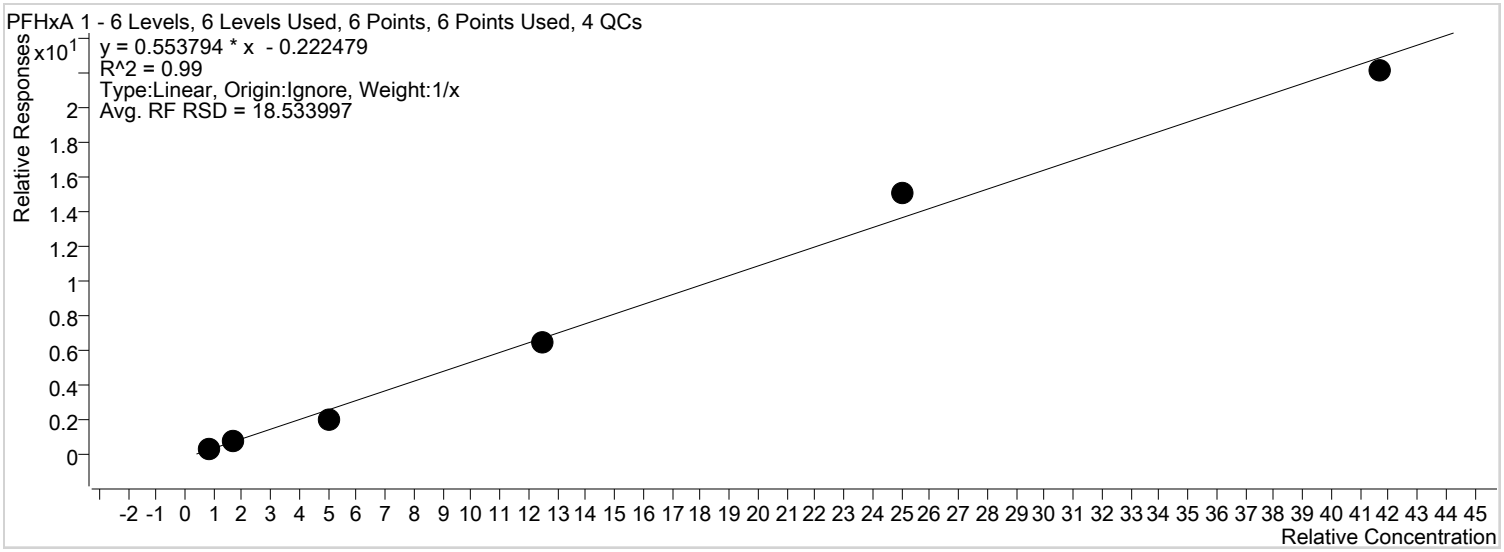
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFHxA 1

**Internal Standard:** MPFHxA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.97 | 1923 | 0.3804 | 127 | 117.1 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.65 | 3875 | 0.4065 | 135 | 97.0 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.12 | 12228 | 0.4119 | 662 | 82.4 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 12.03 | 36651 | 0.5153 | 1672 | 96.3 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 27.62 | 82811 | 0.6029 | 2442 | 110.5 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 40.34 | 136428 | 0.5303 | 7991 | 96.7 |

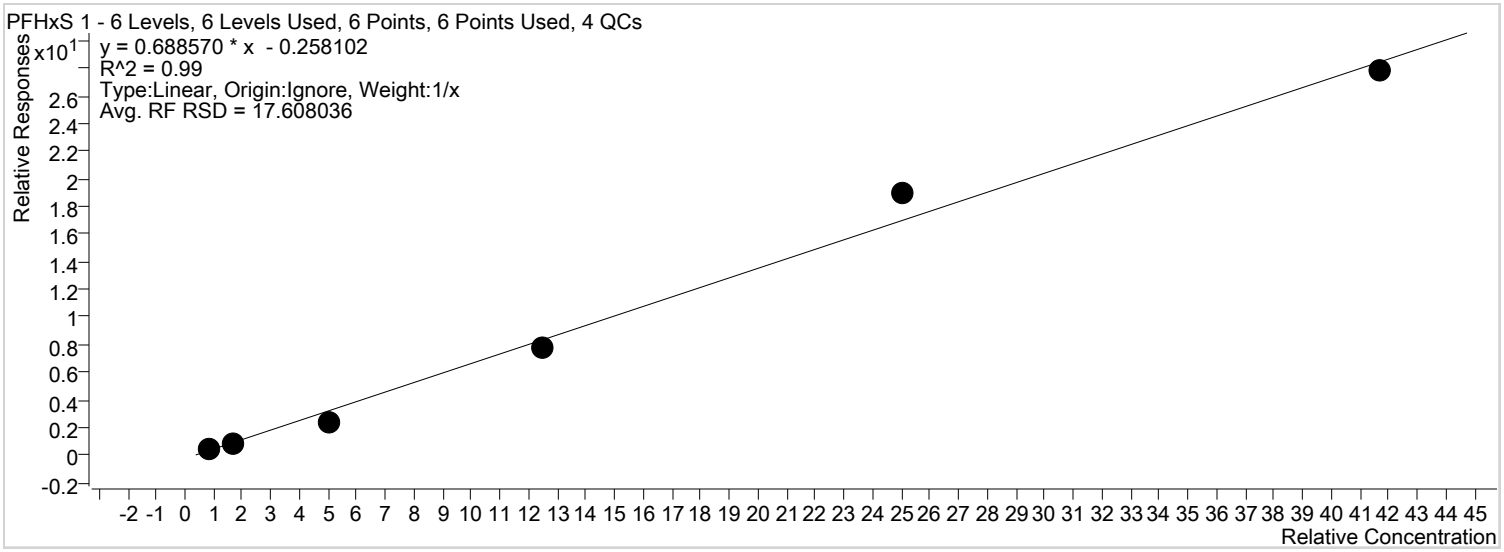
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFHxS 1

**Internal Standard:** MPFHxS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 1.05 | 647 | 0.5588 | 87 | 126.3 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.60 | 1218 | 0.4982 | 81 | 94.4 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 3.89 | 3323 | 0.4837 | 323 | 77.7 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 11.52 | 10001 | 0.6140 | 718 | 92.2 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 27.90 | 22723 | 0.7581 | 1073 | 111.6 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 40.77 | 37995 | 0.6670 | 1347 | 97.8 |

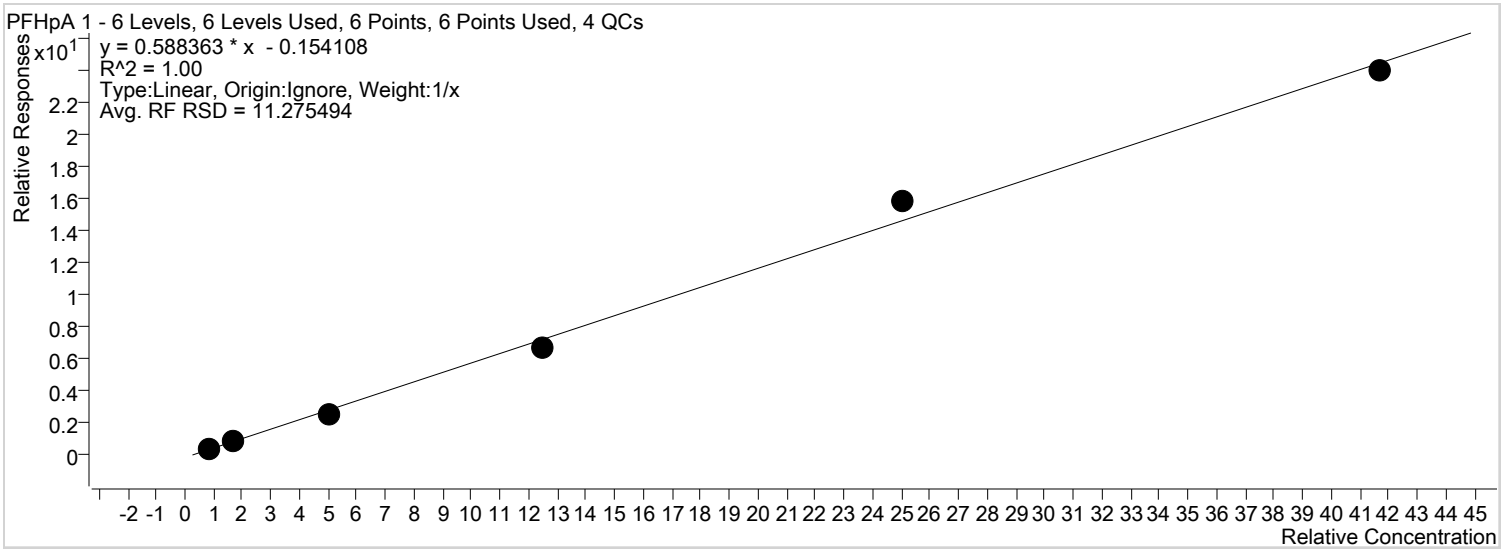
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFHpA 1

**Internal Standard:** MPFHpA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.94 | 2918 | 0.4833 | 24 | 113.7 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.64 | 5438 | 0.4768 | 107 | 96.4 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.51 | 16809 | 0.5000 | 189 | 90.2 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 11.65 | 45851 | 0.5360 | 313 | 93.2 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 27.10 | 103083 | 0.6317 | 377 | 108.4 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 40.88 | 172246 | 0.5731 | 445 | 98.0 |

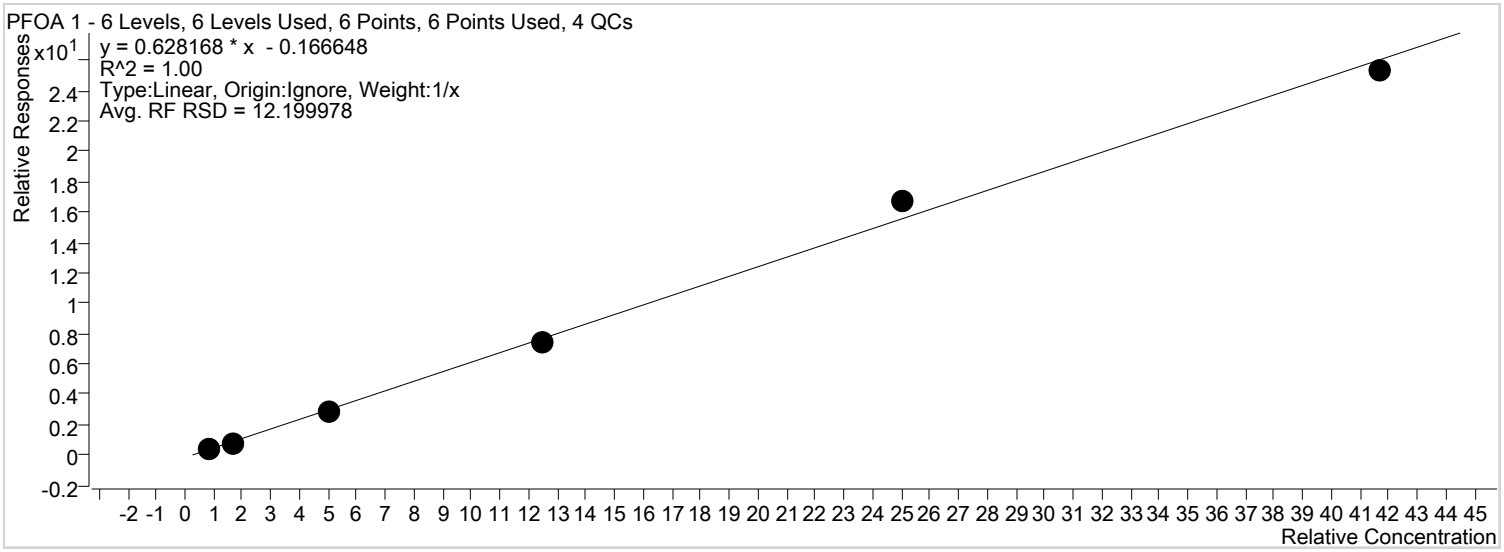
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFOA 1

**Internal Standard:** MPFOA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.94 | 2877 | 0.5099 | 30 | 113.1 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.56 | 5513 | 0.4794 | 78 | 91.9 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.67 | 17004 | 0.5530 | 156 | 93.3 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 12.08 | 46233 | 0.5936 | 433 | 96.6 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 26.94 | 104689 | 0.6703 | 1067 | 107.8 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 40.54 | 177302 | 0.6067 | 1805 | 97.2 |

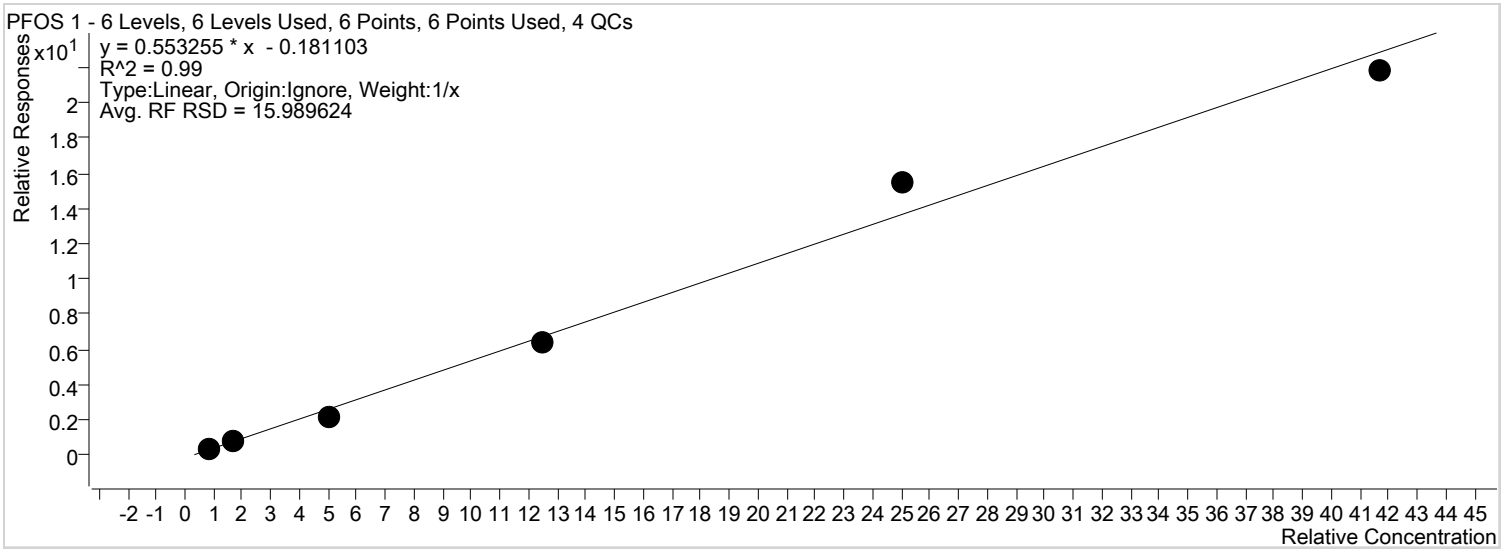
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFOS 1

**Internal Standard:** MPFOS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.96 | 607 | 0.4218 | 124 | 115.7 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.67 | 1119 | 0.4359 | 175 | 98.0 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.14 | 3052 | 0.4221 | 148 | 82.8 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 11.83 | 9097 | 0.5093 | 500 | 94.7 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 28.34 | 21090 | 0.6198 | 368 | 113.3 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 39.79 | 34737 | 0.5236 | 349 | 95.4 |

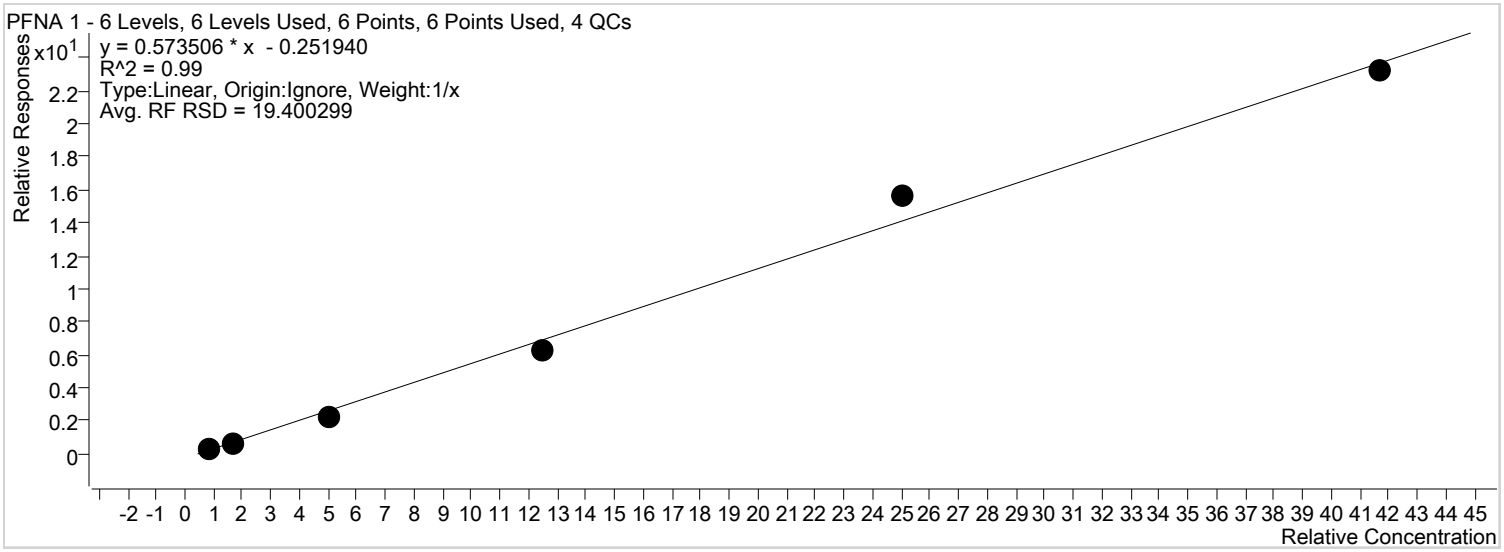
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFNA 1

**Internal Standard:** MPFNA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 1.01 | 2216 | 0.3948 | 33 | 121.8 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.61 | 4138 | 0.3943 | 65 | 94.6 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.22 | 12817 | 0.4333 | 343 | 84.3 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 11.30 | 36842 | 0.4985 | 809 | 90.4 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 27.71 | 86783 | 0.6256 | 1216 | 110.8 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 40.88 | 145867 | 0.5562 | 2414 | 98.0 |

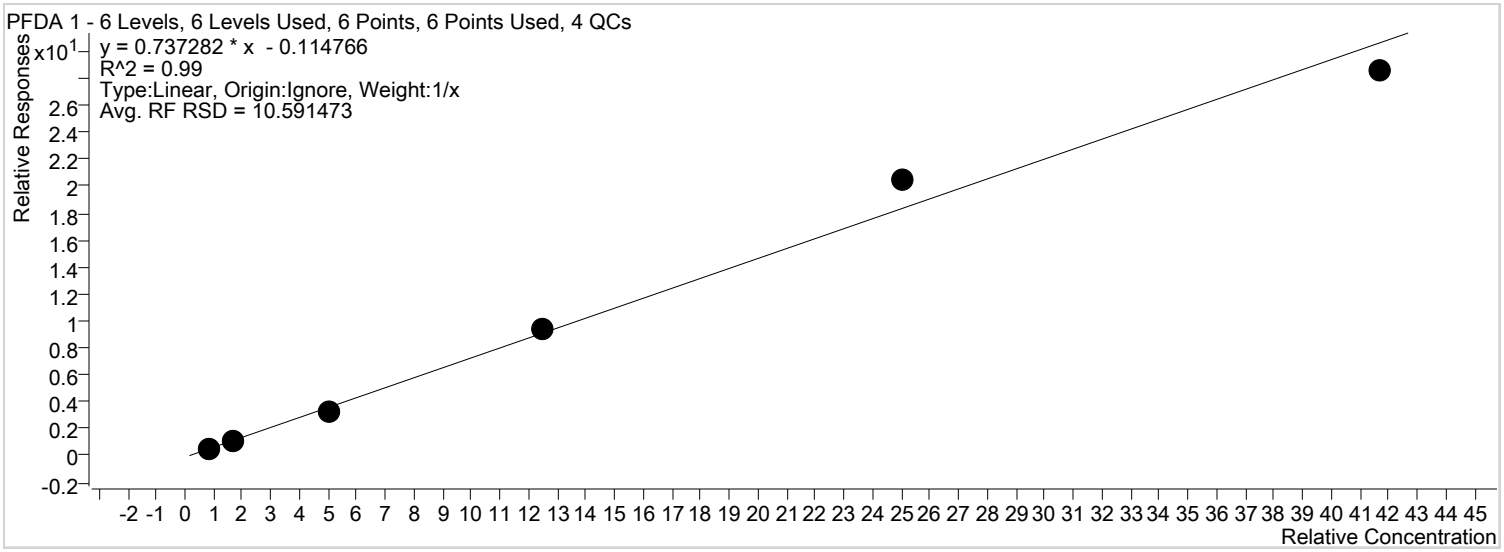
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFDA 1

**Internal Standard:** MPFDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.87 | 2473 | 0.6322 | 30 | 104.5 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.65 | 4803 | 0.6501 | 61 | 97.3 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.52 | 13300 | 0.6434 | 172 | 90.4 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 12.83 | 41124 | 0.7475 | 430 | 102.6 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 27.97 | 84831 | 0.8204 | 647 | 111.9 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 38.88 | 142114 | 0.6848 | 1538 | 93.2 |

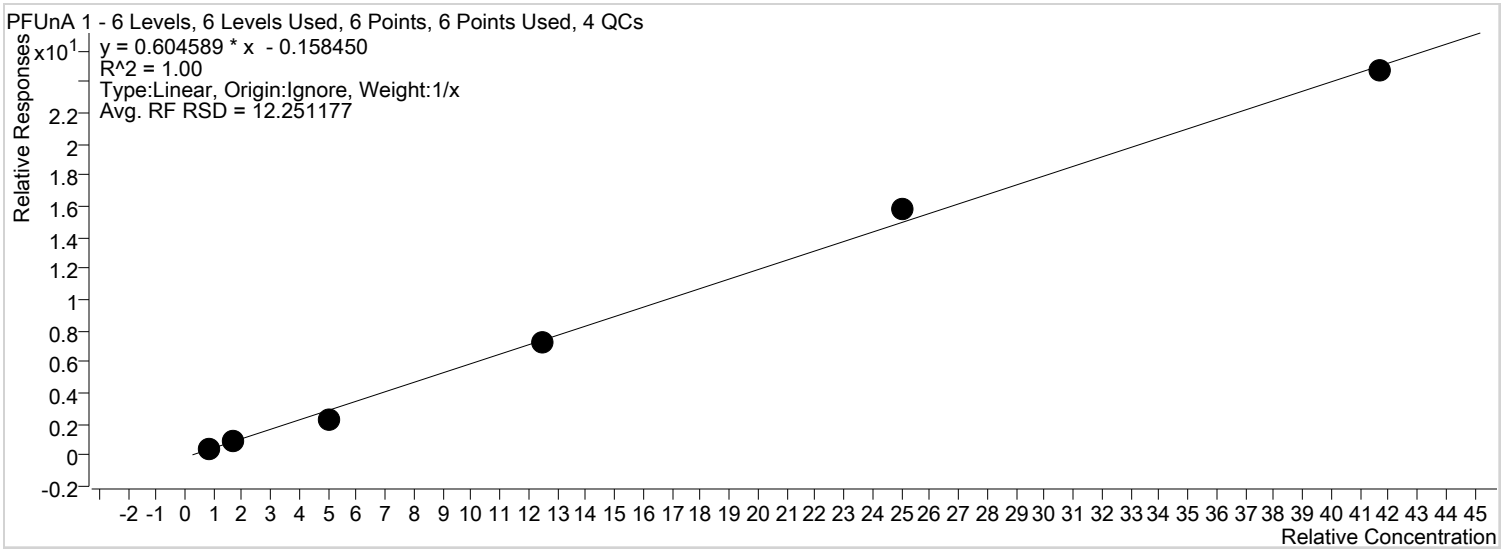
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFUnA 1

**Internal Standard:** MPFUnA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.94 | 2510 | 0.4903 | 27 | 112.7 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.75 | 4875 | 0.5287 | 33 | 102.9 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.05 | 13534 | 0.4579 | 87 | 81.0 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 12.37 | 39617 | 0.5854 | 132 | 98.9 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 26.45 | 87768 | 0.6334 | 184 | 105.8 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 41.18 | 144868 | 0.5932 | 189 | 98.8 |

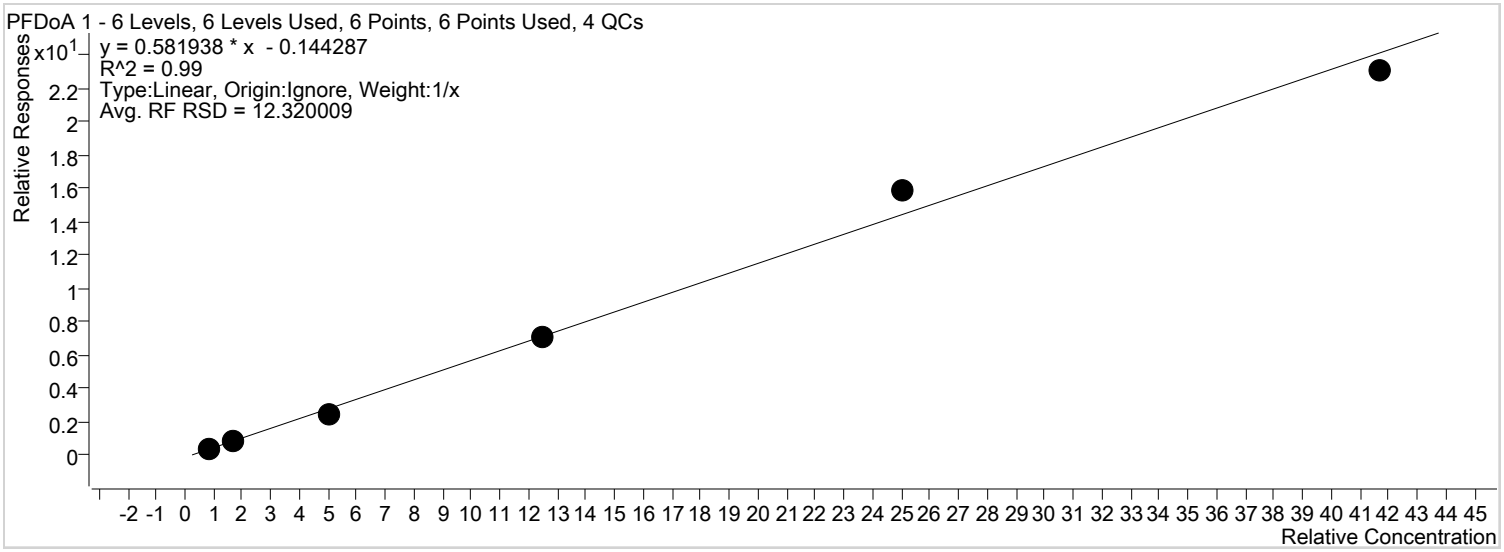
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFDoA 1

**Internal Standard:** MPFDoA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.91 | 2949 | 0.4611 | 42 | 109.1 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.64 | 5881 | 0.4780 | 164 | 96.7 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.47 | 17518 | 0.4912 | 199 | 89.4 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 12.45 | 50698 | 0.5681 | 1115 | 99.6 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 27.40 | 114607 | 0.6321 | 3116 | 109.6 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 39.86 | 187876 | 0.5527 | 11140 | 95.6 |

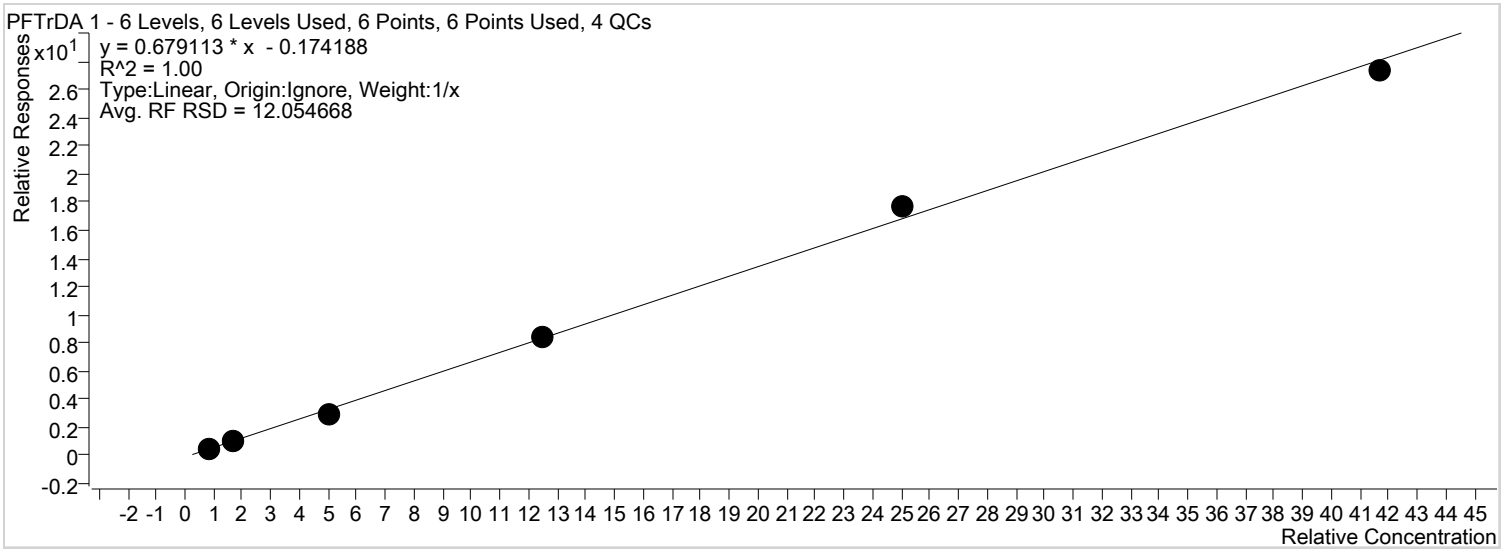
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFTrDA 1

**Internal Standard:** MPFTeDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.89 | 2946 | 0.5169 | 26 | 107.0 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.67 | 5994 | 0.5666 | 51 | 98.5 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.51 | 18012 | 0.5780 | 126 | 90.2 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 12.65 | 51716 | 0.6735 | 212 | 101.2 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 26.43 | 117011 | 0.7109 | 248 | 105.7 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 40.58 | 195943 | 0.6566 | 318 | 97.3 |

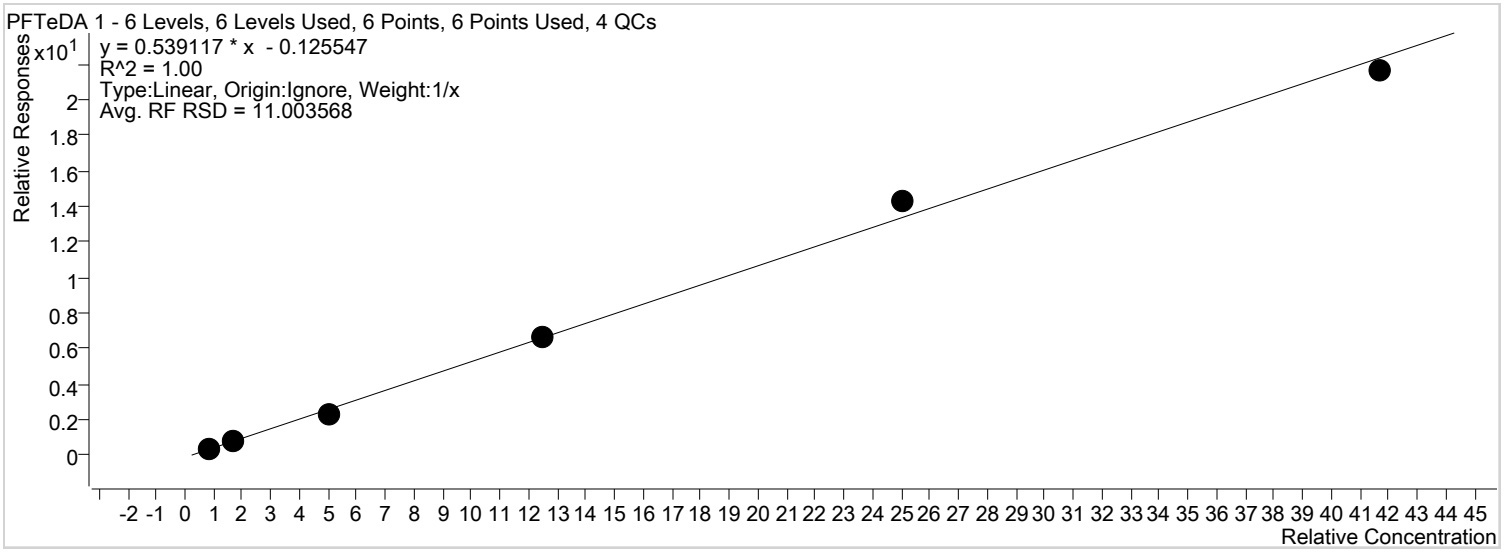
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:36:14 AM

**Instrument:** LCMS04

**Analyte:** PFTeDA 1

**Internal Standard:** MPFTeDA




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 4:15:51 PM | 0.83 | 0.92 | 2545 | 0.4465 | 21 | 110.9 |
| STD 2 | STD 2 | x | 2018/02/15 4:20:46 PM | 1.70 | 1.62 | 4651 | 0.4396 | 37 | 95.2 |
| STD 3 | STD 3 | x | 2018/02/15 4:25:43 PM | 5.00 | 4.48 | 14263 | 0.4577 | 103 | 89.5 |
| STD 4 | STD 4 | x | 2018/02/15 4:30:38 PM | 12.50 | 12.53 | 40717 | 0.5303 | 197 | 100.2 |
| STD 5 | STD 5 | x | 2018/02/15 4:35:35 PM | 25.00 | 26.83 | 94425 | 0.5737 | 337 | 107.3 |
| STD 6 | STD 6 | x | 2018/02/15 4:40:31 PM | 41.70 | 40.35 | 154772 | 0.5187 | 334 | 96.8 |

# By Compound Report

Agilent Technologies

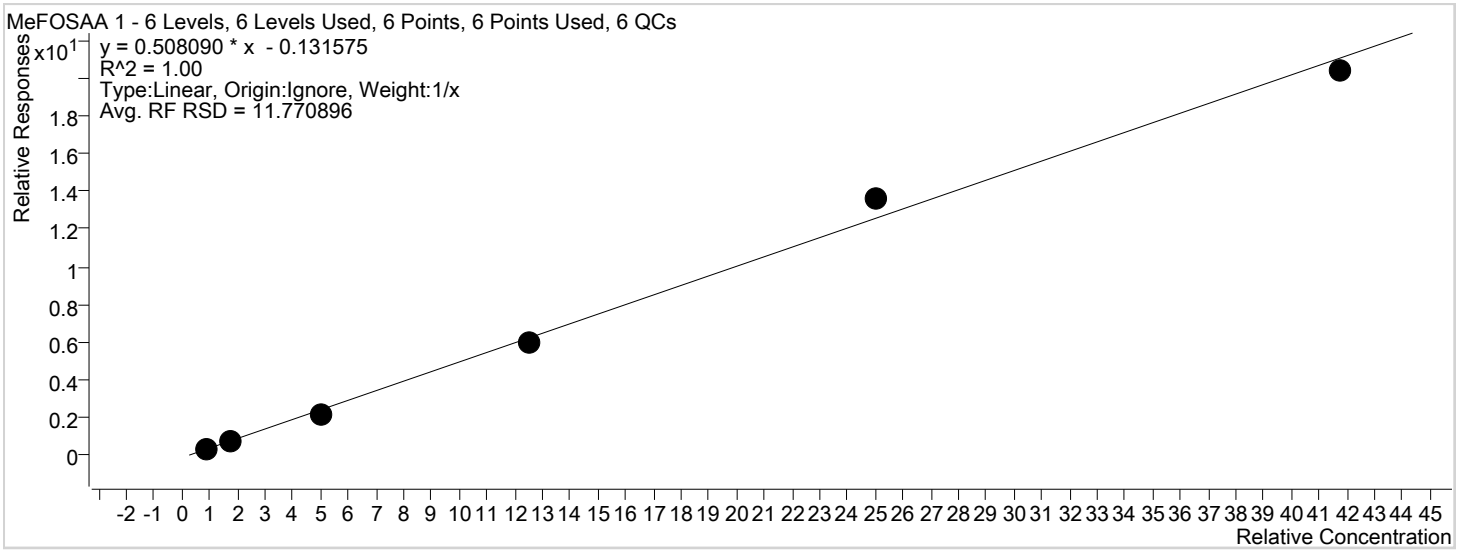
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:41:16 AM

**Instrument:** LCMS04

**Analyte:** MeFOSAA 1

**Internal Standard:** D3-MeFOSAA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 10:39:10 AM | 0.83 | 0.92 | 476 | 0.4067 | 143 | 111.3 |
| STD 2 | STD 2 | x | 2018/02/15 10:41:35 AM | 1.70 | 1.64 | 1031 | 0.4131 | 168 | 96.5 |
| STD 3 | STD 3 | x | 2018/02/15 10:44:00 AM | 5.00 | 4.49 | 3138 | 0.4302 | 294 | 89.8 |
| STD 4 | STD 4 | x | 2018/02/15 10:46:25 AM | 12.50 | 12.10 | 8714 | 0.4814 | 319 | 96.8 |
| STD 5 | STD 5 | x | 2018/02/15 10:48:50 AM | 25.00 | 27.16 | 19911 | 0.5466 | 355 | 108.6 |
| STD 6 | STD 6 | x | 2018/02/15 10:51:15 AM | 41.70 | 40.41 | 32114 | 0.4893 | 353 | 96.9 |

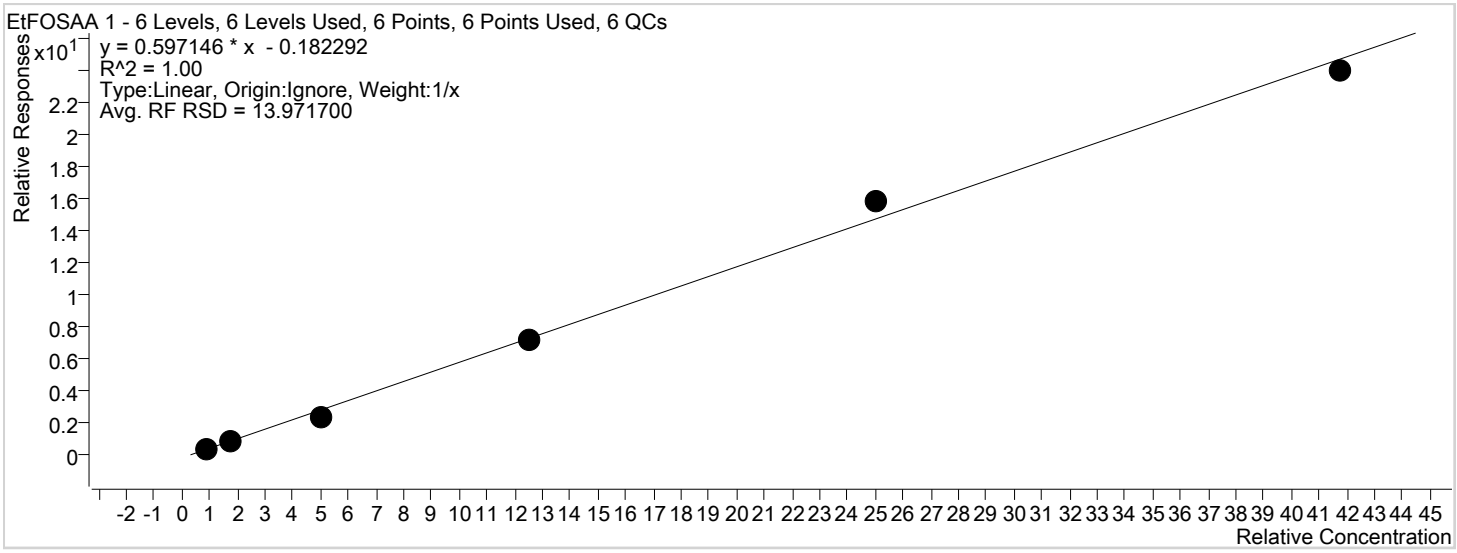
**Batch Path** T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics.batch.bin

**Last Calib Update** 2018/02/21 10:41:16 AM

**Instrument:** LCMS04

**Analyte:** EtFOSAA 1

**Internal Standard:** D5-EtFOSAA IS




| Sample | Level | Enabled | Acquisition Time | Exp. Conc. | Concentration | Response | RF | S/N | Accuracy |
|---|---|---|---|---|---|---|---|---|---|
| STD 1 | STD 1 | x | 2018/02/15 10:39:10 AM | 0.83 | 0.94 | 472 | 0.4575 | 72 | 113.4 |
| STD 2 | STD 2 | x | 2018/02/15 10:41:35 AM | 1.70 | 1.65 | 1008 | 0.4717 | 130 | 97.0 |
| STD 3 | STD 3 | x | 2018/02/15 10:44:00 AM | 5.00 | 4.26 | 3049 | 0.4727 | 411 | 85.3 |
| STD 4 | STD 4 | x | 2018/02/15 10:46:25 AM | 12.50 | 12.45 | 8968 | 0.5800 | 575 | 99.6 |
| STD 5 | STD 5 | x | 2018/02/15 10:48:50 AM | 25.00 | 26.91 | 20560 | 0.6355 | 2666 | 107.7 |
| STD 6 | STD 6 | x | 2018/02/15 10:51:15 AM | 41.70 | 40.52 | 33330 | 0.5759 | 2755 | 97.2 |

# Quantitation Results

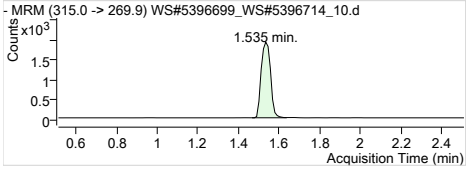
Agilent Technologies

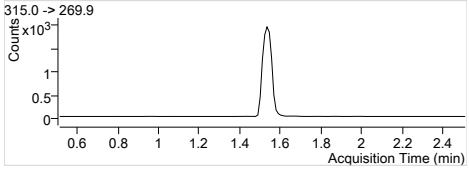
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A2 |
| **Acq. Date** | 2018/02/15 4:55:18 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

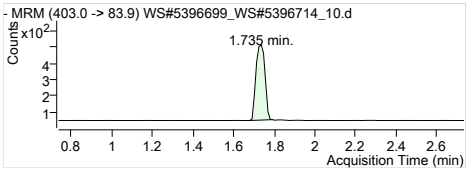
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6103 | 1.53 | 1 µg/L | | |
| MPFHxS | 1431 | 1.74 | 1 µg/L | | |
| MPFHpA | 7408 | 1.78 | 1 µg/L | | |
| MPFOA | 6593 | 1.96 | 1 µg/L | | |
| MPFOS | 1587 | 2.01 | 1 µg/L | | |
| MPFNA | 6732 | 2.09 | 1 µg/L | | |
| MPFDA | 5046 | 2.20 | 1 µg/L | | |
| MPFUnA | 6327 | 2.30 | 1 µg/L | | |
| MPFDoA | 8157 | 2.38 | 1 µg/L | | |
| MPFTeDA | 7028 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 25284 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 26238 | 2.20 | 1 µg/L | | |

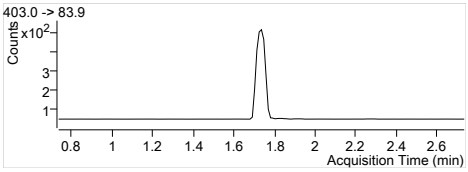
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 587 | 1.20 | 0.83 | 0.98 µg/L | 118.24 |
| PFHxA 1 | 2157 | 1.53 | 0.83 | 1.04 µg/L | 125.29 |
| PFHxS 1 | 605 | 1.72 | 0.83 | 0.99 µg/L | 119.14 |
| PFHpA 1 | 2693 | 1.78 | 0.83 | 0.88 µg/L | 106.00 |
| PFOA 1 | 3106 | 1.96 | 0.83 | 1.02 µg/L | 122.32 |
| PFOS 1 | 536 | 2.01 | 0.83 | 0.94 µg/L | 112.99 |
| PFNA 1 | 2277 | 2.09 | 0.83 | 1.03 µg/L | 123.98 |
| PFDA 1 | 2379 | 2.20 | 0.83 | 0.80 µg/L | 95.80 |
| PFUnA 1 | 2334 | 2.30 | 0.83 | 0.87 µg/L | 105.09 |
| PFDoA 1 | 3175 | 2.38 | 0.83 | 0.92 µg/L | 110.46 |
| PFTrDA 1 | 3314 | 2.44 | 0.83 | 0.95 µg/L | 114.56 |
| PFTeDA 1 | 2539 | 2.51 | 0.83 | 0.90 µg/L | 108.79 |
| 13C2-PFHxA | 6039 | 1.53 | 100.00 | 101.41 µg/L | 101.41 |
| 18O2-PFHxS | 1431 | 1.74 | 100.00 | 103.09 µg/L | 103.09 |
| 13C4-PFHpA | 7408 | 1.78 | 100.00 | 104.26 µg/L | 104.26 |
| 13C4-PFOA | 6593 | 1.96 | 100.00 | 97.75 µg/L | 97.75 |
| 13C4-PFOS | 1587 | 2.01 | 100.00 | 101.80 µg/L | 101.80 |
| 13C5-PFNA | 6731 | 2.09 | 100.00 | 106.96 µg/L | 106.96 |
| 13C2-PFDA | 4998 | 2.20 | 100.00 | 104.90 µg/L | 104.90 |
| 13C2-PFUnA | 6327 | 2.30 | 100.00 | 102.57 µg/L | 102.57 |
| 13C2-PFDoA | 8157 | 2.38 | 100.00 | 101.59 µg/L | 101.59 |
| 13C2-PFTeDA | 7085 | 2.51 | 100.00 | 99.82 µg/L | 99.82 |
| 13C6-PFHxA | 25284 | 1.53 | 100.00 | 103.11 µg/L | 103.11 |
| 13C9-PFDA | 26238 | 2.20 | 100.00 | 107.77 µg/L | 107.77 |



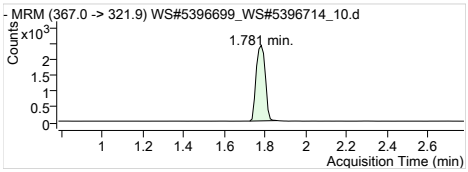



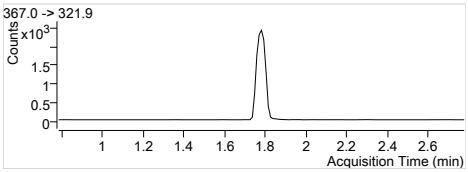

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



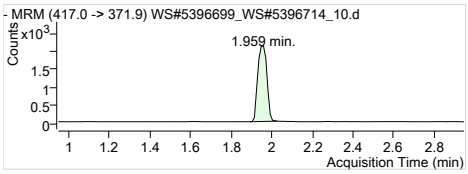



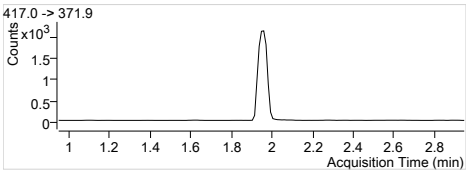

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: CC



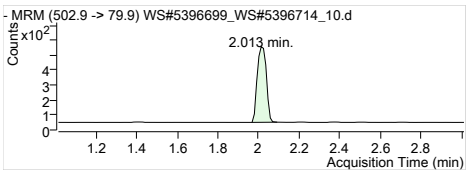



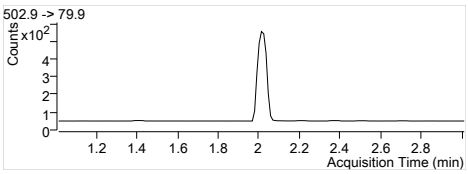

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: CC



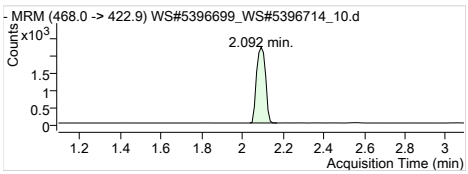



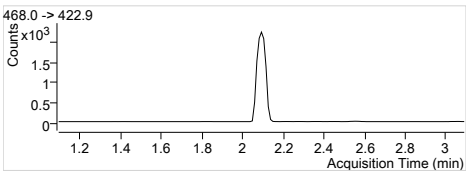

**MPFOA** Internal Standard
RT (Exp. RT): 1.959 (1.948)
Concentration: 1 µg/L
Sample type: CC



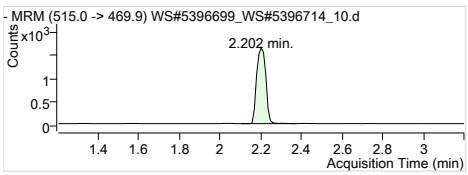



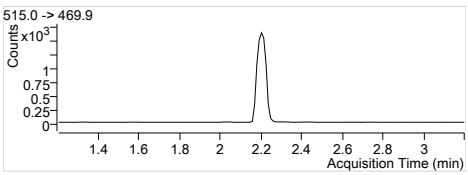

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: CC



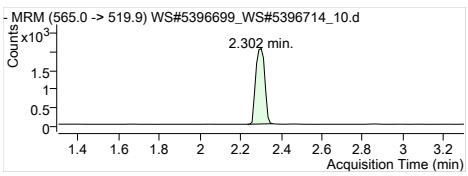



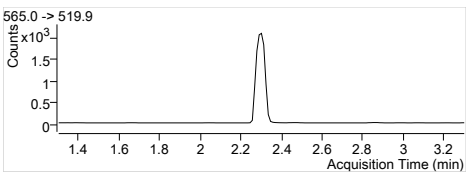

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: CC



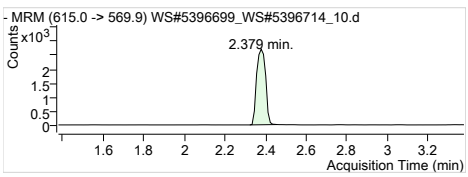



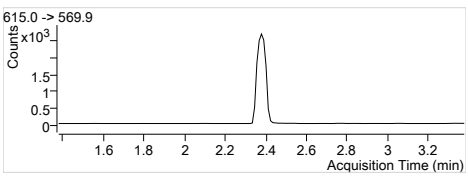

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: CC



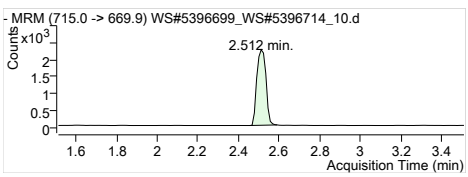



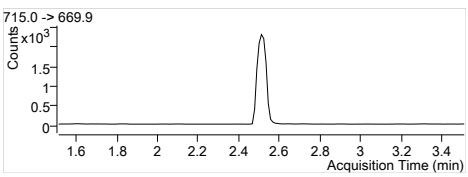

**MPFUnA** Internal Standard
RT (Exp. RT): 2.302 (2.302)
Concentration: 1 µg/L
Sample type: CC



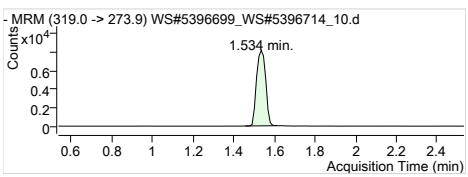



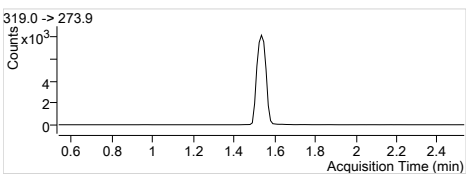

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: CC



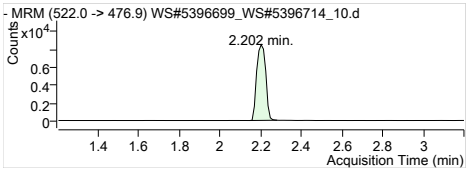



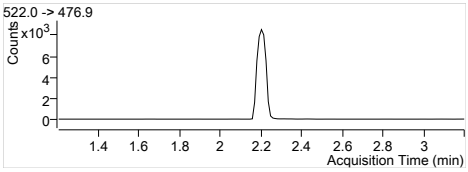

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: CC



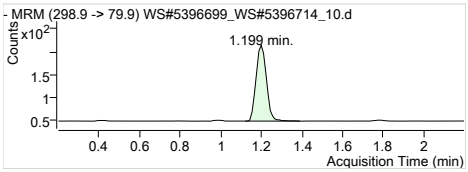



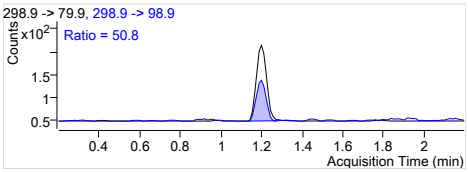

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: CC



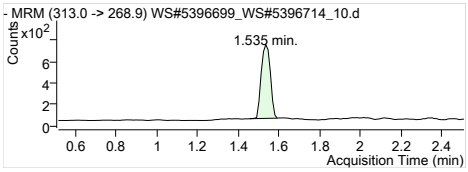



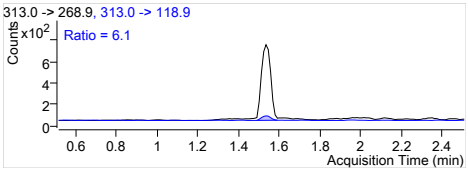

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: CC



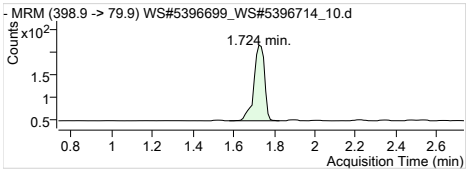



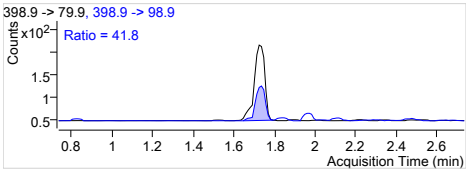

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.199 (1.199)
Calc. conc. 0.98 µg/L
Area ratio: 0.41020
Sample type: CC



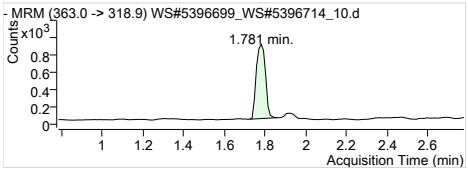



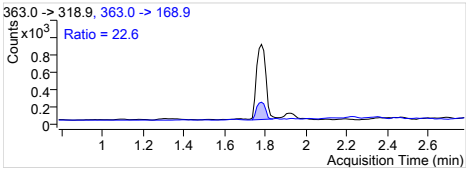

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 1.04 µg/L
Area ratio: 0.35343
Sample type: CC



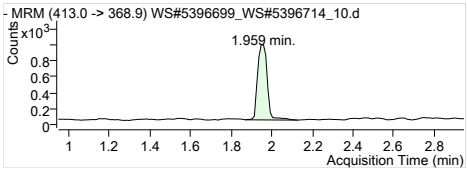



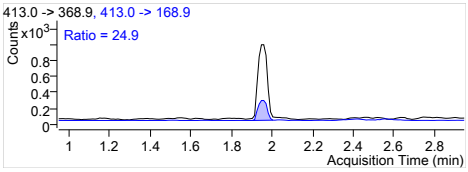

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.724 (1.735)
Calc. conc. 0.99 µg/L
Area ratio: 0.42278
Sample type: CC



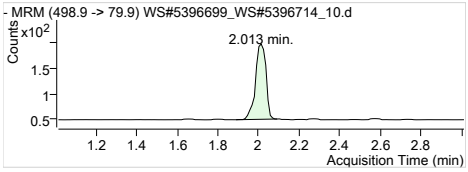



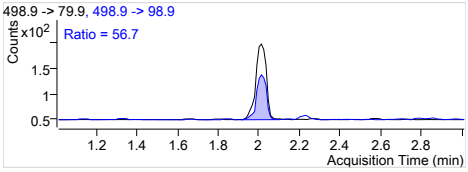

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 0.88 µg/L
Area ratio: 0.36353
Sample type: CC



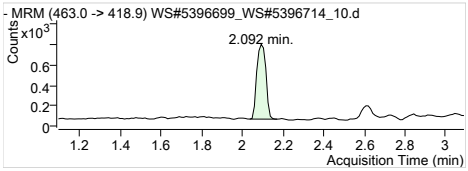



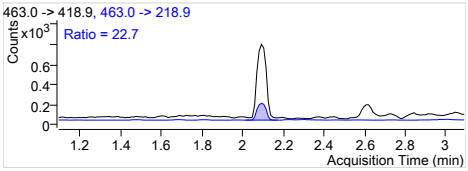

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.959 (1.948)
Calc. conc. 1.02 µg/L
Area ratio: 0.47111
Sample type: CC



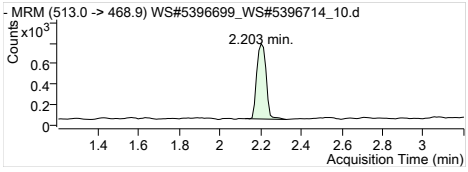



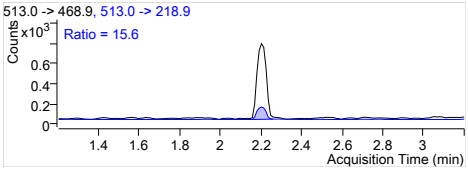

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 0.94 µg/L
Area ratio: 0.33774
Sample type: CC



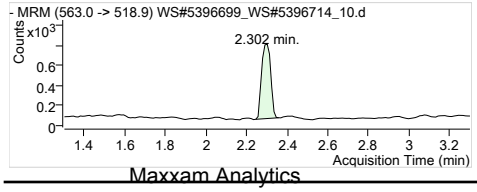



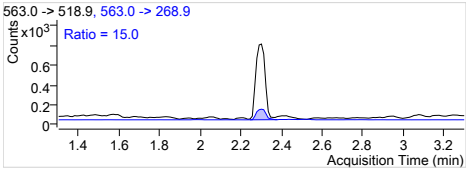

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 1.03 µg/L
Area ratio: 0.33824
Sample type: CC



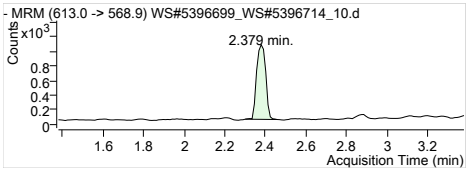



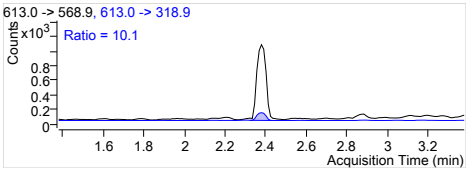

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 0.80 µg/L
Area ratio: 0.47146
Sample type: CC



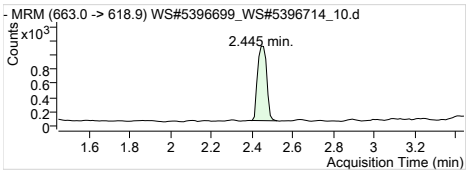



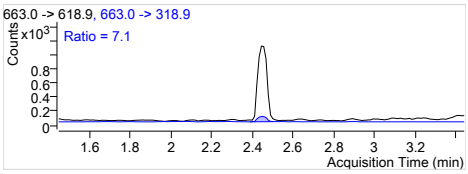

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 0.87 µg/L
Area ratio: 0.36890
Sample type: CC



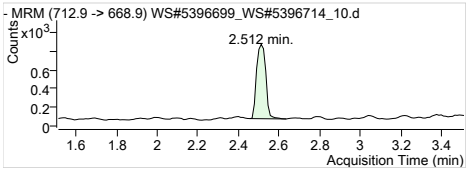



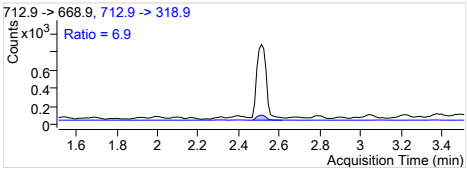

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 0.92 µg/L
Area ratio: 0.38924
Sample type: CC



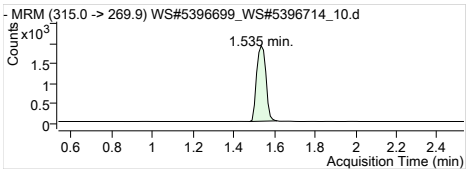



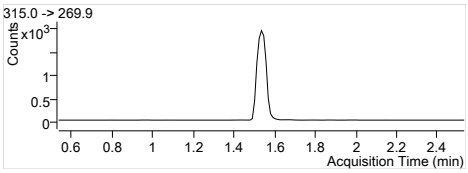

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.445 (2.445)
Calc. conc. 0.95 µg/L
Area ratio: 0.47154
Sample type: CC



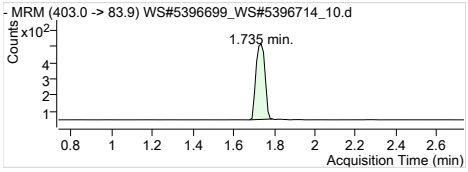



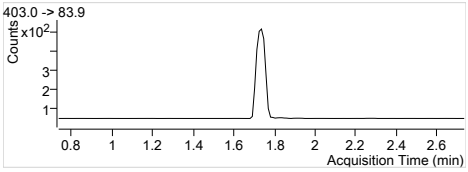

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 0.90 µg/L
Area ratio: 0.36127
Sample type: CC



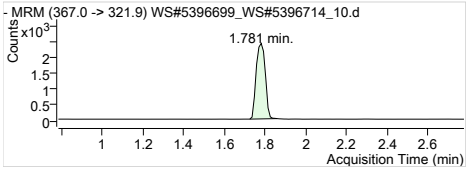



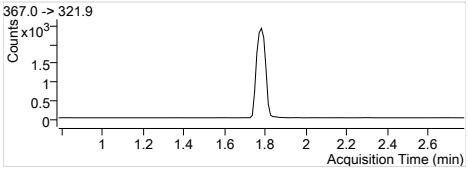

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.535 (1.535)
Calc. conc. 101.41 µg/L
Area ratio: 0.23885
Sample type: CC



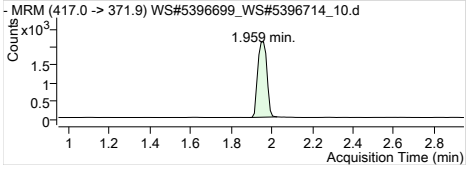



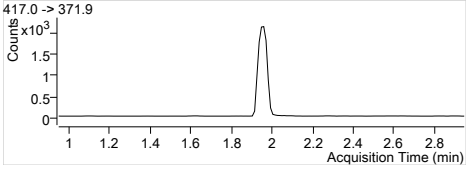

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.735 (1.735)
Calc. conc. 103.09 µg/L
Area ratio: 0.05660
Sample type: CC



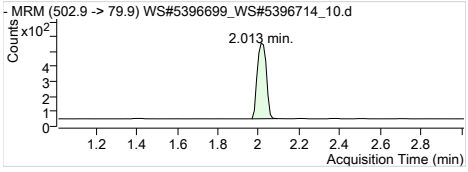



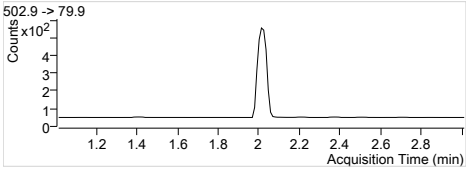

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 104.26 µg/L
Area ratio: 0.29299
Sample type: CC



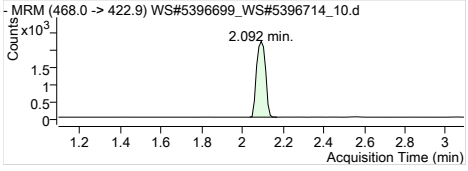



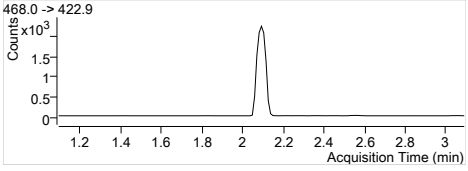

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.959 (1.948)
Calc. conc. 97.75 µg/L
Area ratio: 0.26076
Sample type: CC



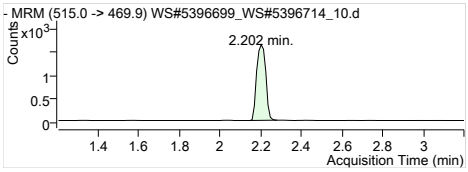



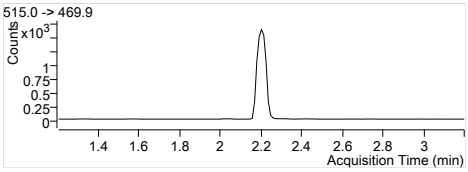

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 101.80 µg/L
Area ratio: 0.06277
Sample type: CC



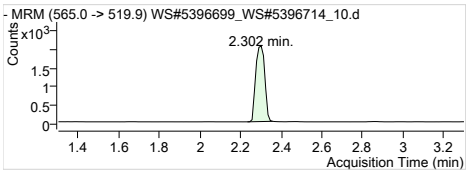



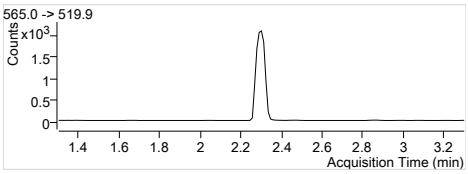

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 106.96 µg/L
Area ratio: 0.26622
Sample type: CC



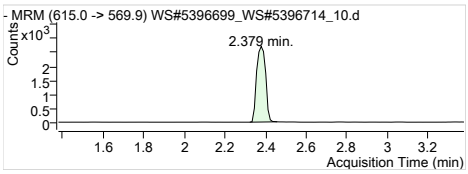



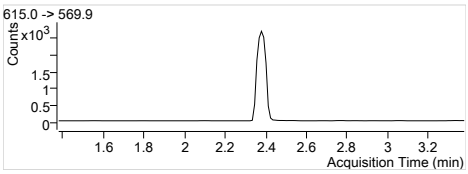

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 104.90 µg/L
Area ratio: 0.19049
Sample type: CC



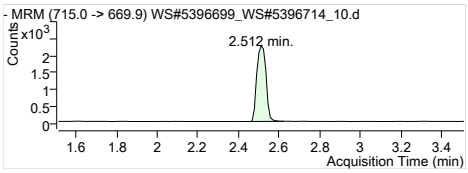



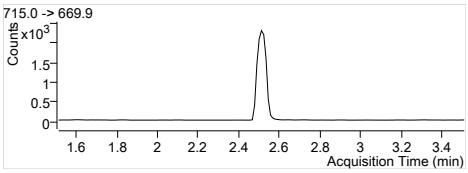

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.302 (2.302)
Calc. conc. 102.57 µg/L
Area ratio: 0.24114
Sample type: CC



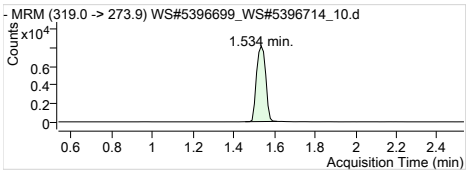



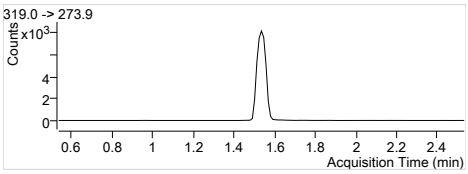

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 101.59 µg/L
Area ratio: 0.31088
Sample type: CC



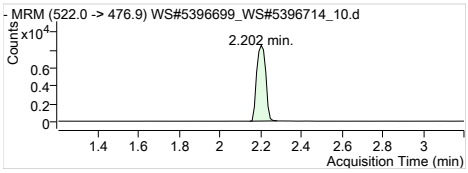



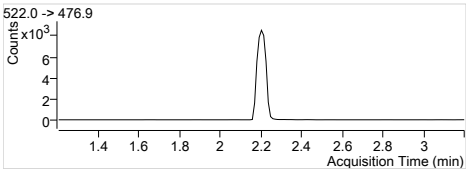

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 99.82 µg/L
Area ratio: 0.27003
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 103.11 µg/L
Area ratio: 0
Sample type: CC



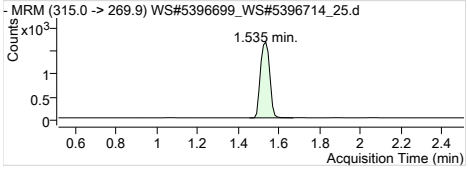

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 107.77 µg/L
Area ratio: 0
Sample type: CC

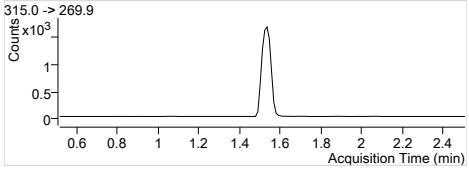
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_25.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/15 6:09:18 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

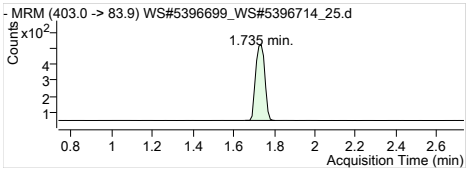
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5243 | 1.53 | 1 µg/L | | |
| MPFHxS | 1488 | 1.74 | 1 µg/L | | |
| MPFHpA | 6713 | 1.78 | 1 µg/L | | |
| MPFOA | 6107 | 1.95 | 1 µg/L | | |
| MPFOS | 1371 | 2.01 | 1 µg/L | | |
| MPFNA | 5792 | 2.09 | 1 µg/L | | |
| MPFDA | 4470 | 2.20 | 1 µg/L | | |
| MPFUnA | 5530 | 2.29 | 1 µg/L | | |
| MPFDoA | 7425 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6845 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 23327 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 24750 | 2.20 | 1 µg/L | | |

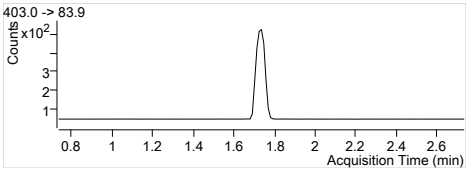
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 10082 | 1.19 | 12.50 | 9.96 µg/L | 79.68 |
| PFHxA 1 | 35158 | 1.53 | 12.50 | 12.51 µg/L | 100.08 |
| PFHxS 1 | 10049 | 1.72 | 12.50 | 10.18 µg/L | 81.46 |
| PFHpA 1 | 46961 | 1.78 | 12.50 | 12.15 µg/L | 97.21 |
| PFOA 1 | 49000 | 1.95 | 12.50 | 13.04 µg/L | 104.31 |
| PFOS 1 | 9506 | 2.01 | 12.50 | 12.86 µg/L | 102.88 |
| PFNA 1 | 38198 | 2.09 | 12.50 | 11.94 µg/L | 95.51 |
| PFDA 1 | 39347 | 2.20 | 12.50 | 12.09 µg/L | 96.76 |
| PFUnA 1 | 39896 | 2.29 | 12.50 | 12.19 µg/L | 97.56 |
| PFDoA 1 | 52915 | 2.38 | 12.50 | 12.49 µg/L | 99.95 |
| PFTrDA 1 | 56339 | 2.44 | 12.50 | 12.38 µg/L | 99.01 |
| PFTeDA 1 | 44336 | 2.51 | 12.50 | 12.25 µg/L | 97.98 |
| 13C2-PFHxA | 5213 | 1.53 | 100.00 | 94.88 µg/L | 94.88 |
| 18O2-PFHxS | 1488 | 1.74 | 100.00 | 116.18 µg/L | 116.18 |
| 13C4-PFHpA | 6713 | 1.78 | 100.00 | 102.40 µg/L | 102.40 |
| 13C4-PFOA | 6107 | 1.95 | 100.00 | 98.14 µg/L | 98.14 |
| 13C4-PFOS | 1371 | 2.01 | 100.00 | 95.32 µg/L | 95.32 |
| 13C5-PFNA | 5748 | 2.09 | 100.00 | 99.00 µg/L | 99.00 |
| 13C2-PFDA | 4444 | 2.20 | 100.00 | 98.88 µg/L | 98.88 |
| 13C2-PFUnA | 5530 | 2.29 | 100.00 | 95.04 µg/L | 95.04 |
| 13C2-PFDoA | 7425 | 2.38 | 100.00 | 98.03 µg/L | 98.03 |
| 13C2-PFTeDA | 6903 | 2.51 | 100.00 | 103.10 µg/L | 103.10 |
| 13C6-PFHxA | 23327 | 1.53 | 100.00 | 95.13 µg/L | 95.13 |
| 13C9-PFDA | 24750 | 2.20 | 100.00 | 101.66 µg/L | 101.66 |



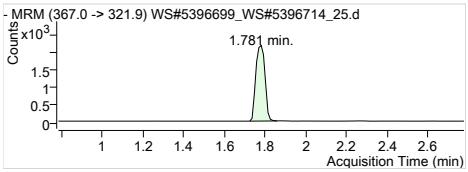



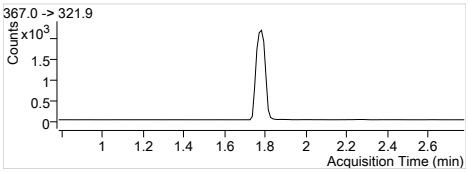

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



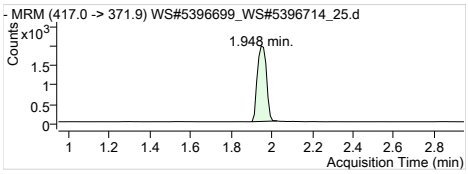



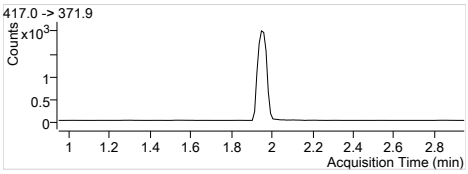

**MPFHxS** Internal Standard
RT (Exp. RT): 1.735 (1.735)
Concentration: 1 µg/L
Sample type: CC



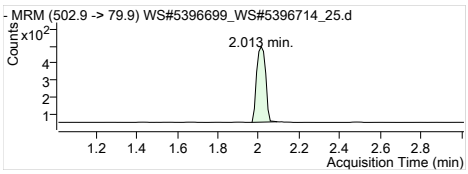



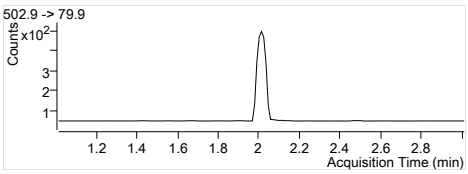

**MPFHpA** Internal Standard
RT (Exp. RT): 1.781 (1.781)
Concentration: 1 µg/L
Sample type: CC



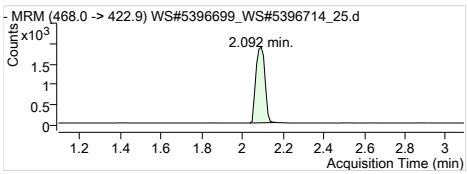



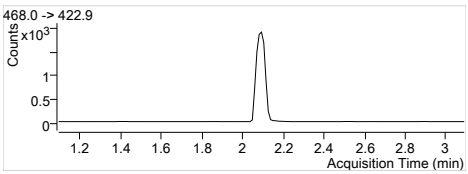

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: CC



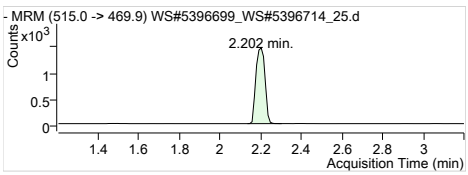



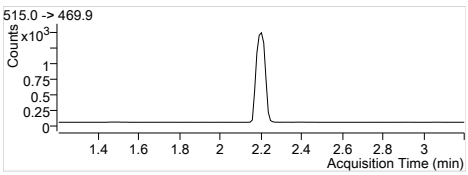

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: CC



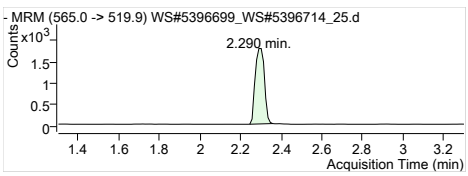



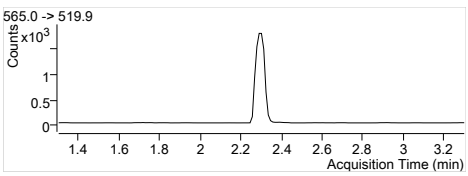

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: CC



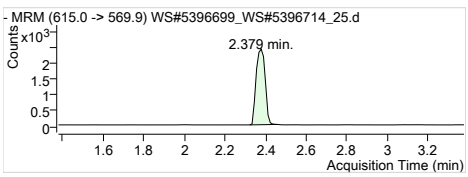



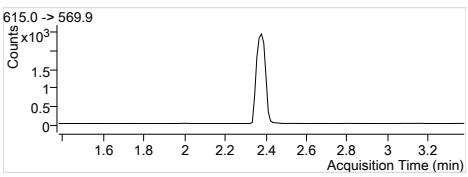

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: CC



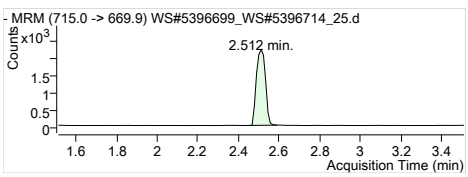



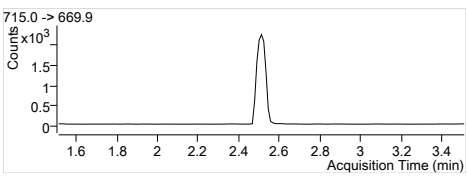

**MPFUnA** Internal Standard
RT (Exp. RT): 2.290 (2.302)
Concentration: 1 µg/L
Sample type: CC



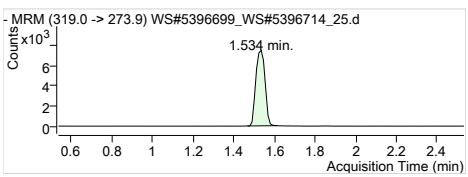



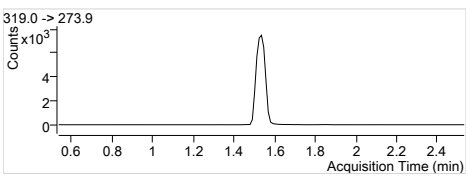

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: CC



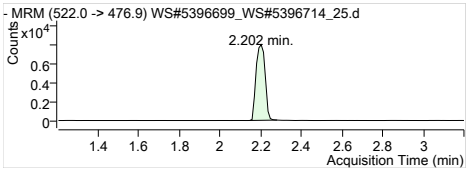



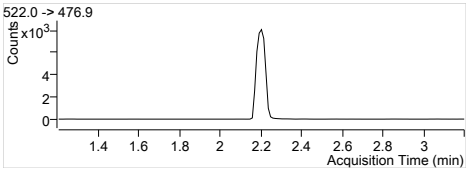

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: CC



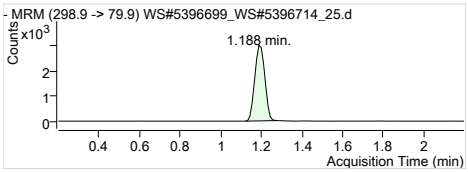



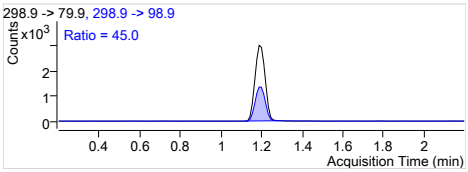

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: CC



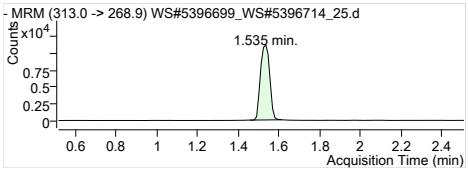



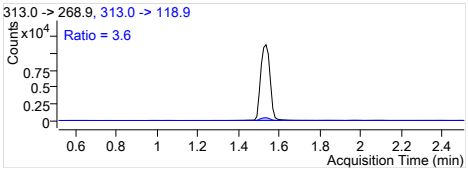

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: CC



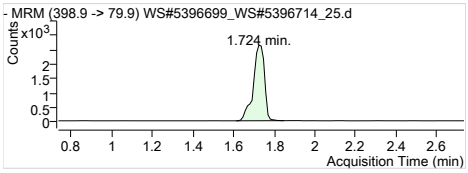



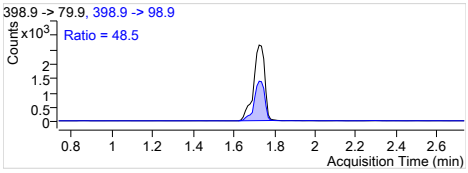

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.188 (1.199)
Calc. conc. 9.96 µg/L
Area ratio: 6.77554
Sample type: CC



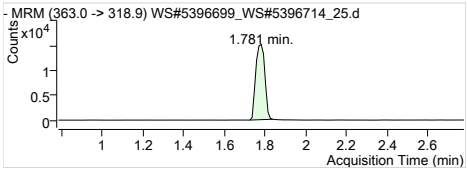



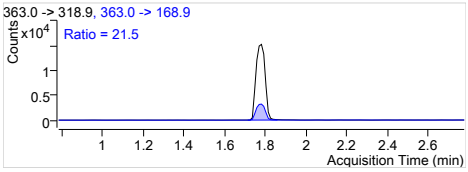

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 12.51 µg/L
Area ratio: 6.70570
Sample type: CC



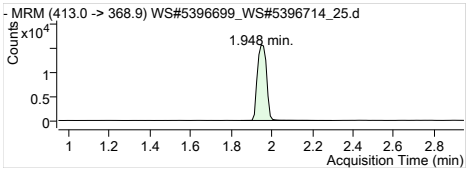



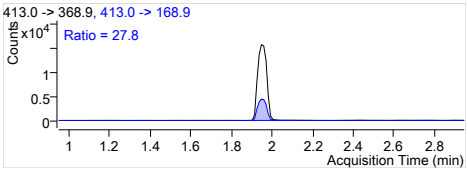

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.724 (1.735)
Calc. conc. 10.18 µg/L
Area ratio: 6.75336
Sample type: CC



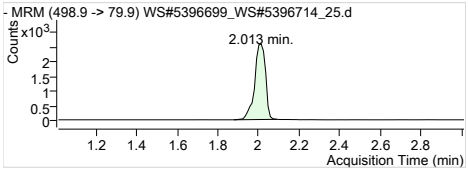



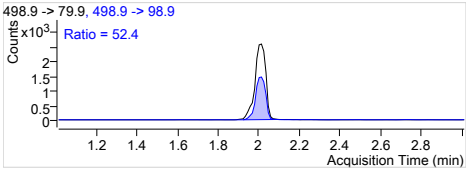

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 12.15 µg/L
Area ratio: 6.99553
Sample type: CC



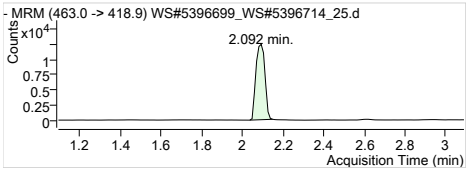



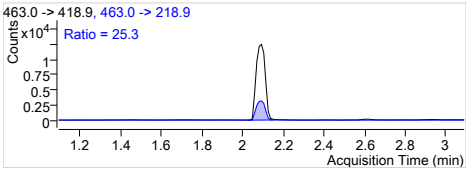

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.948 (1.948)
Calc. conc. 13.04 µg/L
Area ratio: 8.02358
Sample type: CC



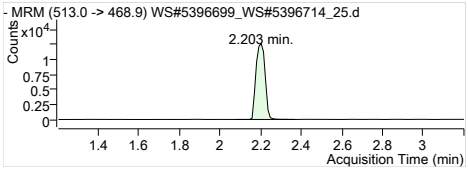



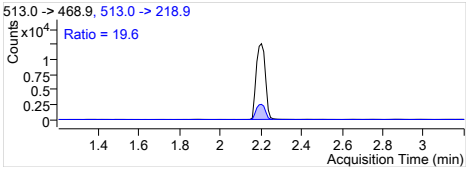

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 12.86 µg/L
Area ratio: 6.93363
Sample type: CC



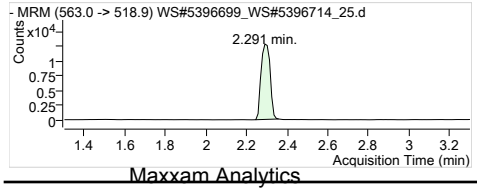



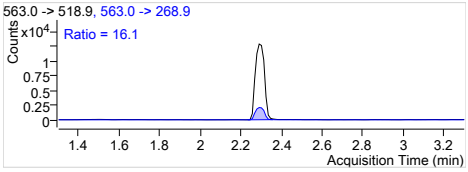

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 11.94 µg/L
Area ratio: 6.59496
Sample type: CC



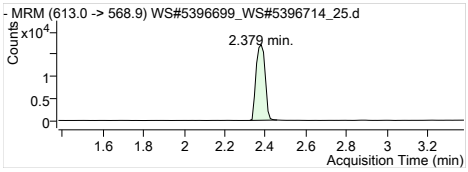



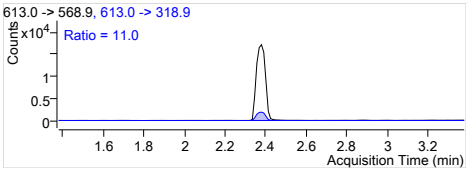

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 12.09 µg/L
Area ratio: 8.80246
Sample type: CC



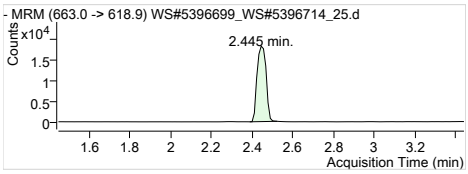



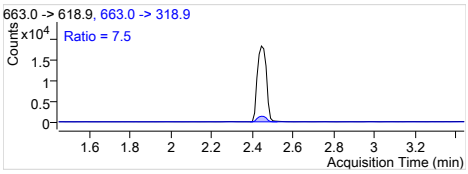

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.291 (2.302)
Calc. conc. 12.19 µg/L
Area ratio: 7.21447
Sample type: CC



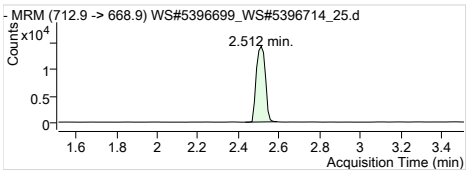



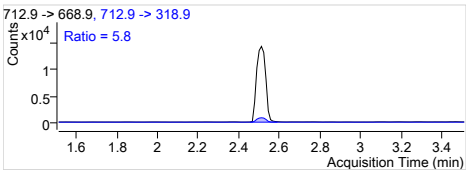

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 12.49 µg/L
Area ratio: 7.12660
Sample type: CC



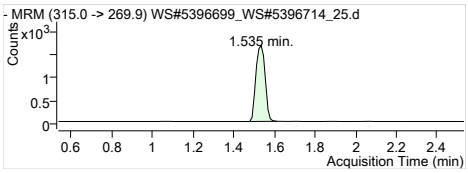



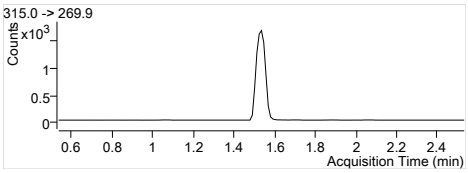

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.445 (2.445)
Calc. conc. 12.38 µg/L
Area ratio: 8.23068
Sample type: CC



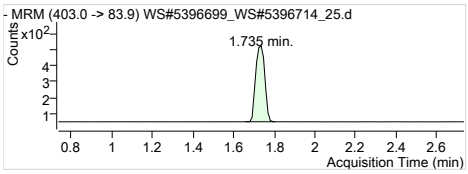



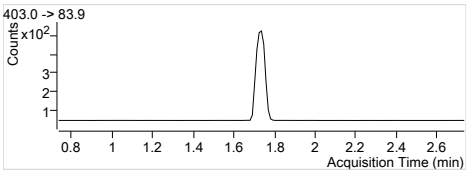

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 12.25 µg/L
Area ratio: 6.47714
Sample type: CC



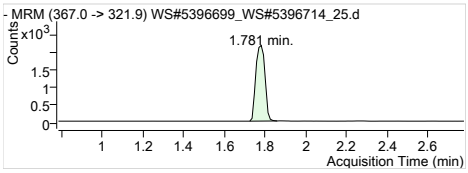



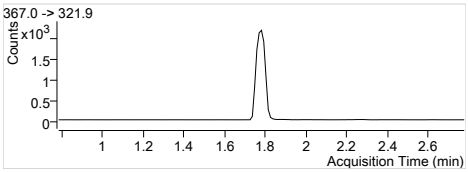

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.535 (1.535)
Calc. conc. 94.88 µg/L
Area ratio: 0.22347
Sample type: CC



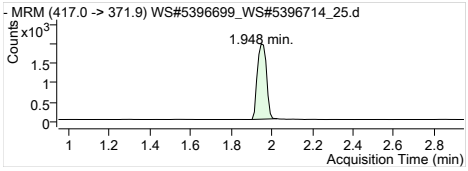



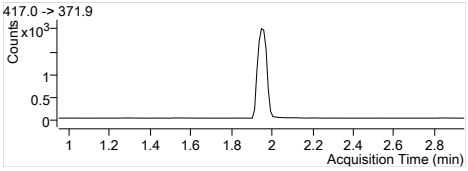

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.735 (1.735)
Calc. conc. 116.18 µg/L
Area ratio: 0.06379
Sample type: CC



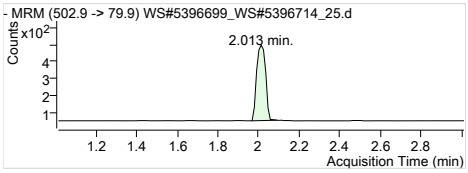



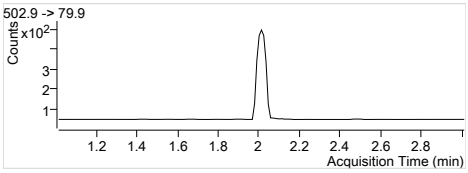

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.781 (1.781)
Calc. conc. 102.40 µg/L
Area ratio: 0.28778
Sample type: CC



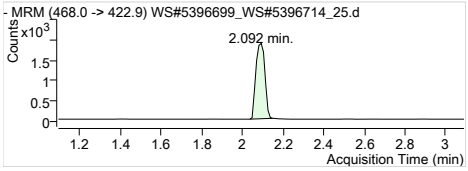



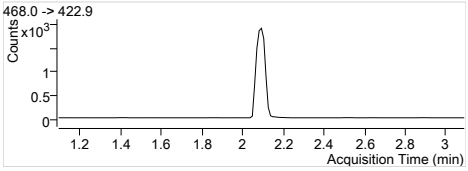

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.948 (1.948)
Calc. conc. 98.14 µg/L
Area ratio: 0.26180
Sample type: CC



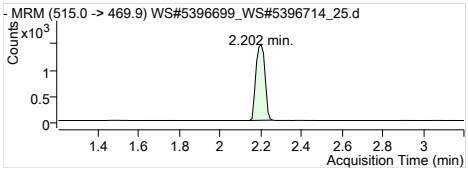



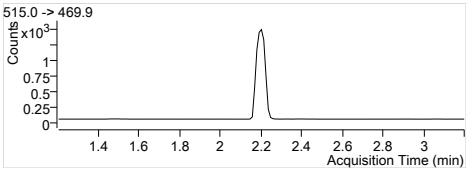

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 95.32 µg/L
Area ratio: 0.05877
Sample type: CC



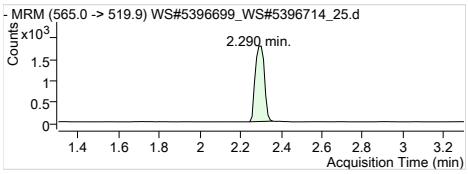



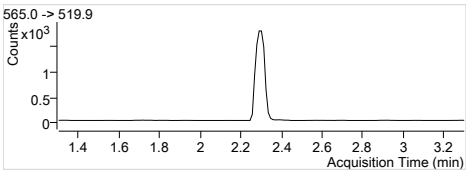

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 99.00 µg/L
Area ratio: 0.24641
Sample type: CC



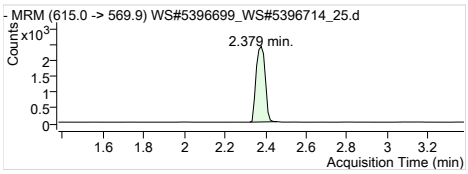



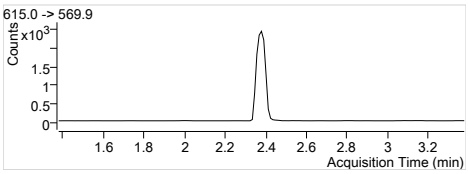

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 98.88 µg/L
Area ratio: 0.17956
Sample type: CC



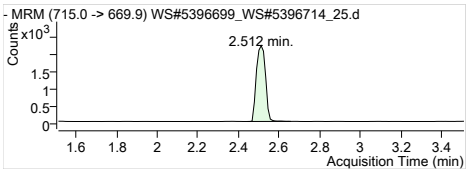



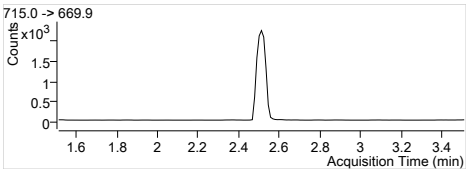

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.290 (2.302)
Calc. conc. 95.04 µg/L
Area ratio: 0.22343
Sample type: CC



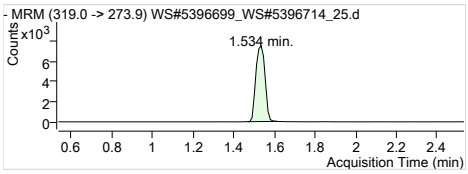



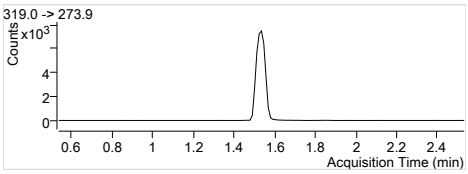

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 98.03 µg/L
Area ratio: 0.30000
Sample type: CC



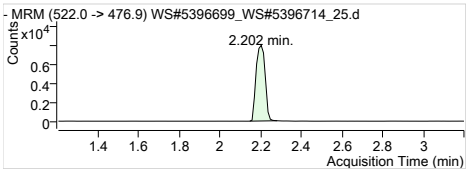



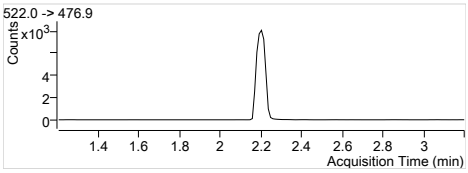

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 103.10 µg/L
Area ratio: 0.27891
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 95.13 µg/L
Area ratio: 0
Sample type: CC



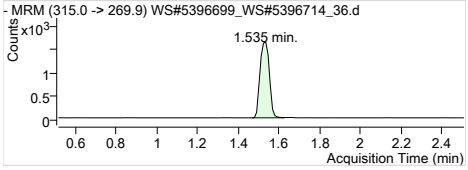

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 101.66 µg/L
Area ratio: 0
Sample type: CC

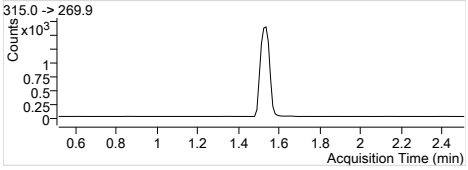
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_36.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/15 7:03:36 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

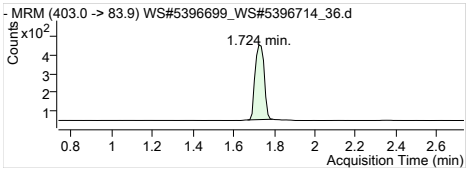
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5131 | 1.53 | 1 µg/L | | |
| MPFHxS | 1246 | 1.72 | 1 µg/L | | |
| MPFHpA | 6682 | 1.77 | 1 µg/L | | |
| MPFOA | 6362 | 1.95 | 1 µg/L | | |
| MPFOS | 1447 | 2.01 | 1 µg/L | | |
| MPFNA | 6000 | 2.09 | 1 µg/L | | |
| MPFDA | 4614 | 2.20 | 1 µg/L | | |
| MPFUnA | 5902 | 2.29 | 1 µg/L | | |
| MPFDoA | 7321 | 2.38 | 1 µg/L | | |
| MPFTeDA | 6965 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 23287 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 24591 | 2.20 | 1 µg/L | | |

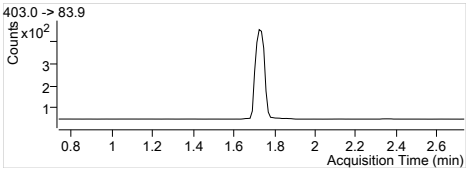
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 10254 | 1.19 | 12.50 | 12.01 µg/L | 96.08 |
| PFHxA 1 | 36952 | 1.53 | 12.50 | 13.41 µg/L | 107.25 |
| PFHxS 1 | 9775 | 1.72 | 12.50 | 11.77 µg/L | 94.15 |
| PFHpA 1 | 47685 | 1.77 | 12.50 | 12.39 µg/L | 99.13 |
| PFOA 1 | 49398 | 1.95 | 12.50 | 12.63 µg/L | 101.01 |
| PFOS 1 | 9576 | 2.00 | 12.50 | 12.29 µg/L | 98.31 |
| PFNA 1 | 39300 | 2.09 | 12.50 | 11.86 µg/L | 94.88 |
| PFDA 1 | 39872 | 2.20 | 12.50 | 11.88 µg/L | 95.01 |
| PFUnA 1 | 41882 | 2.29 | 12.50 | 12.00 µg/L | 96.00 |
| PFDoA 1 | 54333 | 2.38 | 12.50 | 13.00 µg/L | 104.01 |
| PFTrDA 1 | 54911 | 2.44 | 12.50 | 11.87 µg/L | 94.92 |
| PFTeDA 1 | 44587 | 2.51 | 12.50 | 12.11 µg/L | 96.86 |
| 13C2-PFHxA | 5104 | 1.53 | 100.00 | 93.06 µg/L | 93.06 |
| 18O2-PFHxS | 1246 | 1.72 | 100.00 | 97.46 µg/L | 97.46 |
| 13C4-PFHpA | 6682 | 1.77 | 100.00 | 102.11 µg/L | 102.11 |
| 13C4-PFOA | 6362 | 1.95 | 100.00 | 102.41 µg/L | 102.41 |
| 13C4-PFOS | 1447 | 2.01 | 100.00 | 100.78 µg/L | 100.78 |
| 13C5-PFNA | 5978 | 2.09 | 100.00 | 103.14 µg/L | 103.14 |
| 13C2-PFDA | 4602 | 2.20 | 100.00 | 103.06 µg/L | 103.06 |
| 13C2-PFUnA | 5902 | 2.29 | 100.00 | 102.09 µg/L | 102.09 |
| 13C2-PFDoA | 7321 | 2.38 | 100.00 | 97.28 µg/L | 97.28 |
| 13C2-PFTeDA | 7046 | 2.51 | 100.00 | 105.92 µg/L | 105.92 |
| 13C6-PFHxA | 23287 | 1.53 | 100.00 | 94.97 µg/L | 94.97 |
| 13C9-PFDA | 24591 | 2.20 | 100.00 | 101.00 µg/L | 101.00 |



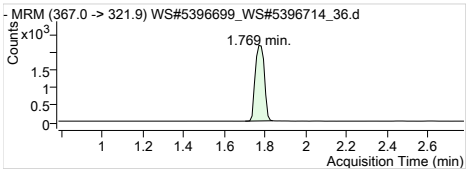



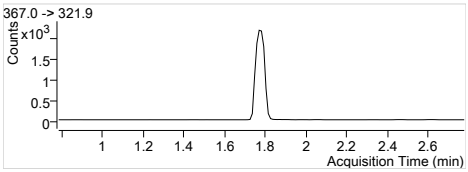

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



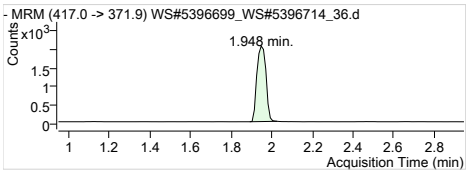



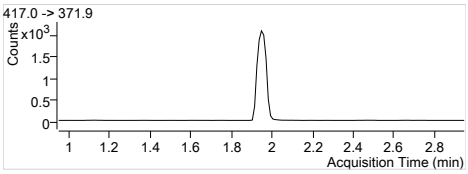

**MPFHxS** Internal Standard
RT (Exp. RT): 1.724 (1.735)
Concentration: 1 µg/L
Sample type: CC



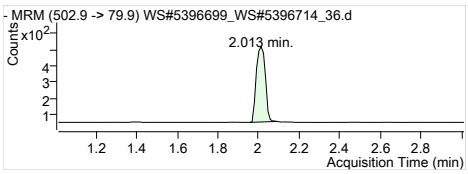



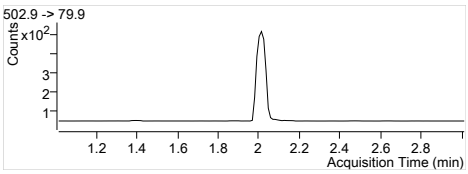

**MPFHpA** Internal Standard
RT (Exp. RT): 1.769 (1.781)
Concentration: 1 µg/L
Sample type: CC



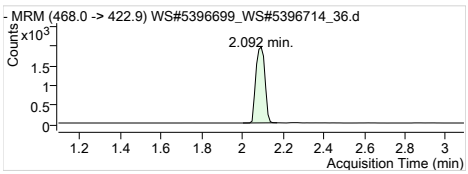



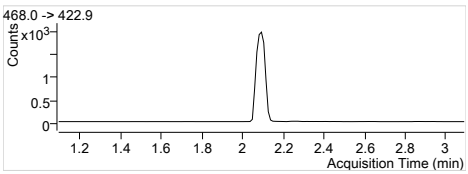

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: CC



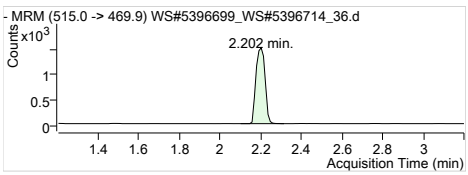



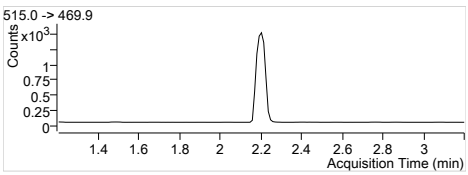

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: CC



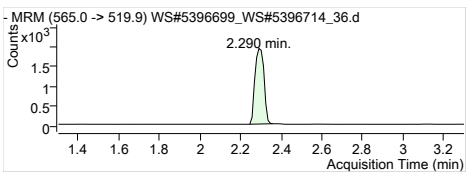



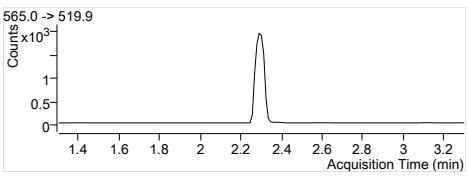

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: CC



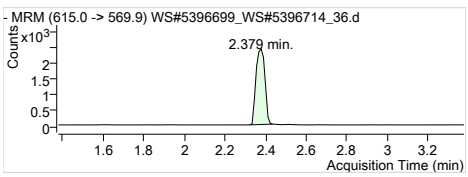



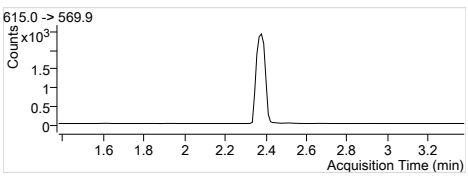

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: CC



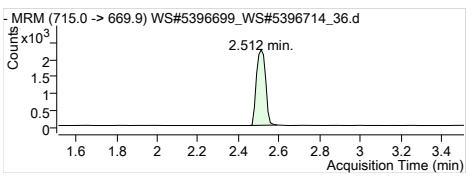



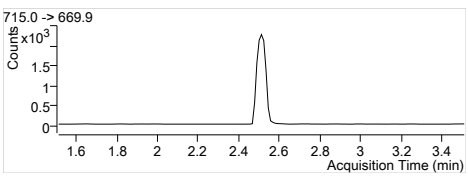

**MPFUnA** Internal Standard
RT (Exp. RT): 2.290 (2.302)
Concentration: 1 µg/L
Sample type: CC



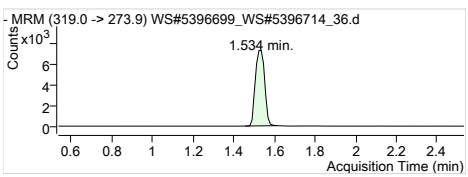



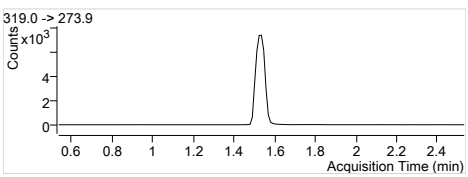

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: CC



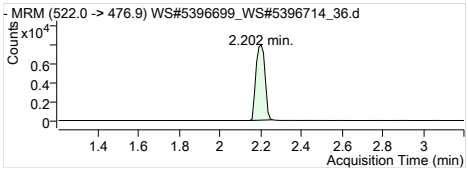



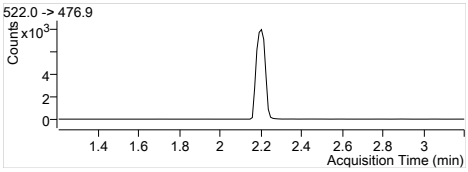

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: CC



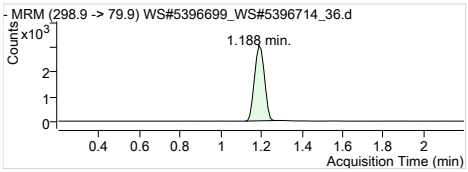



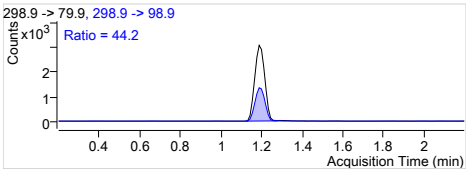

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: CC



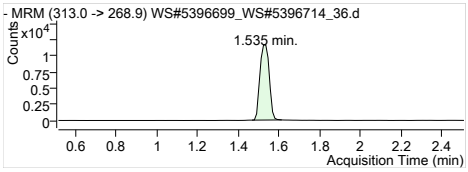



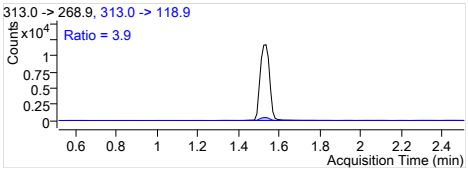

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: CC



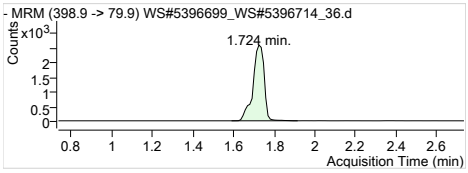



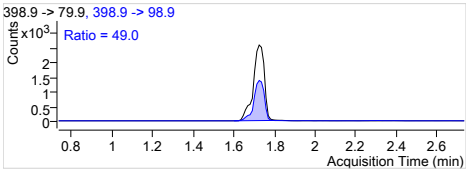

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.188 (1.199)
Calc. conc. 12.01 µg/L
Area ratio: 8.22953
Sample type: CC



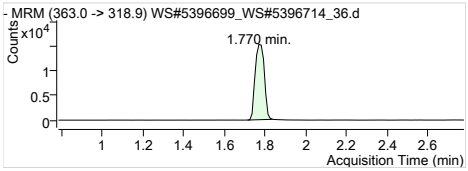



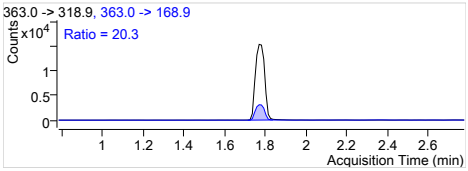

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 13.41 µg/L
Area ratio: 7.20172
Sample type: CC



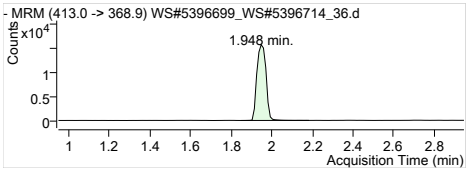



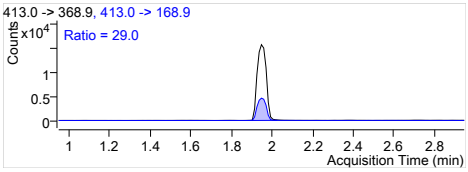

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.724 (1.735)
Calc. conc. 11.77 µg/L
Area ratio: 7.84510
Sample type: CC



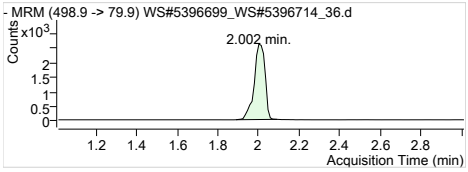



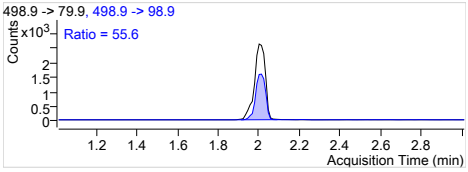

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.770 (1.781)
Calc. conc. 12.39 µg/L
Area ratio: 7.13634
Sample type: CC



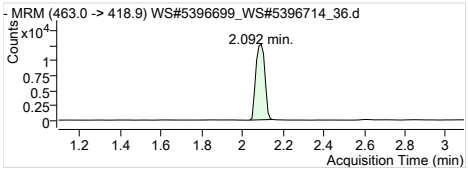



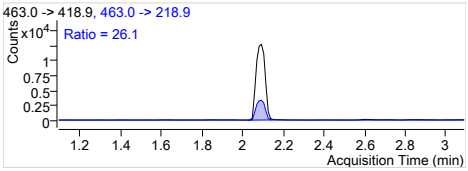

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.948 (1.948)
Calc. conc. 12.63 µg/L
Area ratio: 7.76454
Sample type: CC



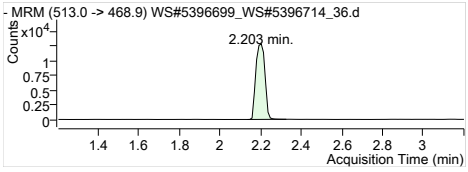



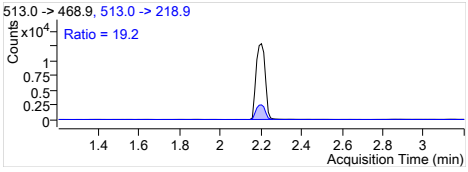

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.002 (2.013)
Calc. conc. 12.29 µg/L
Area ratio: 6.61783
Sample type: CC



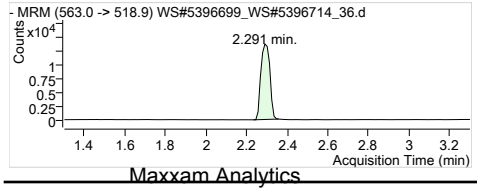



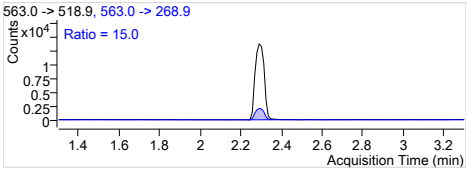

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 11.86 µg/L
Area ratio: 6.55000
Sample type: CC



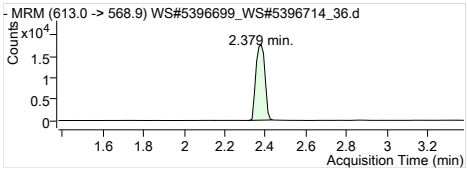



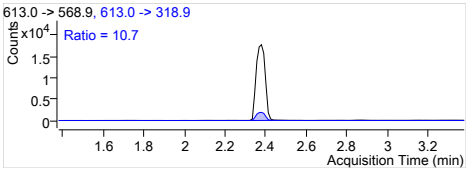

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 11.88 µg/L
Area ratio: 8.64153
Sample type: CC



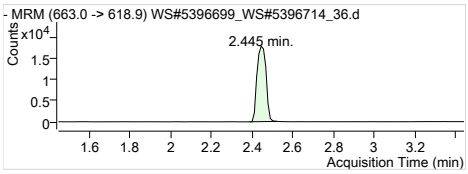



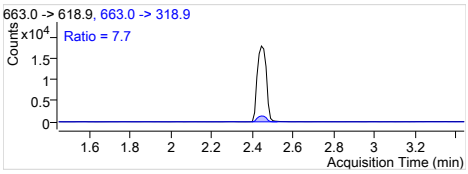

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.291 (2.302)
Calc. conc. 12.00 µg/L
Area ratio: 7.09624
Sample type: CC



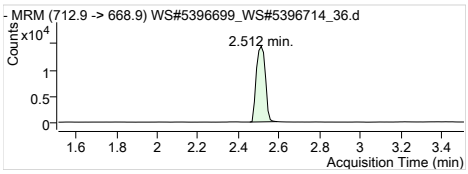



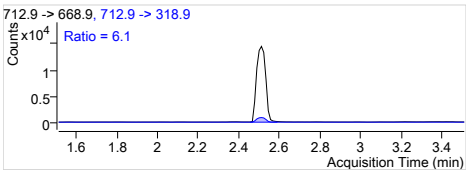

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 13.00 µg/L
Area ratio: 7.42153
Sample type: CC



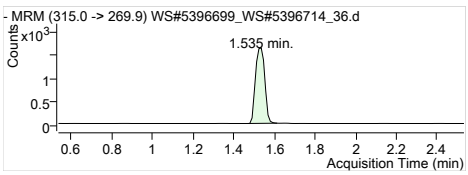



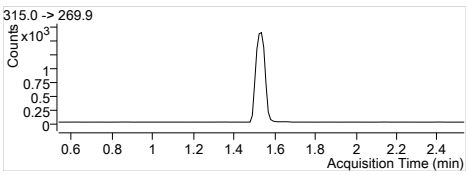

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.445 (2.445)
Calc. conc. 11.87 µg/L
Area ratio: 7.88385
Sample type: CC



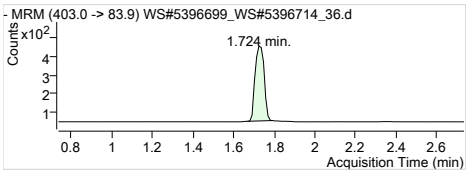



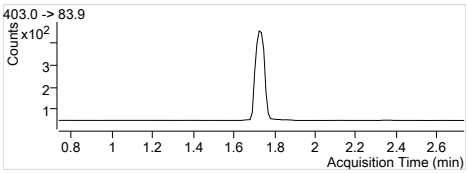

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 12.11 µg/L
Area ratio: 6.40158
Sample type: CC



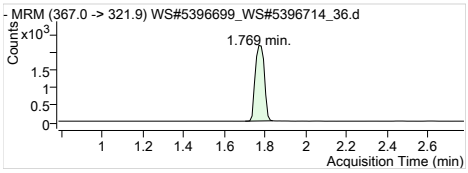



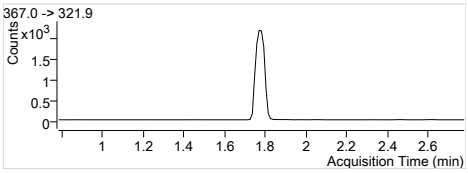

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.535 (1.535)
Calc. conc. 93.06 µg/L
Area ratio: 0.21918
Sample type: CC



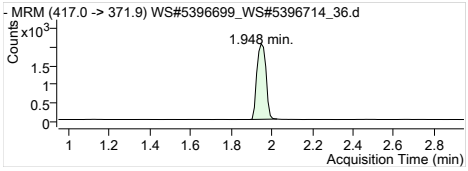



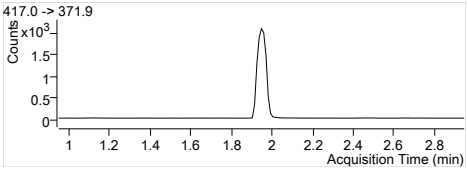

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.724 (1.735)
Calc. conc. 97.46 µg/L
Area ratio: 0.05351
Sample type: CC



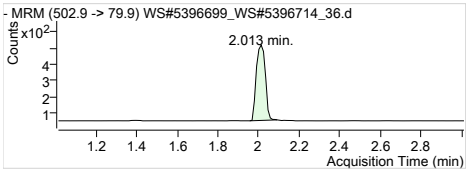



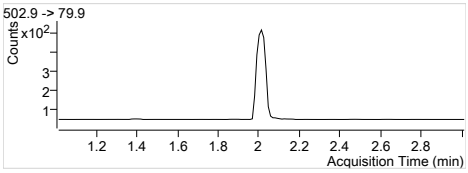

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.769 (1.781)
Calc. conc. 102.11 µg/L
Area ratio: 0.28694
Sample type: CC



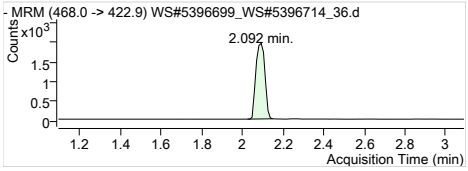



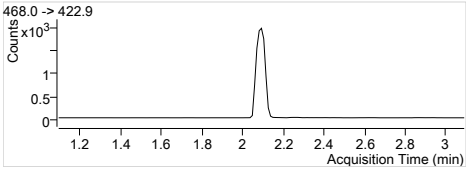

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.948 (1.948)
Calc. conc. 102.41 µg/L
Area ratio: 0.27320
Sample type: CC



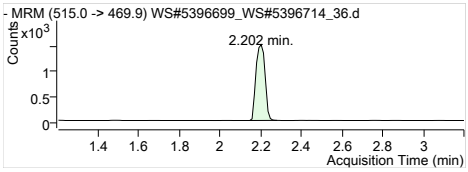



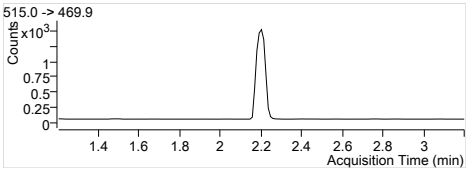

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 2.013 (2.013)
Calc. conc. 100.78 µg/L
Area ratio: 0.06214
Sample type: CC



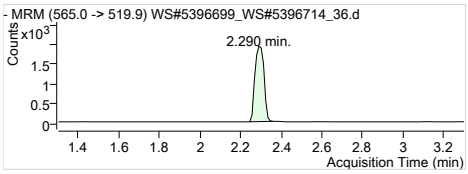



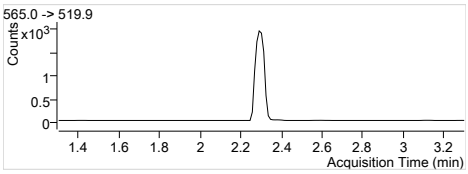

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 103.14 µg/L
Area ratio: 0.25671
Sample type: CC



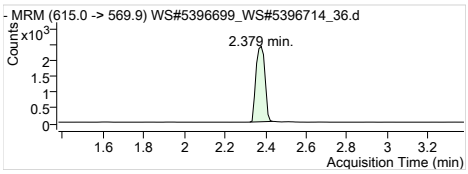



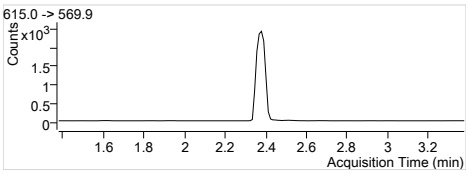

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 103.06 µg/L
Area ratio: 0.18714
Sample type: CC



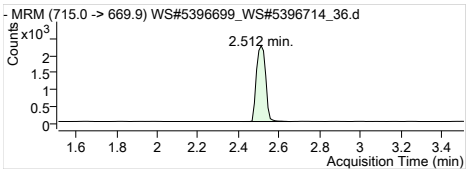



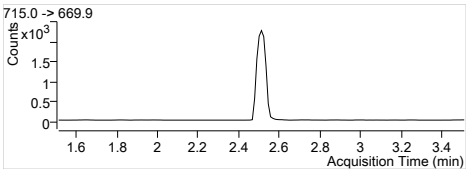

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.290 (2.302)
Calc. conc. 102.09 µg/L
Area ratio: 0.24001
Sample type: CC



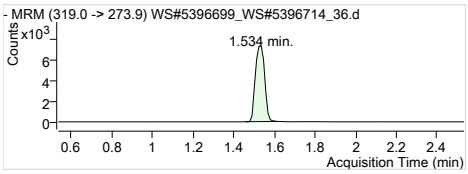



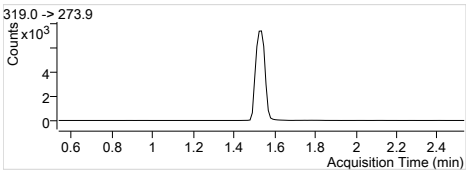

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 97.28 µg/L
Area ratio: 0.29771
Sample type: CC



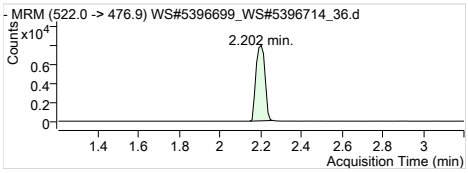



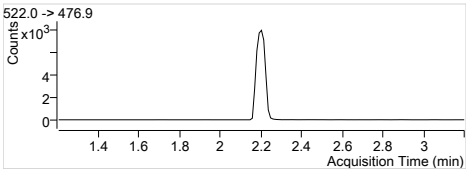

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 105.92 µg/L
Area ratio: 0.28653
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 94.97 µg/L
Area ratio: 0
Sample type: CC



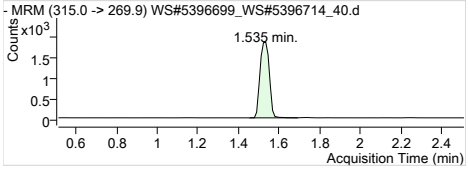

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 101.00 µg/L
Area ratio: 0
Sample type: CC

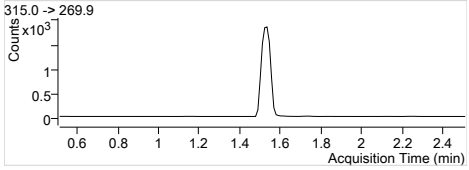
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_40.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/15 7:23:19 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

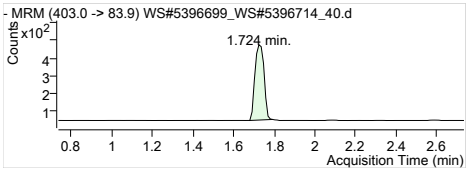
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 5783 | 1.53 | 1 µg/L | | |
| MPFHxS | 1315 | 1.72 | 1 µg/L | | |
| MPFHpA | 7044 | 1.77 | 1 µg/L | | |
| MPFOA | 6464 | 1.95 | 1 µg/L | | |
| MPFOS | 1458 | 2.01 | 1 µg/L | | |
| MPFNA | 5798 | 2.09 | 1 µg/L | | |
| MPFDA | 4456 | 2.20 | 1 µg/L | | |
| MPFUnA | 6093 | 2.29 | 1 µg/L | | |
| MPFDoA | 7597 | 2.38 | 1 µg/L | | |
| MPFTeDA | 7433 | 2.51 | 1 µg/L | | |
| 13C6-PFHxA IS | 22514 | 1.53 | 1 µg/L | | |
| 13C9-PFDA IS | 24736 | 2.20 | 1 µg/L | | |

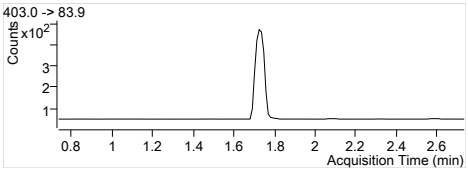
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 10240 | 1.19 | 12.50 | 11.39 µg/L | 91.09 |
| PFHxA 1 | 35827 | 1.53 | 12.50 | 11.59 µg/L | 92.71 |
| PFHxS 1 | 10185 | 1.72 | 12.50 | 11.62 µg/L | 92.99 |
| PFHpA 1 | 47871 | 1.77 | 12.50 | 11.81 µg/L | 94.50 |
| PFOA 1 | 48146 | 1.95 | 12.50 | 12.12 µg/L | 96.98 |
| PFOS 1 | 9596 | 2.00 | 12.50 | 12.22 µg/L | 97.79 |
| PFNA 1 | 39411 | 2.09 | 12.50 | 12.29 µg/L | 98.33 |
| PFDA 1 | 40650 | 2.20 | 12.50 | 12.53 µg/L | 100.23 |
| PFUnA 1 | 41167 | 2.29 | 12.50 | 11.44 µg/L | 91.50 |
| PFDoA 1 | 53422 | 2.38 | 12.50 | 12.33 µg/L | 98.65 |
| PFTrDA 1 | 58326 | 2.44 | 12.50 | 11.81 µg/L | 94.49 |
| PFTeDA 1 | 45687 | 2.51 | 12.50 | 11.63 µg/L | 93.07 |
| 13C2-PFHxA | 5683 | 1.53 | 100.00 | 107.17 µg/L | 107.17 |
| 18O2-PFHxS | 1315 | 1.72 | 100.00 | 106.38 µg/L | 106.38 |
| 13C4-PFHpA | 7044 | 1.77 | 100.00 | 111.33 µg/L | 111.33 |
| 13C4-PFOA | 6464 | 1.95 | 100.00 | 107.63 µg/L | 107.63 |
| 13C4-PFOS | 1458 | 2.01 | 100.00 | 105.03 µg/L | 105.03 |
| 13C5-PFNA | 5798 | 2.09 | 100.00 | 103.47 µg/L | 103.47 |
| 13C2-PFDA | 4332 | 2.20 | 100.00 | 96.44 µg/L | 96.44 |
| 13C2-PFUnA | 6093 | 2.29 | 100.00 | 104.77 µg/L | 104.77 |
| 13C2-PFDoA | 7597 | 2.38 | 100.00 | 100.36 µg/L | 100.36 |
| 13C2-PFTeDA | 7533 | 2.51 | 100.00 | 112.57 µg/L | 112.57 |
| 13C6-PFHxA | 22514 | 1.53 | 100.00 | 91.82 µg/L | 91.82 |
| 13C9-PFDA | 24736 | 2.20 | 100.00 | 101.60 µg/L | 101.60 |



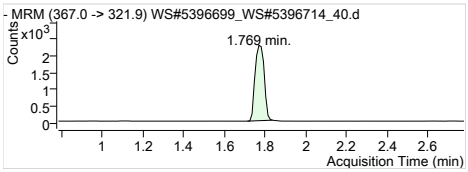



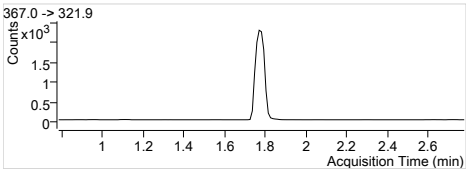

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.535 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



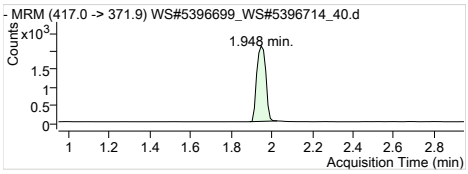



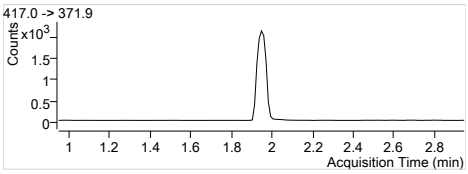

**MPFHxS** Internal Standard
RT (Exp. RT): 1.724 (1.735)
Concentration: 1 µg/L
Sample type: CC



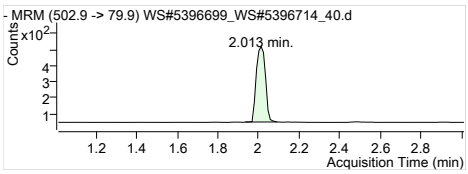



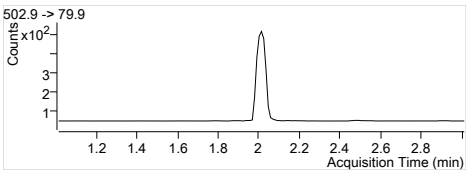

**MPFHpA** Internal Standard
RT (Exp. RT): 1.769 (1.781)
Concentration: 1 µg/L
Sample type: CC



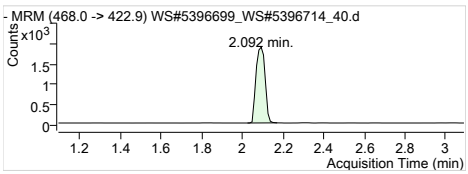



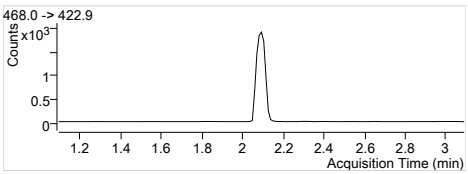

**MPFOA** Internal Standard
RT (Exp. RT): 1.948 (1.948)
Concentration: 1 µg/L
Sample type: CC



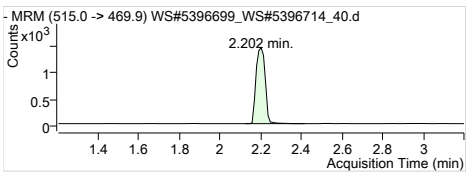



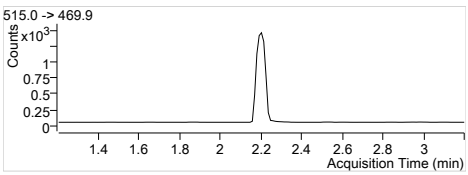

**MPFOS** Internal Standard
RT (Exp. RT): 2.013 (2.013)
Concentration: 1 µg/L
Sample type: CC



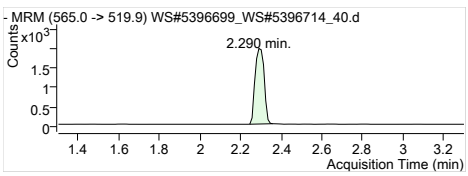



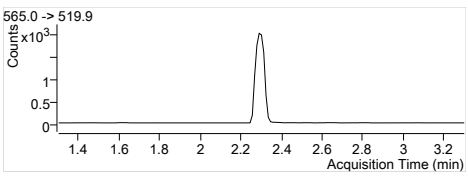

**MPFNA** Internal Standard
RT (Exp. RT): 2.092 (2.092)
Concentration: 1 µg/L
Sample type: CC



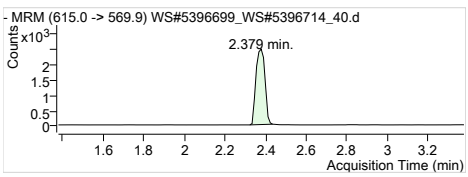



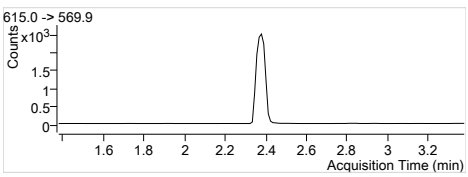

**MPFDA** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: CC



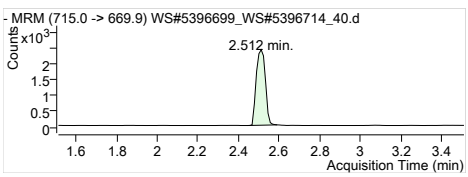



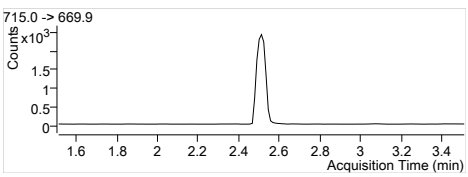

**MPFUnA** Internal Standard
RT (Exp. RT): 2.290 (2.302)
Concentration: 1 µg/L
Sample type: CC



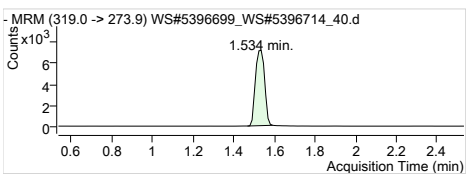



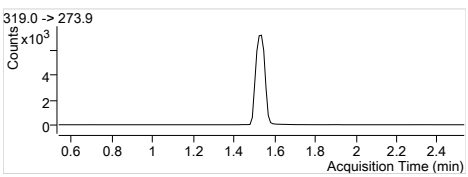

**MPFDoA** Internal Standard
RT (Exp. RT): 2.379 (2.379)
Concentration: 1 µg/L
Sample type: CC



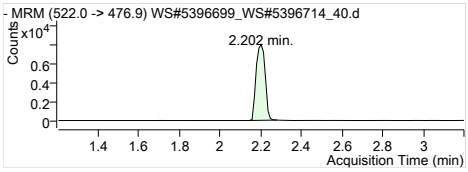



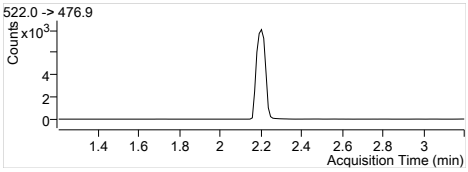

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.512 (2.512)
Concentration: 1 µg/L
Sample type: CC



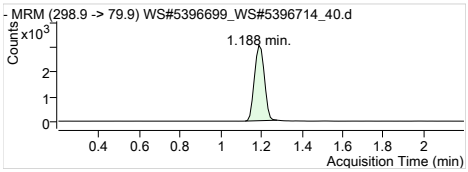



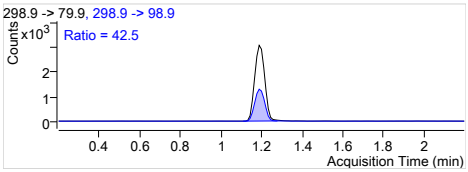

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.534 (1.534)
Concentration: 1 µg/L
Sample type: CC



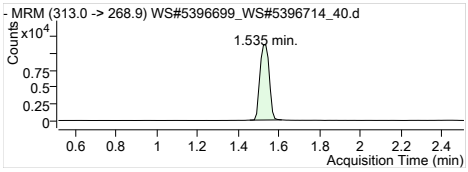



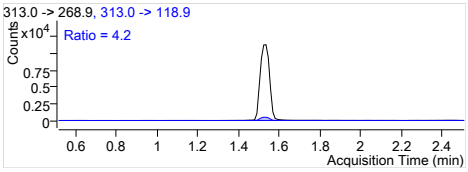

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.202 (2.202)
Concentration: 1 µg/L
Sample type: CC



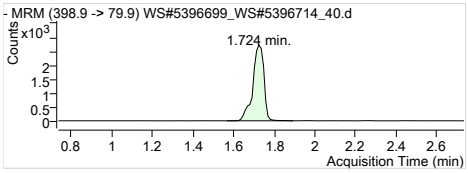



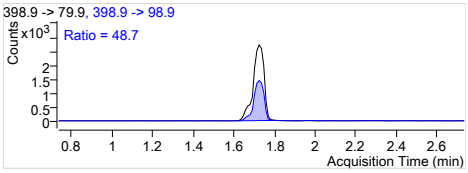

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.188 (1.199)
Calc. conc. 11.39 µg/L
Area ratio: 7.78707
Sample type: CC



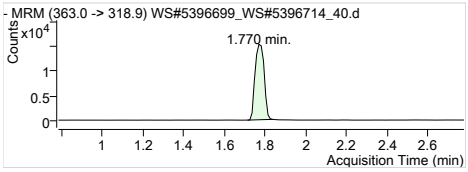



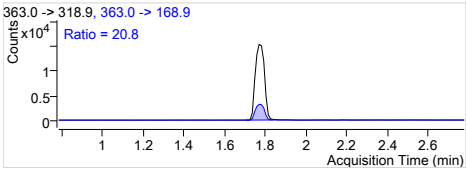

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.535 (1.512)
Calc. conc. 11.59 µg/L
Area ratio: 6.19523
Sample type: CC



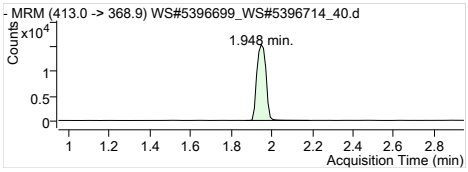



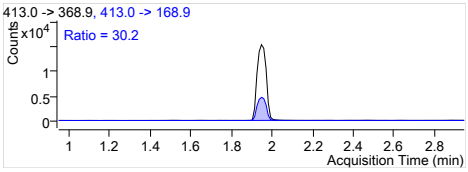

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.724 (1.735)
Calc. conc. 11.62 µg/L
Area ratio: 7.74525
Sample type: CC



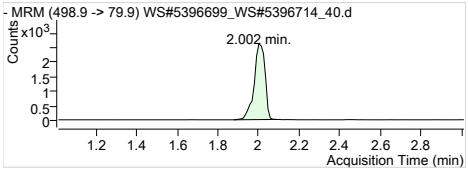



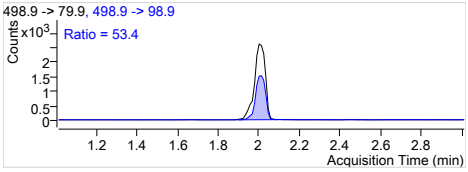

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.770 (1.781)
Calc. conc. 11.81 µg/L
Area ratio: 6.79600
Sample type: CC



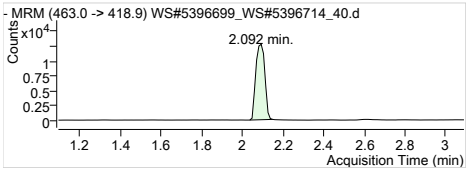



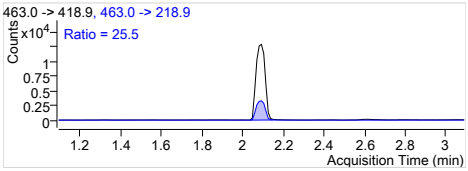

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.948 (1.948)
Calc. conc. 12.12 µg/L
Area ratio: 7.44833
Sample type: CC



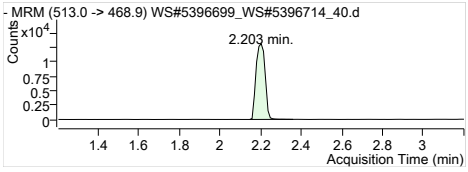



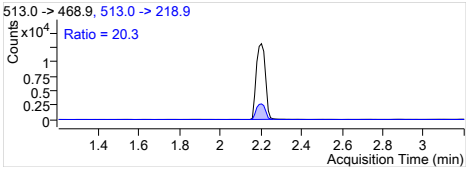

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.002 (2.013)
Calc. conc. 12.22 µg/L
Area ratio: 6.58162
Sample type: CC



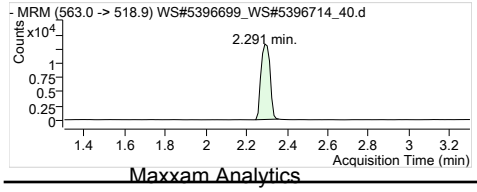



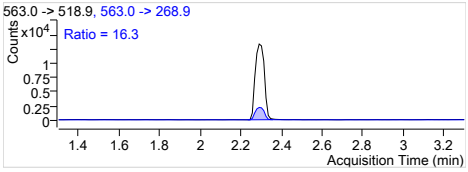

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.092 (2.092)
Calc. conc. 12.29 µg/L
Area ratio: 6.79734
Sample type: CC



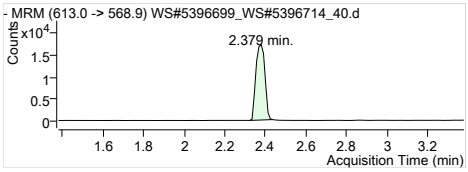



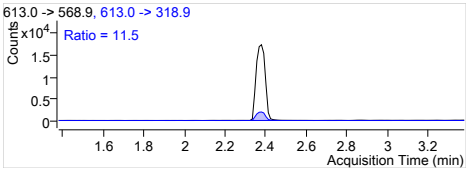

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.203 (2.203)
Calc. conc. 12.53 µg/L
Area ratio: 9.12253
Sample type: CC



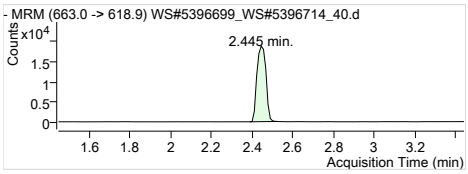



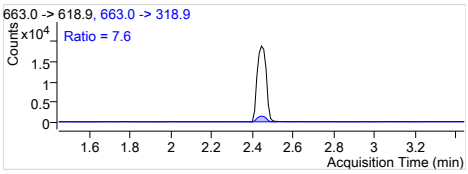

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.291 (2.302)
Calc. conc. 11.44 µg/L
Area ratio: 6.75644
Sample type: CC



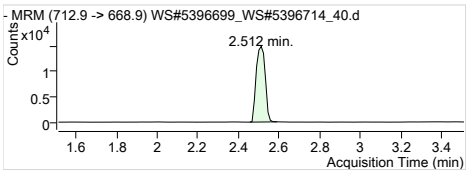



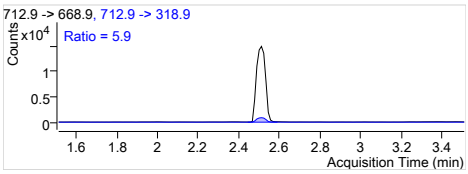

| | |
|---|---|
| **PFDoA 1** | 613.0 -> 568.9 |
| RT (Exp. RT): | 2.379 (2.379) |
| Calc. conc. | 12.33 µg/L |
| Area ratio: | 7.03199 |
| Sample type: | CC |



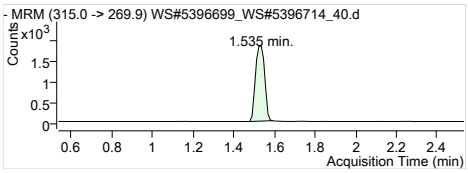



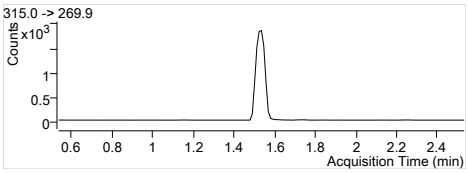

| | |
|---|---|
| **PFTrDA 1** | 663.0 -> 618.9 |
| RT (Exp. RT): | 2.445 (2.445) |
| Calc. conc. | 11.81 µg/L |
| Area ratio: | 7.84690 |
| Sample type: | CC |



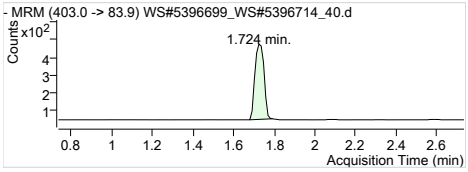



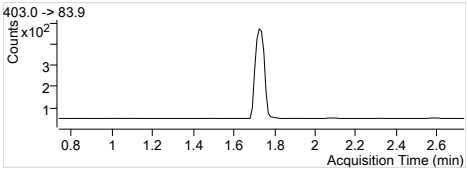

| | |
|---|---|
| **PFTeDA 1** | 712.9 -> 668.9 |
| RT (Exp. RT): | 2.512 (2.512) |
| Calc. conc. | 11.63 µg/L |
| Area ratio: | 6.14651 |
| Sample type: | CC |



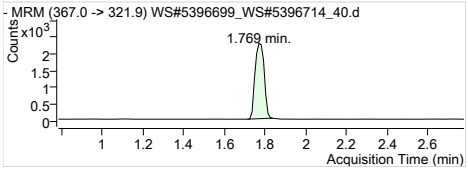



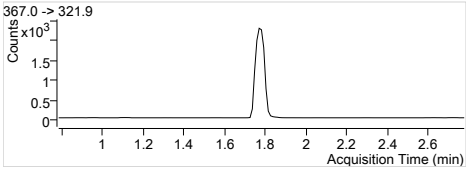

| | |
|---|---|
| **13C2-PFHxA** | 315.0 -> 269.9 |
| RT (Exp. RT): | 1.535 (1.535) |
| Calc. conc. | 107.17 µg/L |
| Area ratio: | 0.25242 |
| Sample type: | CC |



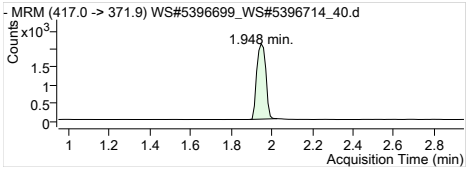



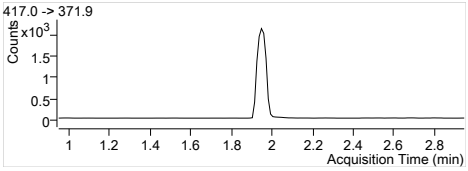

| | |
|---|---|
| **18O2-PFHxS** | 403.0 -> 83.9 |
| RT (Exp. RT): | 1.724 (1.735) |
| Calc. conc. | 106.38 µg/L |
| Area ratio: | 0.05841 |
| Sample type: | CC |



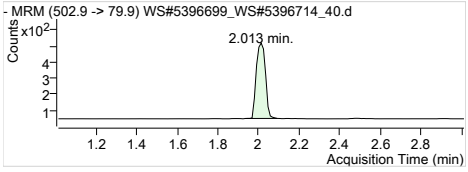



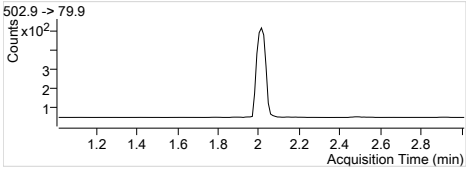

| | |
|---|---|
| **13C4-PFHpA** | 367.0 -> 321.9 |
| RT (Exp. RT): | 1.769 (1.781) |
| Calc. conc. | 111.33 µg/L |
| Area ratio: | 0.31287 |
| Sample type: | CC |



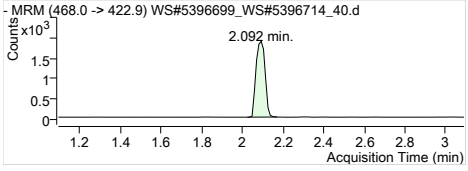



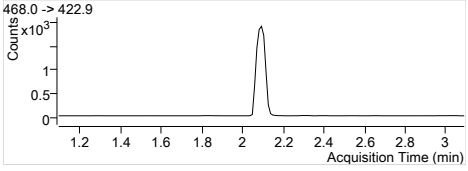

| | |
|---|---|
| **13C4-PFOA** | 417.0 -> 371.9 |
| RT (Exp. RT): | 1.948 (1.948) |
| Calc. conc. | 107.63 µg/L |
| Area ratio: | 0.28711 |
| Sample type: | CC |



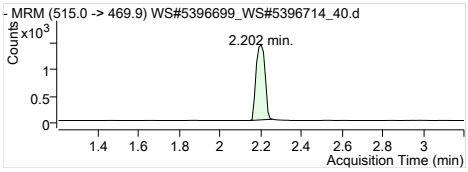



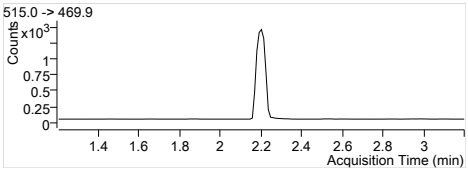

| | |
|---|---|
| **13C4-PFOS** | 502.9 -> 79.9 |
| RT (Exp. RT): | 2.013 (2.013) |
| Calc. conc. | 105.03 µg/L |
| Area ratio: | 0.06476 |
| Sample type: | CC |



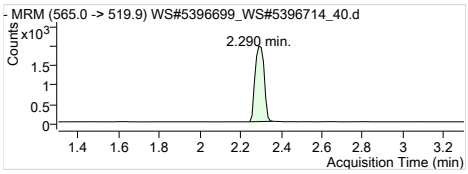



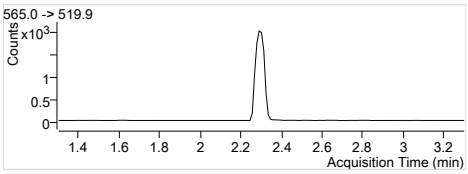

| | |
|---|---|
| **13C5-PFNA** | 468.0 -> 422.9 |
| RT (Exp. RT): | 2.092 (2.092) |
| Calc. conc. | 103.47 µg/L |
| Area ratio: | 0.25753 |
| Sample type: | CC |



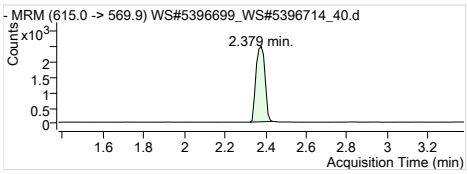



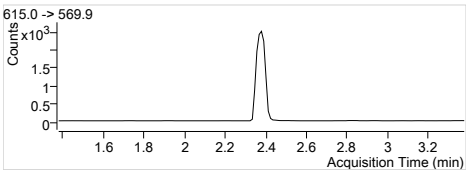

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 96.44 µg/L
Area ratio: 0.17513
Sample type: CC



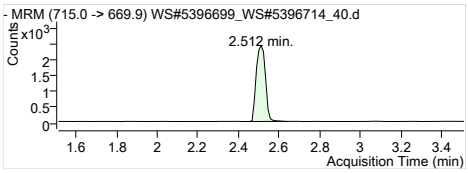



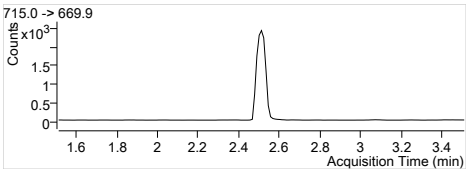

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.290 (2.302)
Calc. conc. 104.77 µg/L
Area ratio: 0.24632
Sample type: CC



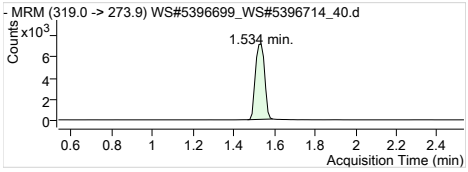



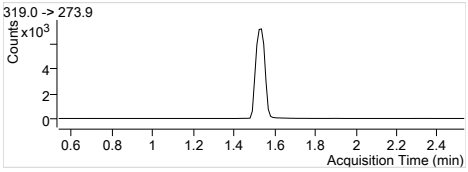

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.379 (2.379)
Calc. conc. 100.36 µg/L
Area ratio: 0.30712
Sample type: CC



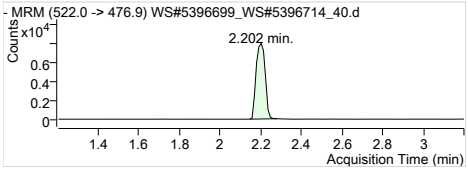



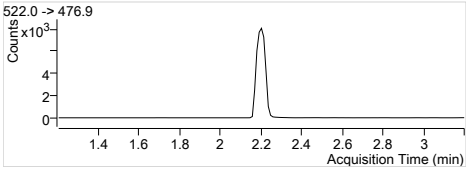

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.512 (2.512)
Calc. conc. 112.57 µg/L
Area ratio: 0.30454
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.534 (1.534)
Calc. conc. 91.82 µg/L
Area ratio: 0
Sample type: CC



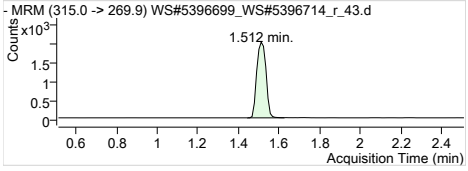

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.202 (2.202)
Calc. conc. 101.60 µg/L
Area ratio: 0
Sample type: CC

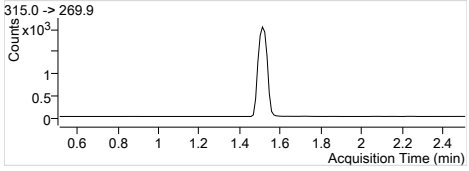
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_r_43.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 0.024 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A2 |
| **Acq. Date** | 2018/02/16 8:47:49 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

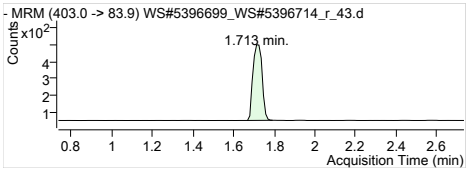
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6354 | 1.51 | 1 µg/L | | |
| MPFHxS | 1422 | 1.71 | 1 µg/L | | |
| MPFHpA | 8443 | 1.76 | 1 µg/L | | |
| MPFOA | 8504 | 1.94 | 1 µg/L | | |
| MPFOS | 1781 | 2.00 | 1 µg/L | | |
| MPFNA | 8200 | 2.07 | 1 µg/L | | |
| MPFDA | 6256 | 2.19 | 1 µg/L | | |
| MPFUnA | 7507 | 2.28 | 1 µg/L | | |
| MPFDoA | 9664 | 2.37 | 1 µg/L | | |
| MPFTeDA | 9370 | 2.50 | 1 µg/L | | |
| 13C6-PFHxA IS | 28040 | 1.51 | 1 µg/L | | |
| 13C9-PFDA IS | 32416 | 2.19 | 1 µg/L | | |

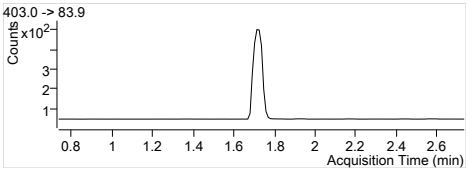
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 604 | 1.18 | 0.83 | 0.02 µg/L | 120.72 |
| PFHxA 1 | 2391 | 1.51 | 0.83 | 0.03 µg/L | 130.27 |
| PFHxS 1 | 683 | 1.71 | 0.83 | 0.03 µg/L | 129.20 |
| PFHpA 1 | 2733 | 1.76 | 0.83 | 0.02 µg/L | 97.84 |
| PFOA 1 | 3381 | 1.94 | 0.83 | 0.02 µg/L | 108.22 |
| PFOS 1 | 650 | 2.00 | 0.83 | 0.02 µg/L | 118.92 |
| PFNA 1 | 2825 | 2.07 | 0.83 | 0.02 µg/L | 125.30 |
| PFDA 1 | 2831 | 2.19 | 0.83 | 0.02 µg/L | 92.70 |
| PFUnA 1 | 2926 | 2.28 | 0.83 | 0.02 µg/L | 109.25 |
| PFDoA 1 | 3770 | 2.37 | 0.83 | 0.02 µg/L | 110.64 |
| PFTrDA 1 | 4217 | 2.43 | 0.83 | 0.02 µg/L | 110.75 |
| PFTeDA 1 | 3363 | 2.50 | 0.83 | 0.02 µg/L | 108.27 |
| 13C2-PFHxA | 6303 | 1.51 | 100.00 | 95.44 µg/L | 95.44 |
| 18O2-PFHxS | 1422 | 1.71 | 100.00 | 92.37 µg/L | 92.37 |
| 13C4-PFHpA | 8443 | 1.76 | 100.00 | 107.15 µg/L | 107.15 |
| 13C4-PFOA | 8504 | 1.94 | 100.00 | 113.69 µg/L | 113.69 |
| 13C4-PFOS | 1781 | 2.00 | 100.00 | 103.01 µg/L | 103.01 |
| 13C5-PFNA | 8179 | 2.07 | 100.00 | 117.19 µg/L | 117.19 |
| 13C2-PFDA | 6199 | 2.19 | 100.00 | 105.31 µg/L | 105.31 |
| 13C2-PFUnA | 7507 | 2.28 | 100.00 | 98.50 µg/L | 98.50 |
| 13C2-PFDoA | 9664 | 2.37 | 100.00 | 97.42 µg/L | 97.42 |
| 13C2-PFTeDA | 9508 | 2.50 | 100.00 | 108.42 µg/L | 108.42 |
| 13C6-PFHxA | 28040 | 1.51 | 100.00 | 2.74 µg/L | 114.35 |
| 13C9-PFDA | 32416 | 2.19 | 100.00 | 3.20 µg/L | 133.14 |



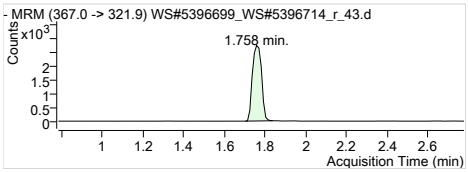



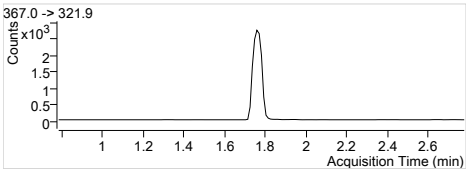

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.512 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



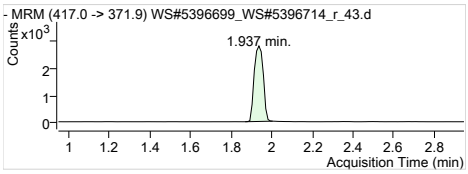



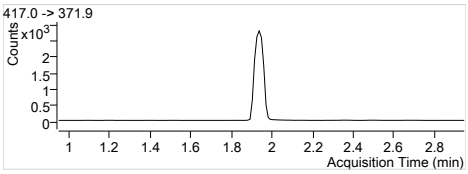

**MPFHxS** Internal Standard
RT (Exp. RT): 1.713 (1.735)
Concentration: 1 µg/L
Sample type: CC



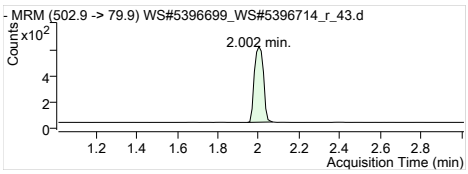



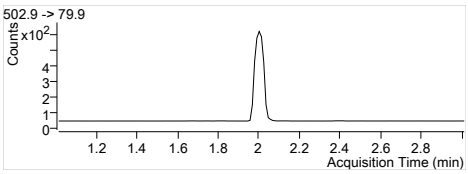

**MPFHpA** Internal Standard
RT (Exp. RT): 1.758 (1.781)
Concentration: 1 µg/L
Sample type: CC



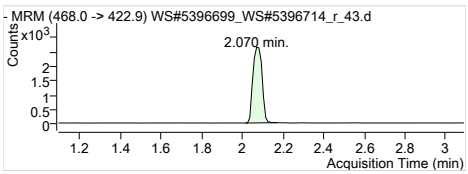



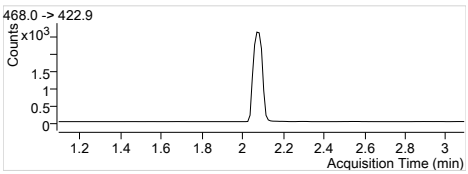

**MPFOA** Internal Standard
RT (Exp. RT): 1.937 (1.948)
Concentration: 1 µg/L
Sample type: CC



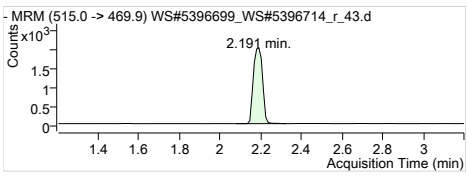



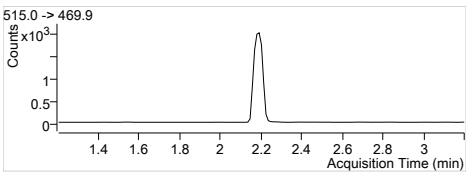

**MPFOS** Internal Standard
RT (Exp. RT): 2.002 (2.013)
Concentration: 1 µg/L
Sample type: CC



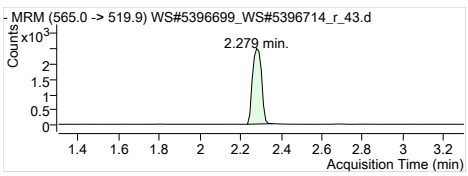



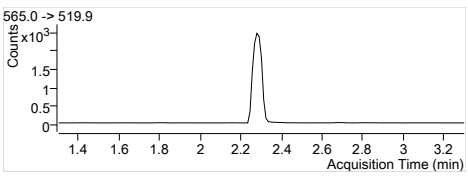

**MPFNA** Internal Standard
RT (Exp. RT): 2.070 (2.092)
Concentration: 1 µg/L
Sample type: CC



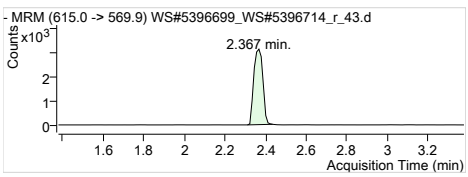



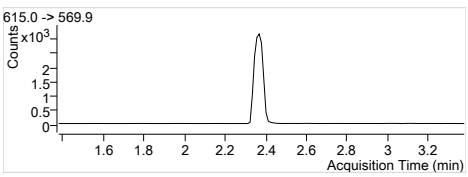

**MPFDA** Internal Standard
RT (Exp. RT): 2.191 (2.202)
Concentration: 1 µg/L
Sample type: CC



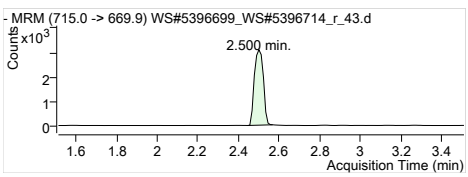



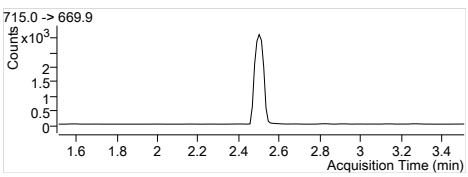

**MPFUnA** Internal Standard
RT (Exp. RT): 2.279 (2.302)
Concentration: 1 µg/L
Sample type: CC



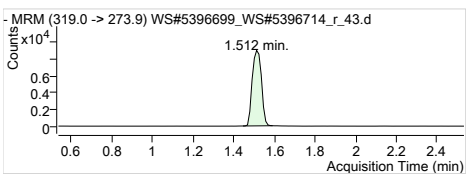



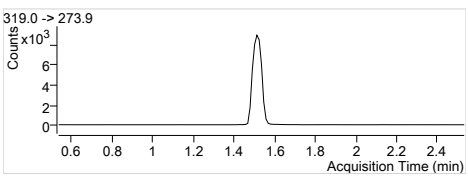

**MPFDoA** Internal Standard
RT (Exp. RT): 2.367 (2.379)
Concentration: 1 µg/L
Sample type: CC



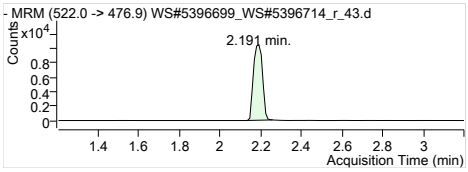



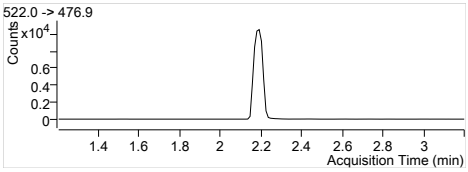

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.500 (2.512)
Concentration: 1 µg/L
Sample type: CC



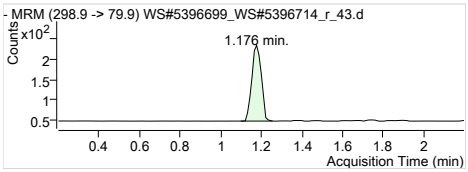



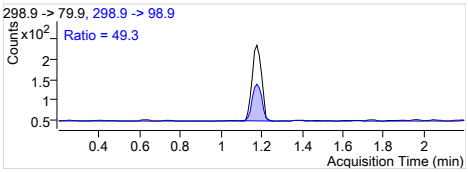

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.512 (1.534)
Concentration: 1 µg/L
Sample type: CC



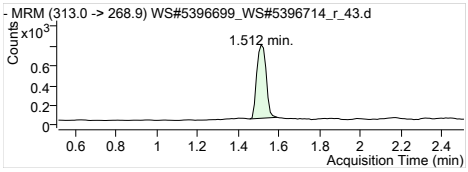



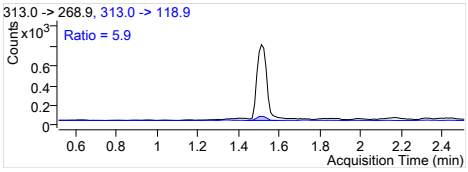

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.191 (2.202)
Concentration: 1 µg/L
Sample type: CC



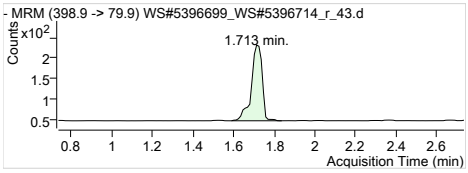



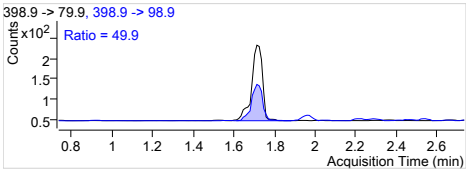

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.176 (1.199)
Calc. conc. 0.02 µg/L
Area ratio: 0.42475
Sample type: CC



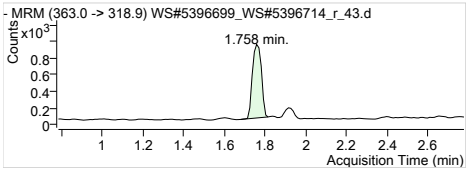



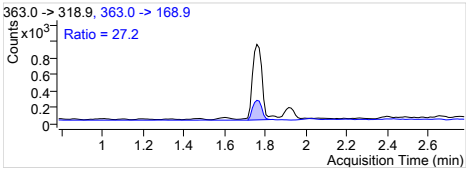

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.512 (1.512)
Calc. conc. 0.03 µg/L
Area ratio: 0.37630
Sample type: CC



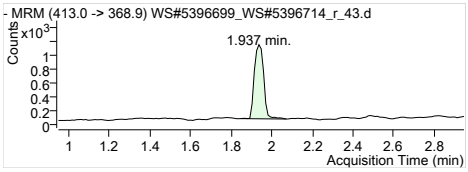



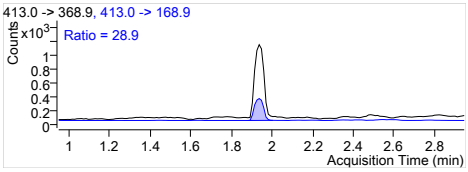

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.713 (1.735)
Calc. conc. 0.03 µg/L
Area ratio: 0.48031
Sample type: CC



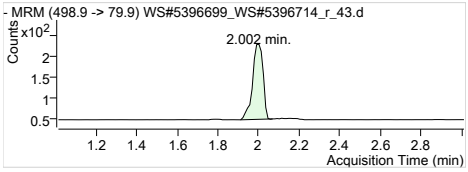



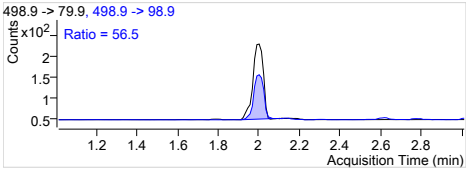

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.758 (1.781)
Calc. conc. 0.02 µg/L
Area ratio: 0.32370
Sample type: CC



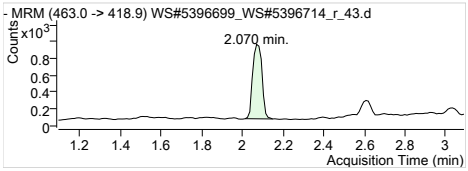



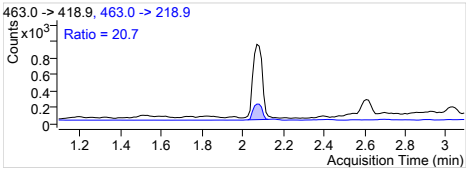

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.937 (1.948)
Calc. conc. 0.02 µg/L
Area ratio: 0.39758
Sample type: CC



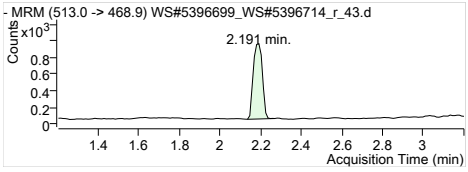



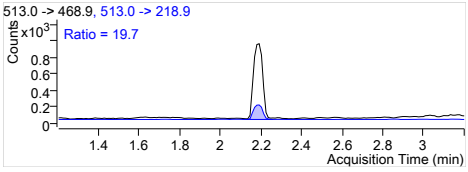

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 2.002 (2.013)
Calc. conc. 0.02 µg/L
Area ratio: 0.36496
Sample type: CC



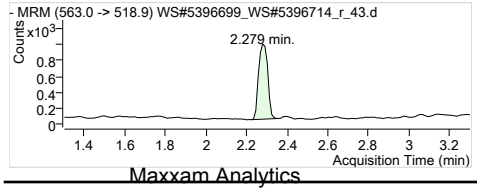



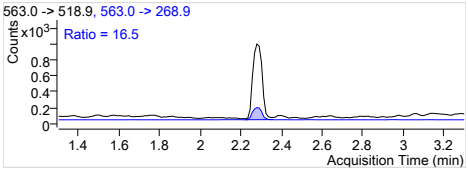

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.070 (2.092)
Calc. conc. 0.02 µg/L
Area ratio: 0.34451
Sample type: CC



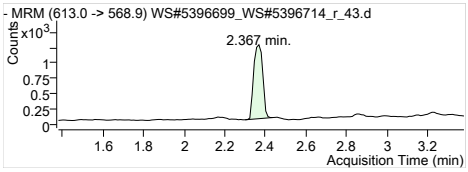



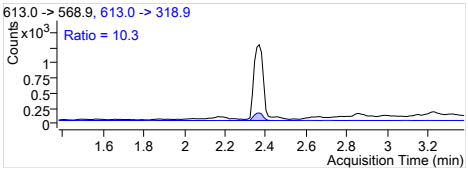

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.191 (2.203)
Calc. conc. 0.02 µg/L
Area ratio: 0.45253
Sample type: CC



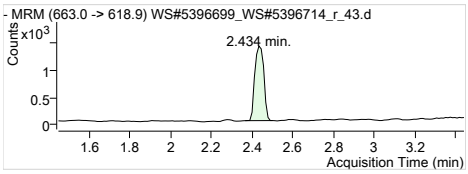



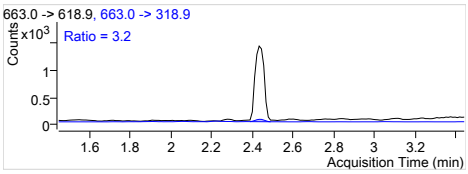

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.279 (2.302)
Calc. conc. 0.02 µg/L
Area ratio: 0.38977
Sample type: CC



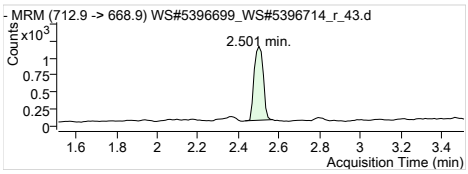



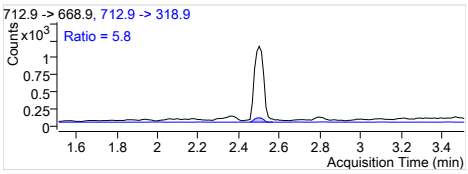

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.367 (2.379)
Calc. conc. 0.02 µg/L
Area ratio: 0.39011
Sample type: CC



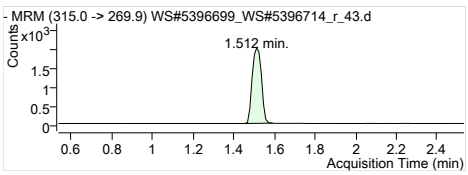



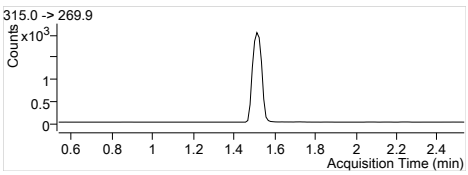

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.434 (2.445)
Calc. conc. 0.02 µg/L
Area ratio: 0.45005
Sample type: CC



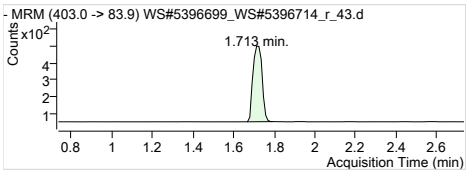



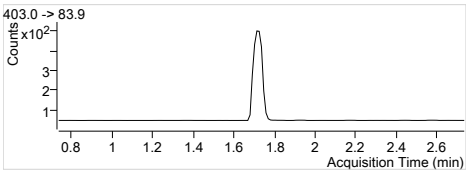

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.501 (2.512)
Calc. conc. 0.02 µg/L
Area ratio: 0.35891
Sample type: CC



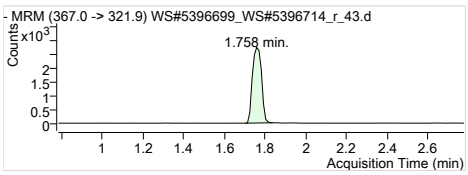



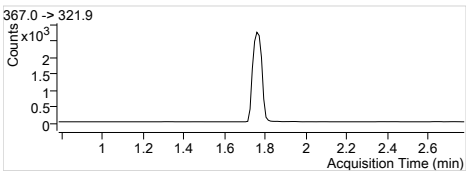

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.512 (1.535)
Calc. conc. 95.44 µg/L
Area ratio: 0.22479
Sample type: CC



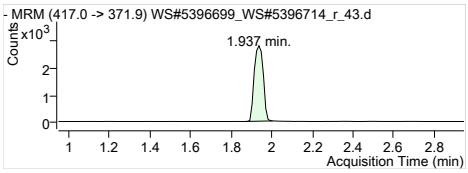



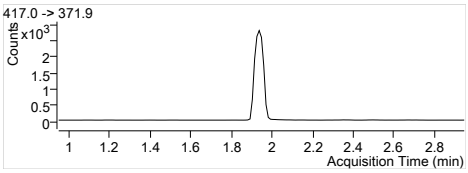

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.713 (1.735)
Calc. conc. 92.37 µg/L
Area ratio: 0.05071
Sample type: CC



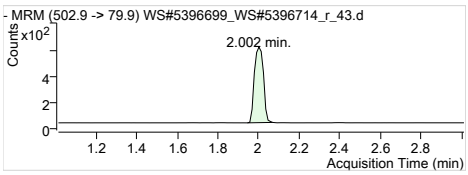



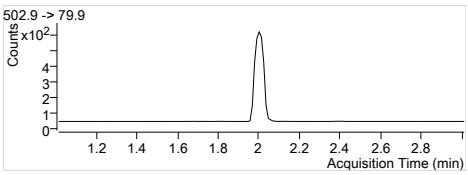

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.758 (1.781)
Calc. conc. 107.15 µg/L
Area ratio: 0.30111
Sample type: CC



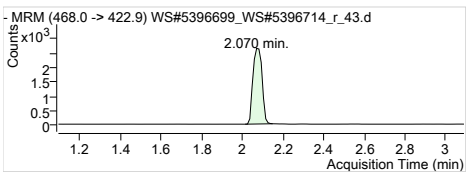



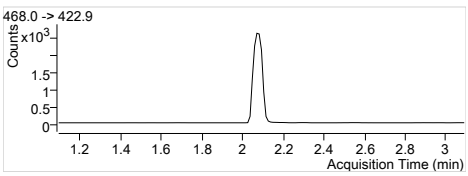

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.937 (1.948)
Calc. conc. 113.69 µg/L
Area ratio: 0.30328
Sample type: CC



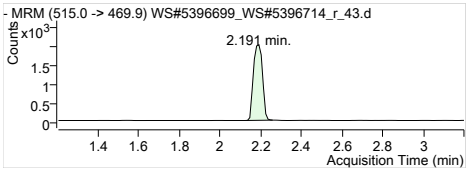



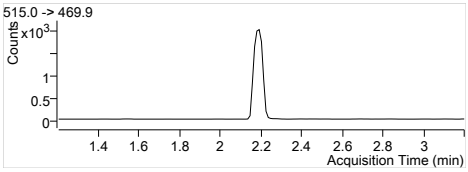

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 2.002 (2.013)
Calc. conc. 103.01 µg/L
Area ratio: 0.06352
Sample type: CC



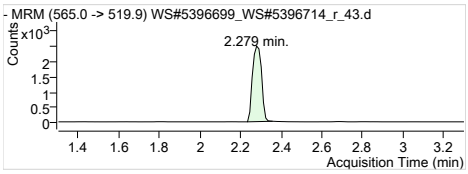



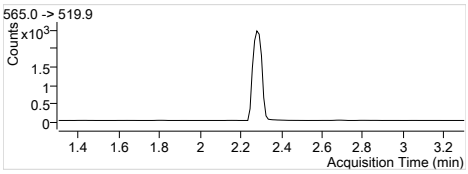

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.070 (2.092)
Calc. conc. 117.19 µg/L
Area ratio: 0.29169
Sample type: CC



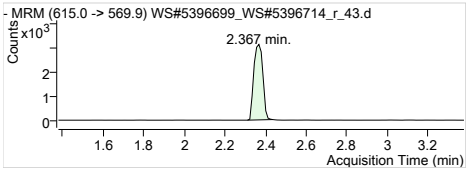



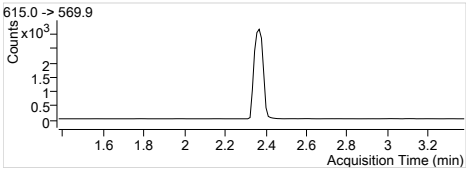

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.191 (2.202)
Calc. conc. 105.31 µg/L
Area ratio: 0.19123
Sample type: CC



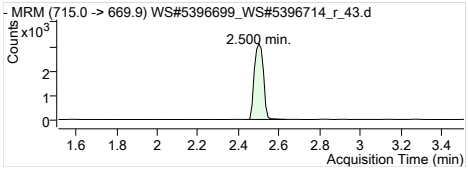



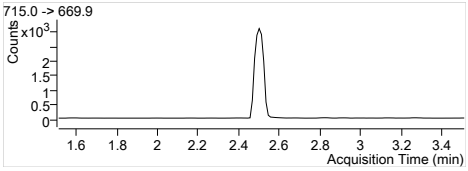

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.279 (2.302)
Calc. conc. 98.50 µg/L
Area ratio: 0.23158
Sample type: CC



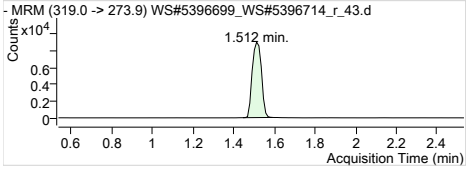



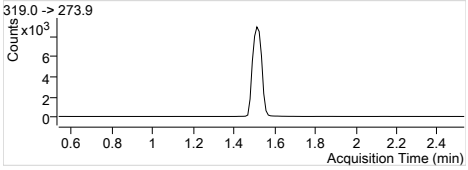

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.367 (2.379)
Calc. conc. 97.42 µg/L
Area ratio: 0.29812
Sample type: CC



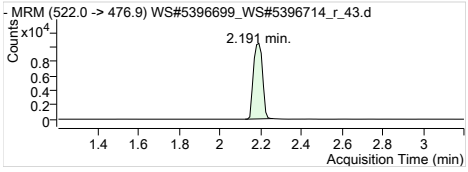



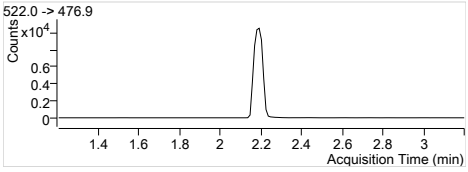

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.500 (2.512)
Calc. conc. 108.42 µg/L
Area ratio: 0.29331
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.512 (1.534)
Calc. conc. 2.74 µg/L
Area ratio: 0
Sample type: CC



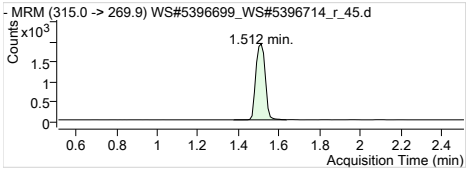

**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.191 (2.202)
Calc. conc. 3.20 µg/L
Area ratio: 0
Sample type: CC

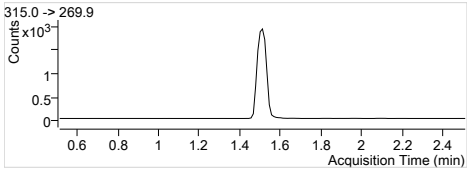
| | |
|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714\QuantResults\PFC_Water_Low_180215_WS#5396699_EarthToxics |

| | | | |
|---|---|---|---|
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_r_45.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/16 8:57:41 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

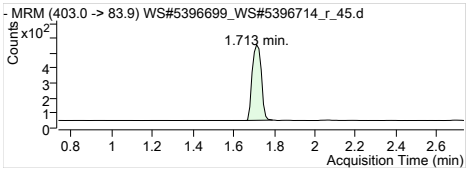
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| MPFHxA | 6139 | 1.51 | 1 µg/L | | |
| MPFHxS | 1580 | 1.71 | 1 µg/L | | |
| MPFHpA | 7660 | 1.76 | 1 µg/L | | |
| MPFOA | 7892 | 1.94 | 1 µg/L | | |
| MPFOS | 1703 | 2.00 | 1 µg/L | | |
| MPFNA | 7129 | 2.07 | 1 µg/L | | |
| MPFDA | 5208 | 2.19 | 1 µg/L | | |
| MPFUnA | 6983 | 2.28 | 1 µg/L | | |
| MPFDoA | 8642 | 2.37 | 1 µg/L | | |
| MPFTeDA | 8576 | 2.50 | 1 µg/L | | |
| 13C6-PFHxA IS | 24438 | 1.51 | 1 µg/L | | |
| 13C9-PFDA IS | 28392 | 2.19 | 1 µg/L | | |

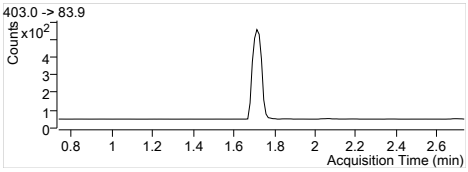
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| PFBS 1 | 10566 | 1.17 | 12.50 | 9.84 µg/L | 78.68 |
| PFHxA 1 | 36648 | 1.51 | 12.50 | 11.18 µg/L | 89.45 |
| PFHxS 1 | 10206 | 1.71 | 12.50 | 9.76 µg/L | 78.05 |
| PFHpA 1 | 49299 | 1.76 | 12.50 | 11.20 µg/L | 89.60 |
| PFOA 1 | 56040 | 1.94 | 12.50 | 11.57 µg/L | 92.56 |
| PFOS 1 | 10326 | 1.99 | 12.50 | 11.29 µg/L | 90.30 |
| PFNA 1 | 46620 | 2.07 | 12.50 | 11.84 µg/L | 94.74 |
| PFDA 1 | 46085 | 2.18 | 12.50 | 12.16 µg/L | 97.26 |
| PFUnA 1 | 48890 | 2.28 | 12.50 | 11.84 µg/L | 94.74 |
| PFDoA 1 | 61990 | 2.37 | 12.50 | 12.57 µg/L | 100.59 |
| PFTrDA 1 | 68583 | 2.43 | 12.50 | 12.03 µg/L | 96.26 |
| PFTeDA 1 | 54399 | 2.50 | 12.50 | 12.00 µg/L | 95.99 |
| 13C2-PFHxA | 6037 | 1.51 | 100.00 | 104.88 µg/L | 104.88 |
| 18O2-PFHxS | 1580 | 1.71 | 100.00 | 117.76 µg/L | 117.76 |
| 13C4-PFHpA | 7660 | 1.76 | 100.00 | 111.54 µg/L | 111.54 |
| 13C4-PFOA | 7892 | 1.94 | 100.00 | 121.06 µg/L | 121.06 |
| 13C4-PFOS | 1703 | 2.00 | 100.00 | 113.02 µg/L | 113.02 |
| 13C5-PFNA | 7105 | 2.07 | 100.00 | 116.81 µg/L | 116.81 |
| 13C2-PFDA | 5189 | 2.19 | 100.00 | 100.65 µg/L | 100.65 |
| 13C2-PFUnA | 6983 | 2.28 | 100.00 | 104.61 µg/L | 104.61 |
| 13C2-PFDoA | 8642 | 2.37 | 100.00 | 99.46 µg/L | 99.46 |
| 13C2-PFTeDA | 8672 | 2.50 | 100.00 | 112.91 µg/L | 112.91 |
| 13C6-PFHxA | 24438 | 1.51 | 100.00 | 99.66 µg/L | 99.66 |
| 13C9-PFDA | 28392 | 2.19 | 100.00 | 116.62 µg/L | 116.62 |



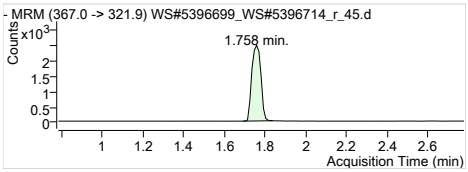



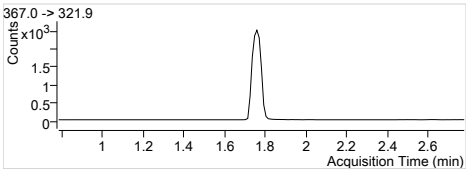

| | |
|---|---|
| **MPFHxA** | Internal Standard |
| RT (Exp. RT): | 1.512 (1.512) |
| Concentration: | 1 µg/L |
| Sample type: | CC |



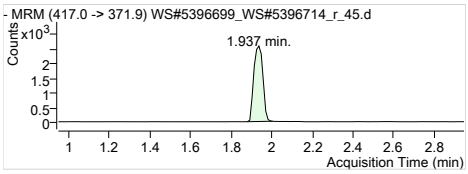



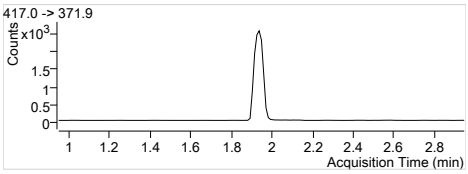

**MPFHxS** Internal Standard
RT (Exp. RT): 1.713 (1.735)
Concentration: 1 µg/L
Sample type: CC



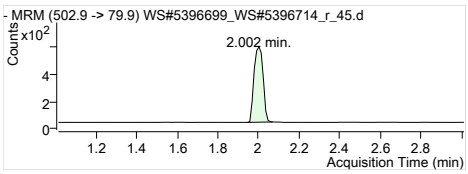



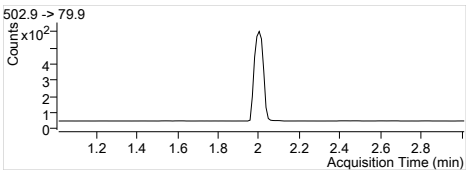

**MPFHpA** Internal Standard
RT (Exp. RT): 1.758 (1.781)
Concentration: 1 µg/L
Sample type: CC



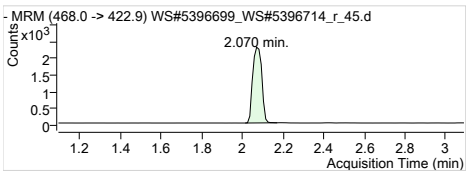



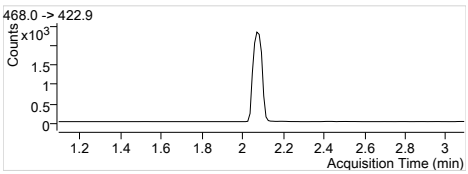

**MPFOA** Internal Standard
RT (Exp. RT): 1.937 (1.948)
Concentration: 1 µg/L
Sample type: CC



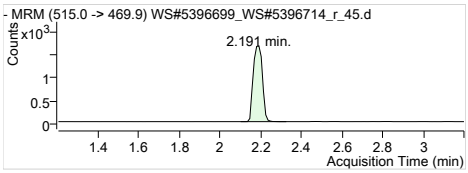



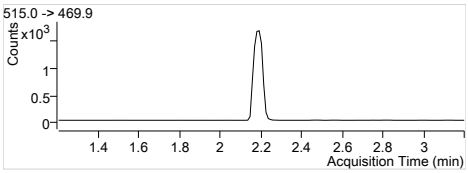

**MPFOS** Internal Standard
RT (Exp. RT): 2.002 (2.013)
Concentration: 1 µg/L
Sample type: CC



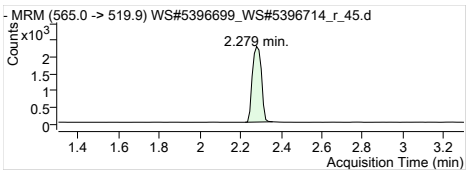



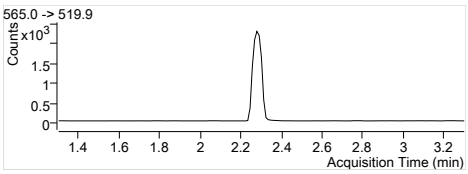

**MPFNA** Internal Standard
RT (Exp. RT): 2.070 (2.092)
Concentration: 1 µg/L
Sample type: CC



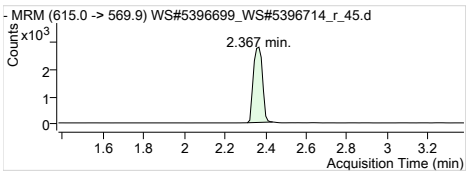



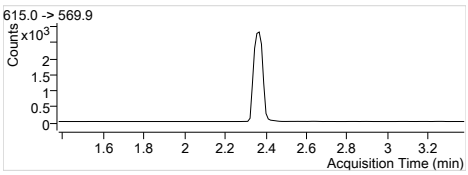

**MPFDA** Internal Standard
RT (Exp. RT): 2.191 (2.202)
Concentration: 1 µg/L
Sample type: CC



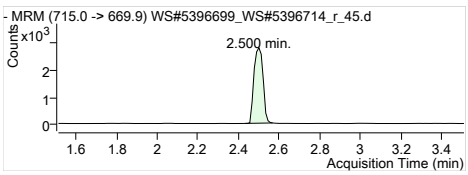



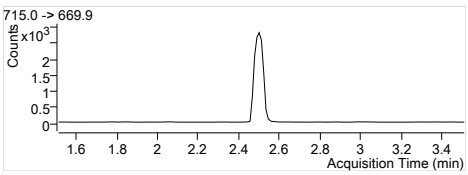

**MPFUnA** Internal Standard
RT (Exp. RT): 2.279 (2.302)
Concentration: 1 µg/L
Sample type: CC



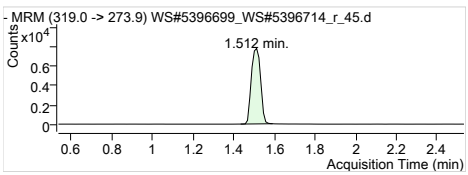



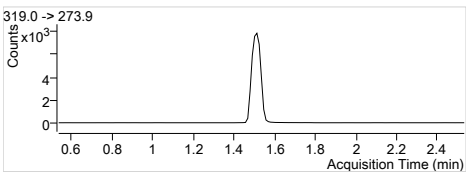

**MPFDoA** Internal Standard
RT (Exp. RT): 2.367 (2.379)
Concentration: 1 µg/L
Sample type: CC



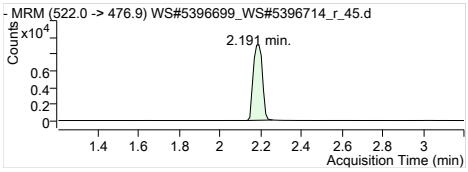



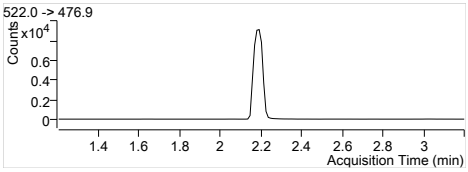

**MPFTeDA** Internal Standard
RT (Exp. RT): 2.500 (2.512)
Concentration: 1 µg/L
Sample type: CC



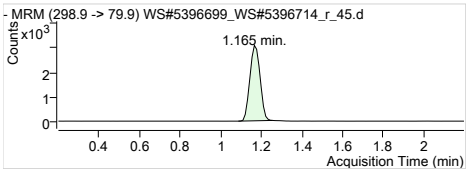



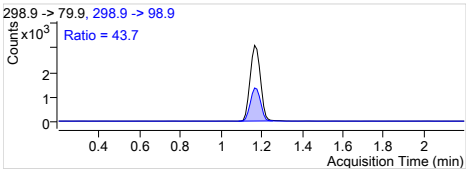

**13C6-PFHxA IS** Internal Standard
RT (Exp. RT): 1.512 (1.534)
Concentration: 1 µg/L
Sample type: CC



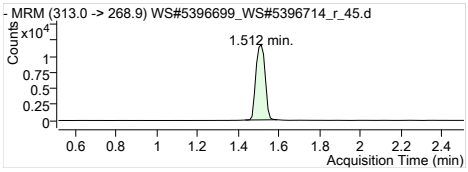



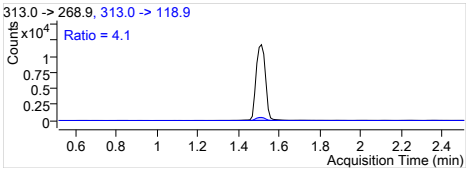

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 2.191 (2.202)
Concentration: 1 µg/L
Sample type: CC



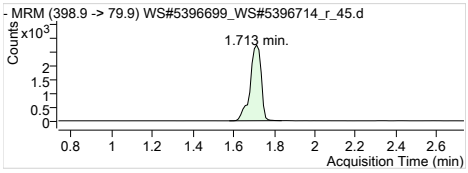



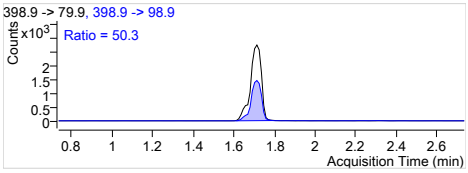

**PFBS 1** 298.9 -> 79.9
RT (Exp. RT): 1.165 (1.199)
Calc. conc. 9.84 µg/L
Area ratio: 6.68734
Sample type: CC



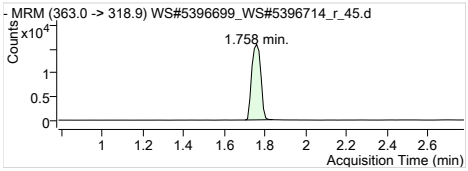



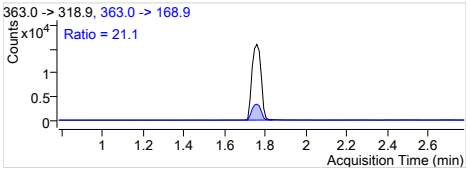

**PFHxA 1** 313.0 -> 268.9
RT (Exp. RT): 1.512 (1.512)
Calc. conc. 11.18 µg/L
Area ratio: 5.96970
Sample type: CC



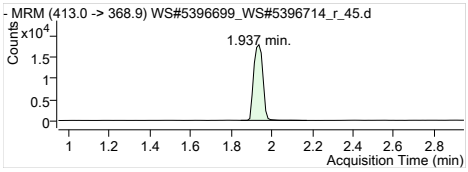



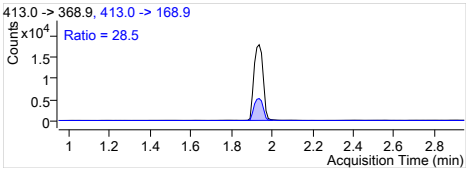

**PFHxS 1** 398.9 -> 79.9
RT (Exp. RT): 1.713 (1.735)
Calc. conc. 9.76 µg/L
Area ratio: 6.45949
Sample type: CC



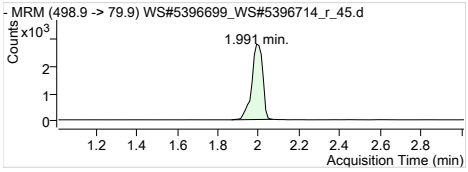



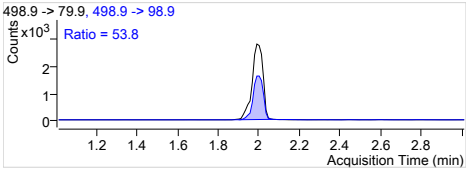

**PFHpA 1** 363.0 -> 318.9
RT (Exp. RT): 1.758 (1.781)
Calc. conc. 11.20 µg/L
Area ratio: 6.43590
Sample type: CC



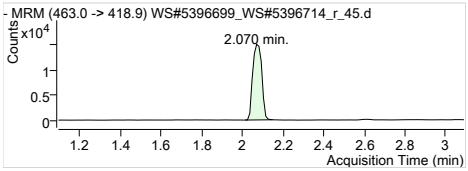



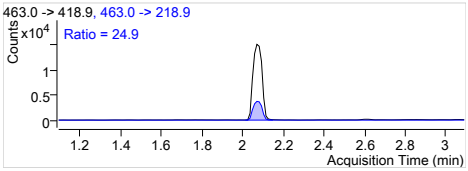

**PFOA 1** 413.0 -> 368.9
RT (Exp. RT): 1.937 (1.948)
Calc. conc. 11.57 µg/L
Area ratio: 7.10086
Sample type: CC



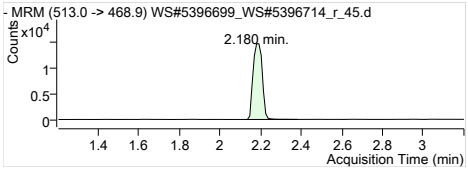



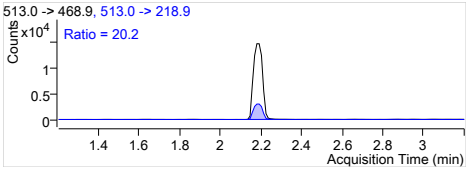

**PFOS 1** 498.9 -> 79.9
RT (Exp. RT): 1.991 (2.013)
Calc. conc. 11.29 µg/L
Area ratio: 6.06342
Sample type: CC



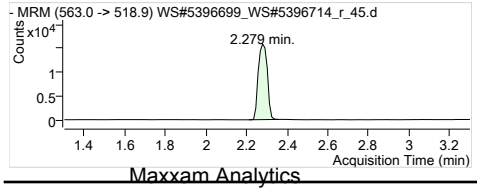



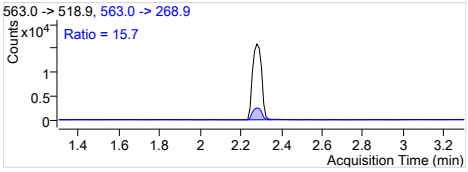

**PFNA 1** 463.0 -> 418.9
RT (Exp. RT): 2.070 (2.092)
Calc. conc. 11.84 µg/L
Area ratio: 6.53949
Sample type: CC



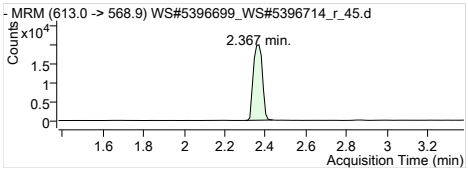



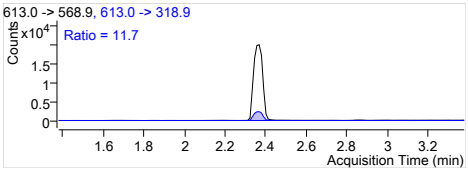

**PFDA 1** 513.0 -> 468.9
RT (Exp. RT): 2.180 (2.203)
Calc. conc. 12.16 µg/L
Area ratio: 8.84889
Sample type: CC



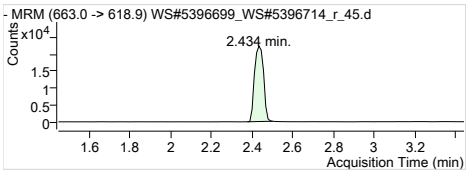



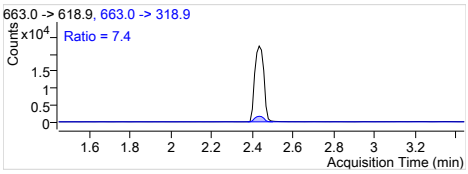

**PFUnA 1** 563.0 -> 518.9
RT (Exp. RT): 2.279 (2.302)
Calc. conc. 11.84 µg/L
Area ratio: 7.00129
Sample type: CC



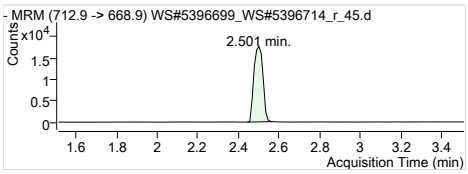



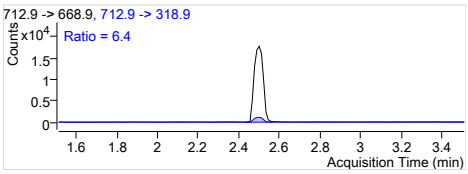

**PFDoA 1** 613.0 -> 568.9
RT (Exp. RT): 2.367 (2.379)
Calc. conc. 12.57 µg/L
Area ratio: 7.17311
Sample type: CC



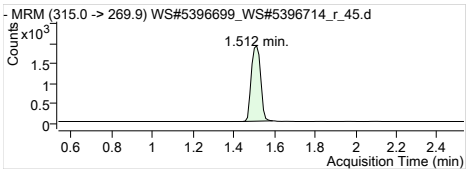



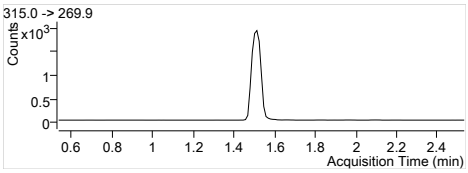

**PFTrDA 1** 663.0 -> 618.9
RT (Exp. RT): 2.434 (2.445)
Calc. conc. 12.03 µg/L
Area ratio: 7.99708
Sample type: CC



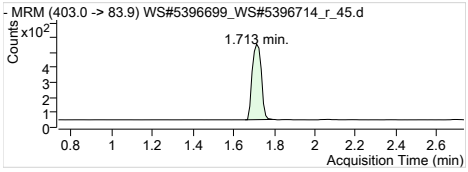



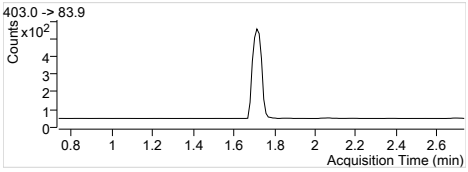

**PFTeDA 1** 712.9 -> 668.9
RT (Exp. RT): 2.501 (2.512)
Calc. conc. 12.00 µg/L
Area ratio: 6.34317
Sample type: CC



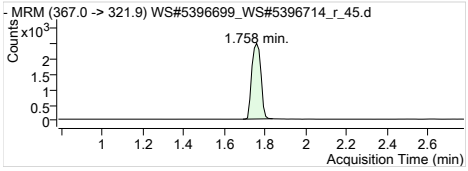



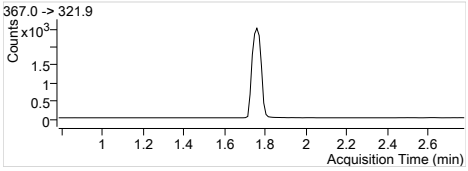

**13C2-PFHxA** 315.0 -> 269.9
RT (Exp. RT): 1.512 (1.535)
Calc. conc. 104.88 µg/L
Area ratio: 0.24703
Sample type: CC



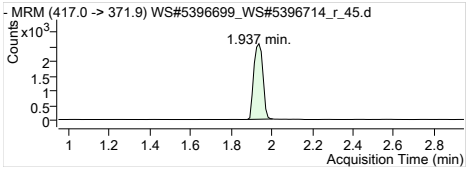



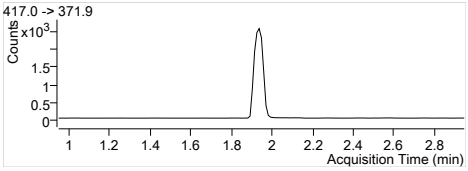

**18O2-PFHxS** 403.0 -> 83.9
RT (Exp. RT): 1.713 (1.735)
Calc. conc. 117.76 µg/L
Area ratio: 0.06465
Sample type: CC



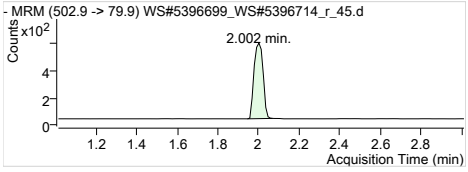



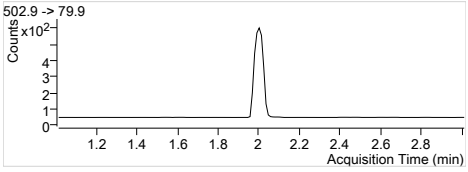

**13C4-PFHpA** 367.0 -> 321.9
RT (Exp. RT): 1.758 (1.781)
Calc. conc. 111.54 µg/L
Area ratio: 0.31345
Sample type: CC



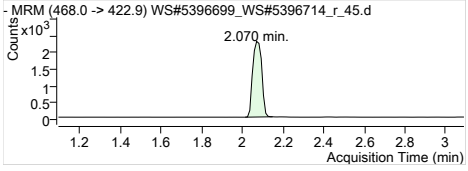



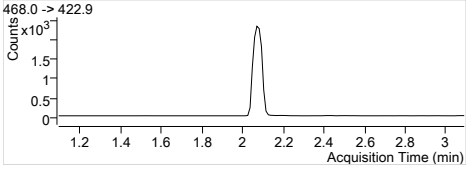

**13C4-PFOA** 417.0 -> 371.9
RT (Exp. RT): 1.937 (1.948)
Calc. conc. 121.06 µg/L
Area ratio: 0.32294
Sample type: CC



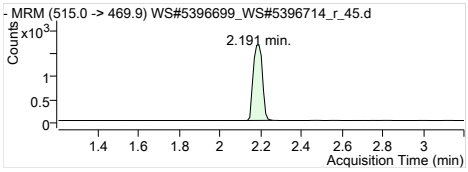



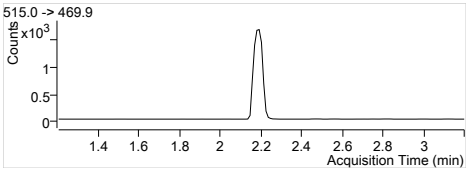

**13C4-PFOS** 502.9 -> 79.9
RT (Exp. RT): 2.002 (2.013)
Calc. conc. 113.02 µg/L
Area ratio: 0.06969
Sample type: CC



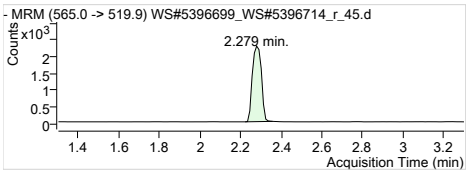



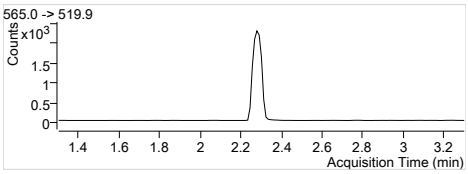

**13C5-PFNA** 468.0 -> 422.9
RT (Exp. RT): 2.070 (2.092)
Calc. conc. 116.81 µg/L
Area ratio: 0.29074
Sample type: CC



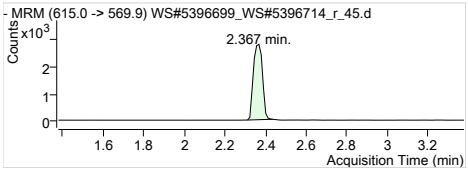



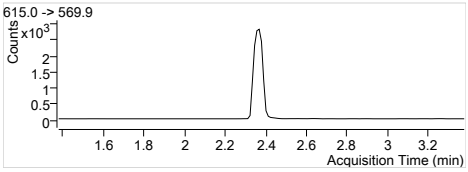

**13C2-PFDA** 515.0 -> 469.9
RT (Exp. RT): 2.191 (2.202)
Calc. conc. 100.65 µg/L
Area ratio: 0.18276
Sample type: CC



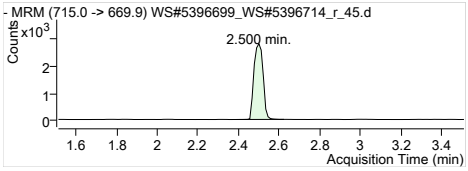



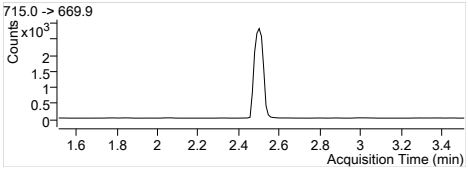

**13C2-PFUnA** 565.0 -> 519.9
RT (Exp. RT): 2.279 (2.302)
Calc. conc. 104.61 µg/L
Area ratio: 0.24595
Sample type: CC



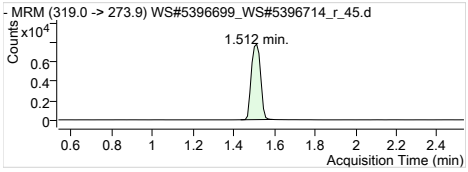



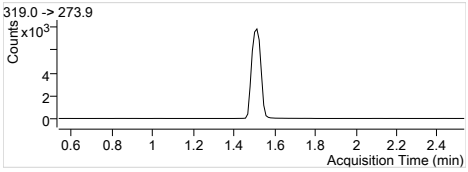

**13C2-PFDoA** 615.0 -> 569.9
RT (Exp. RT): 2.367 (2.379)
Calc. conc. 99.46 µg/L
Area ratio: 0.30438
Sample type: CC



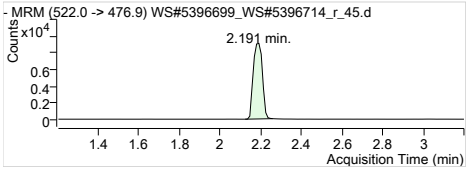



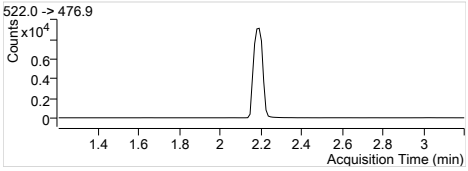

**13C2-PFTeDA** 715.0 -> 669.9
RT (Exp. RT): 2.500 (2.512)
Calc. conc. 112.91 µg/L
Area ratio: 0.30544
Sample type: CC




**13C6-PFHxA** 319.0 -> 273.9
RT (Exp. RT): 1.512 (1.534)
Calc. conc. 99.66 µg/L
Area ratio: 0
Sample type: CC




**13C9-PFDA** 522.0 -> 476.9
RT (Exp. RT): 2.191 (2.202)
Calc. conc. 116.62 µg/L
Area ratio: 0
Sample type: CC

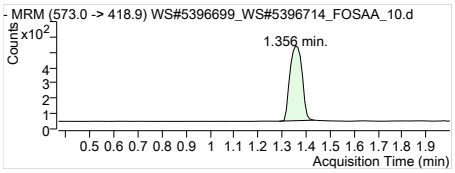
# Quantitation Results

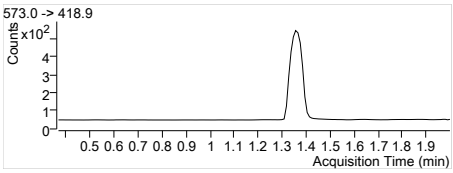
Agilent Technologies

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **ISC** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_10.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A2 |
| **Acq. Date** | 2018/02/15 10:58:29 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

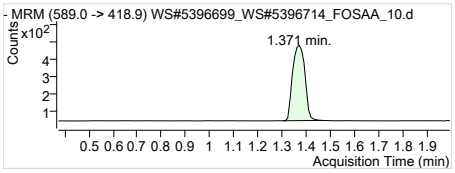
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1728 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1534 | 1.37 | 1 µg/L | | |
| 13C9-PFDA IS | 28624 | 1.11 | 1 µg/L | | |

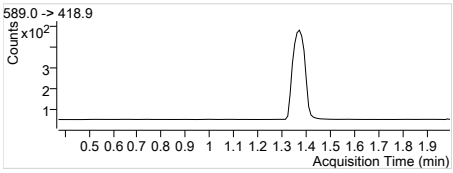
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 631 | 1.36 | 0.83 | 0.98 µg/L | 117.79 |
| EtFOSAA 1 | 620 | 1.37 | 0.83 | 0.98 µg/L | 118.33 |
| D3-MeFOSAA | 1771 | 1.36 | 100.00 | 112.39 µg/L | 112.39 |
| D5-EtFOSAA | 1546 | 1.37 | 100.00 | 112.67 µg/L | 112.67 |
| 13C9-PFDA | 28210 | 1.11 | 100.00 | 106.23 µg/L | 106.23 |



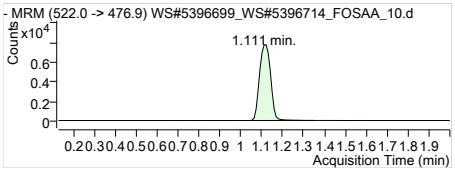



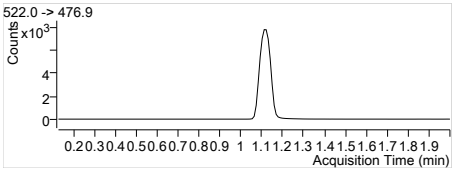

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: CC



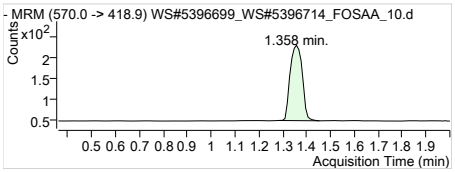



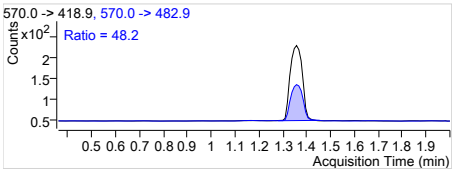

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.371 (1.371)
Concentration: 1 µg/L
Sample type: CC



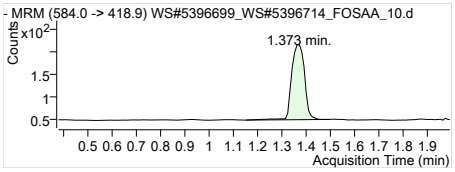



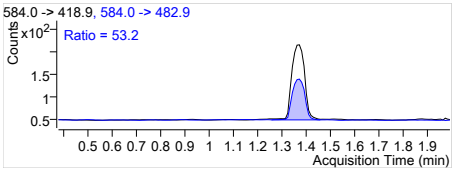

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.111 (1.121)
Concentration: 1 µg/L
Sample type: CC



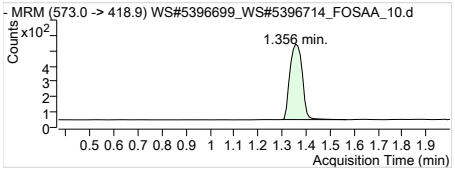



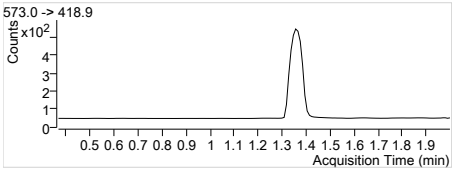

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.358 (1.358)
Calc. conc. 0.98 µg/L
Area ratio: 0.36516
Sample type: CC



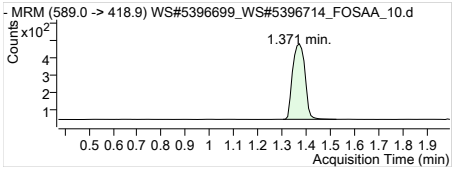



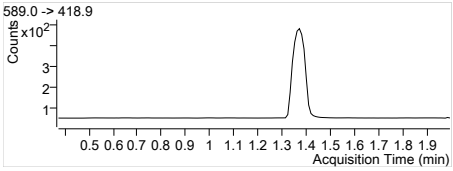

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.373 (1.373)
Calc. conc. 0.98 µg/L
Area ratio: 0.40417
Sample type: CC



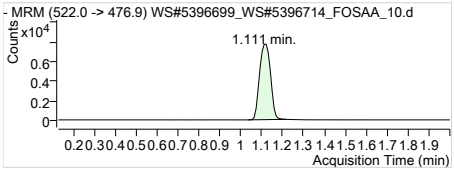



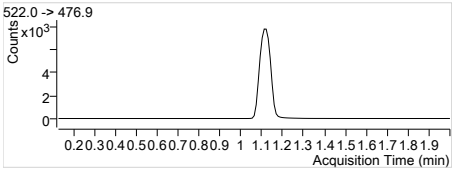

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 112.39 µg/L
Area ratio: 0.06187
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.371 (1.371) |
| Calc. conc. | 112.67 µg/L |
| Area ratio: | 0.05401 |
| Sample type: | CC |



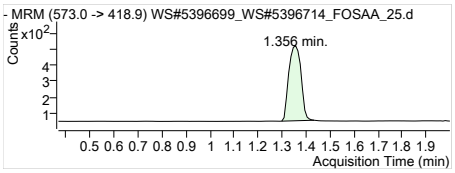



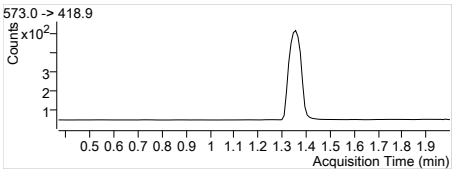

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.111 (1.121) |
| Calc. conc. | 106.23 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_25.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/15 11:34:40 AM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

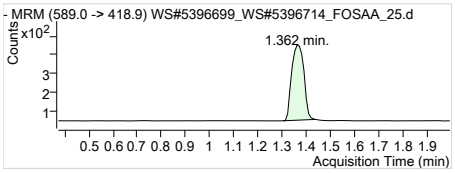
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1658 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1409 | 1.36 | 1 µg/L | | |
| 13C9-PFDA IS | 26628 | 1.10 | 1 µg/L | | |

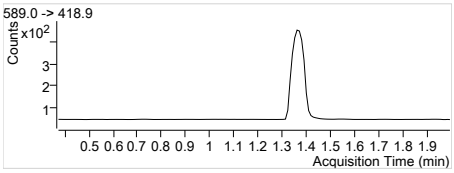
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 9942 | 1.36 | 12.50 | 12.06 µg/L | 96.49 |
| EtFOSAA 1 | 10337 | 1.36 | 12.50 | 12.59 µg/L | 100.73 |
| D3-MeFOSAA | 1693 | 1.36 | 100.00 | 115.49 µg/L | 115.49 |
| D5-EtFOSAA | 1442 | 1.36 | 100.00 | 112.96 µg/L | 112.96 |
| 13C9-PFDA | 26064 | 1.10 | 100.00 | 98.15 µg/L | 98.15 |



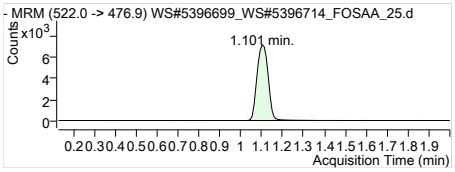



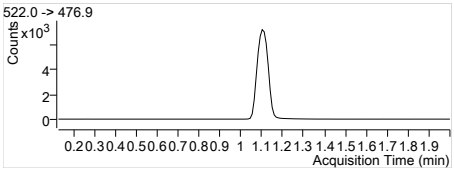

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: CC



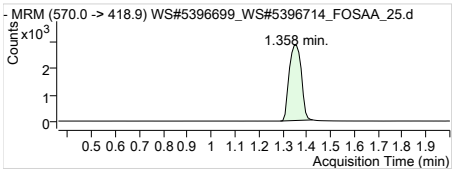



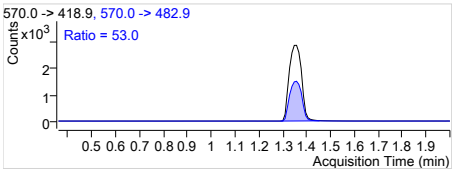

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.362 (1.371)
Concentration: 1 µg/L
Sample type: CC



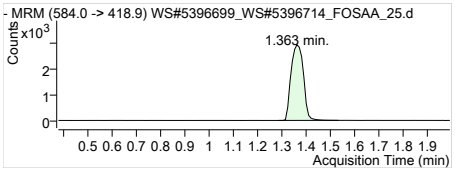



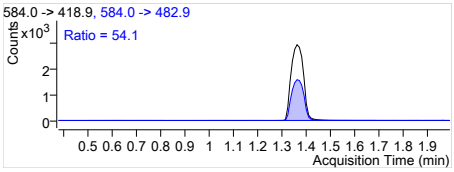

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.101 (1.121)
Concentration: 1 µg/L
Sample type: CC



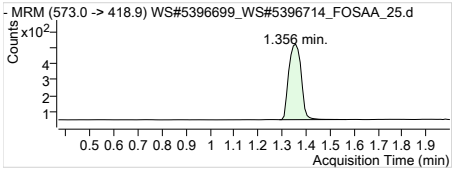



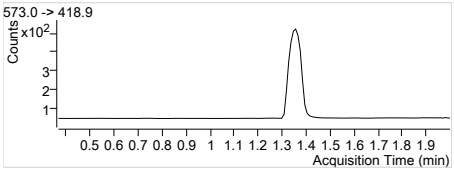

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.358 (1.358)
Calc. conc. 12.06 µg/L
Area ratio: 5.99638
Sample type: CC



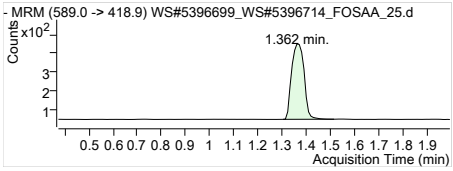



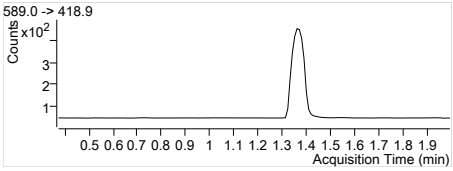

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.363 (1.373)
Calc. conc. 12.59 µg/L
Area ratio: 7.33641
Sample type: CC



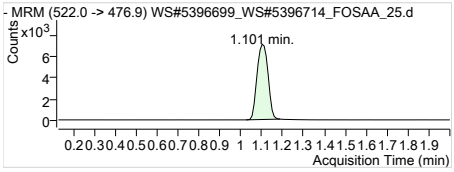



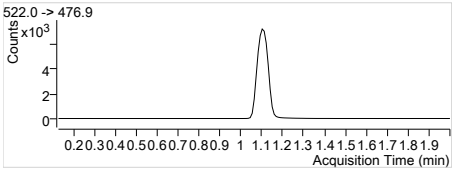

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 115.49 µg/L
Area ratio: 0.06358
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.362 (1.371) |
| Calc. conc. | 112.96 µg/L |
| Area ratio: | 0.05415 |
| Sample type: | CC |



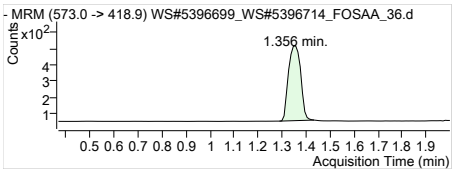



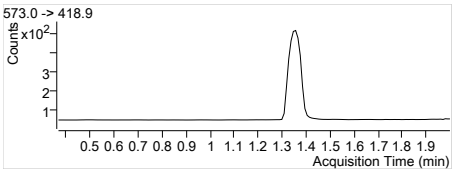

| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.101 (1.121) |
| Calc. conc. | 98.15 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

| | | | |
|---|---|---|---|
| **Batch Path** | T:\lcms4\PFC\20180215\WS#5396699_WS#5396714_FOSAA\QuantResults\PFC_Water_Low_180215_WS#5396699_FOSAA_EarthToxics | | |
| **Sample Name** | **CCV** | **Instrument** | LCMS04 |
| **Data File** | WS#5396699_WS#5396714_FOSAA_36.d | **Operator** | |
| **Sample Type** | CC | **Dilution** | 1 |
| **Acq. Method** | PFC_Water_Low_FOSAA.m | **Position** | P2-A5 |
| **Acq. Date** | 2018/02/15 12:01:09 PM | **Injection Volume** | Per Method |
| **Sample Annotation** | - | | |

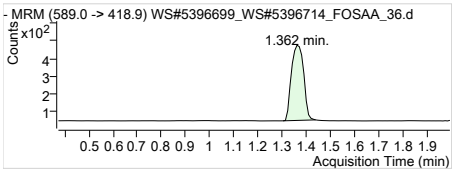
| ISTD Compounds | Response | RT | Target conc. | | |
|---|---|---|---|---|---|
| D3-MeFOSAA IS | 1653 | 1.36 | 1 µg/L | | |
| D5-EtFOSAA IS | 1491 | 1.36 | 1 µg/L | | |
| 13C9-PFDA IS | 26549 | 1.10 | 1 µg/L | | |

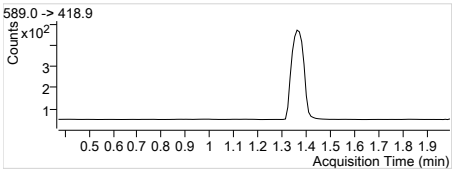
| Compound | Response | RT | Target Conc. | Calc. Conc. | Accuracy |
|---|---|---|---|---|---|
| MeFOSAA 1 | 10075 | 1.35 | 12.50 | 12.25 µg/L | 98.04 |
| EtFOSAA 1 | 10287 | 1.36 | 12.50 | 11.86 µg/L | 94.87 |
| D3-MeFOSAA | 1680 | 1.36 | 100.00 | 114.95 µg/L | 114.95 |
| D5-EtFOSAA | 1516 | 1.36 | 100.00 | 119.11 µg/L | 119.11 |
| 13C9-PFDA | 26014 | 1.10 | 100.00 | 97.96 µg/L | 97.96 |



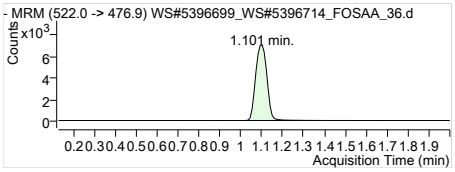



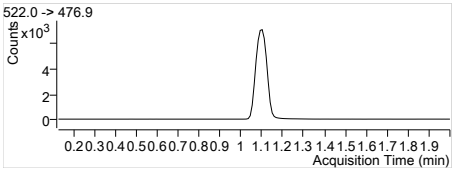

**D3-MeFOSAA IS** Internal Standard
RT (Exp. RT): 1.356 (1.366)
Concentration: 1 µg/L
Sample type: CC



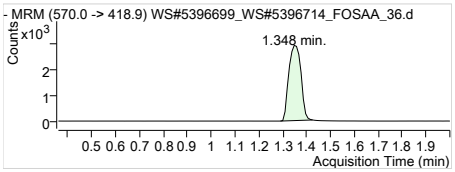



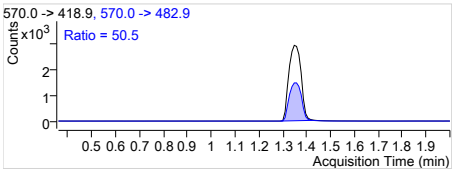

**D5-EtFOSAA IS** Internal Standard
RT (Exp. RT): 1.362 (1.371)
Concentration: 1 µg/L
Sample type: CC



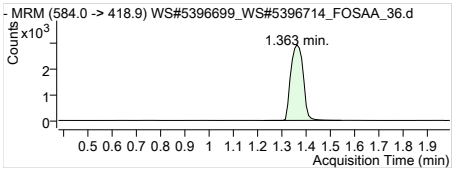



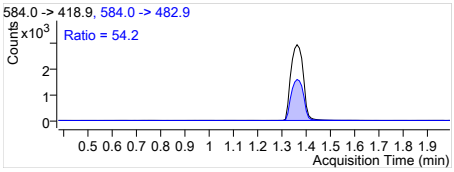

**13C9-PFDA IS** Internal Standard
RT (Exp. RT): 1.101 (1.121)
Concentration: 1 µg/L
Sample type: CC



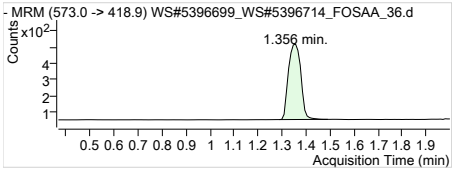



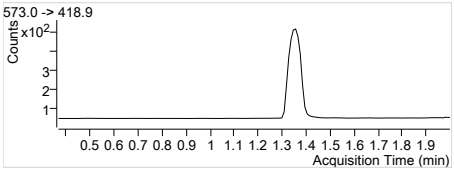

**MeFOSAA 1** 570.0 -> 418.9
RT (Exp. RT): 1.348 (1.358)
Calc. conc. 12.25 µg/L
Area ratio: 6.09498
Sample type: CC



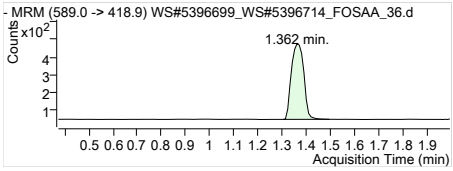



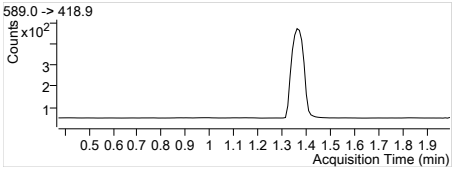

**EtFOSAA 1** 584.0 -> 418.9
RT (Exp. RT): 1.363 (1.373)
Calc. conc. 11.86 µg/L
Area ratio: 6.89940
Sample type: CC



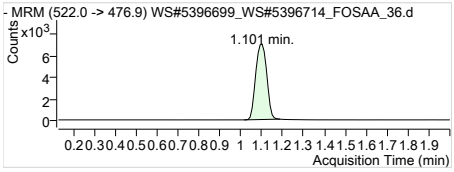



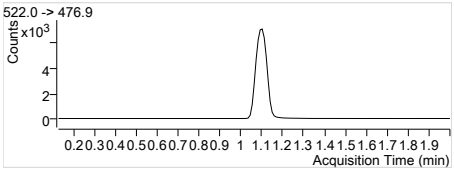

**D3-MeFOSAA** 573.0 -> 418.9
RT (Exp. RT): 1.356 (1.366)
Calc. conc. 114.95 µg/L
Area ratio: 0.06328
Sample type: CC




| | |
|---|---|
| **D5-EtFOSAA** | 589.0 -> 418.9 |
| RT (Exp. RT): | 1.362 (1.371) |
| Calc. conc. | 119.11 µg/L |
| Area ratio: | 0.05710 |
| Sample type: | CC |




| | |
|---|---|
| **13C9-PFDA** | 522.0 -> 476.9 |
| RT (Exp. RT): | 1.101 (1.121) |
| Calc. conc. | 97.96 µg/L |
| Area ratio: | 0 |
| Sample type: | CC |

| DODCMD_ID | INSTALLATION_ID | SDG | SITE_NAME | NORM_SITE_NAME | LOCATION_NAME | LOCATION_TYPE_DESC | COORD_X | COORD_Y | CONTRACT_ID | DO_CTO_NUMBER | CONTR_NAME | SAMPLE_NAME | SAMPLE_MATRIX_DESC | SAMPLE_TYPE_DESC | COLLECT_DATE | ANALYTICAL_METHOD | ANALYTICAL_METHOD_GRP_DESC | RES_META_ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SOUTHEAST | ORLANDO_NTC | B818419 | OU 00002 | SITE 00003 | OLDOU203A | Monitoring well | 547446.7549 | 1486787.572 | N6247016D9008 | JM11 | TETRA TECH, INC. | OLD-OU2-03A-0118 | Ground water | Normal (Regular) | 22-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | OU 00002 | SITE 00003 | OLDOU251A | Monitoring well | 545734.4256 | 1484153.93 | N6247016D9008 | JM11 | TETRA TECH, INC. | OLD-OU2-51A-0118-D | Ground water | Field duplicate | 22-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | OU 00002 | SITE 00003 | OLDOU211A | Monitoring well | 545760.68 | 1485627.27 | N6247016D9008 | JM11 | TETRA TECH, INC. | OLD-OU2-11A-0118 | Ground water | Normal (Regular) | 22-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | OU 00002 | SITE 00003 | OLDOU251A | Monitoring well | 545734.4256 | 1484153.93 | N6247016D9008 | JM11 | TETRA TECH, INC. | OLD-OU2-51A-0118 | Ground water | Normal (Regular) | 22-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | SA 00002 | AOC GROUP1 | OLD0209A | Monitoring well | 552829.56 | 1530632.49 | N6247016D9008 | JM11 | TETRA TECH, INC. | OLD-02-09A-0118 | Ground water | Normal (Regular) | 23-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | | | | | | | N6247016D9008 | JM11 | TETRA TECH, INC. | FB-OLD-012218-1 | Water for QC samples | QC Sample | 22-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | | | | | | | N6247016D9008 | JM11 | TETRA TECH, INC. | EB-DPT-012218-1 | Water for QC samples | QC Sample | 22-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | | | | | | | N6247016D9008 | JM11 | TETRA TECH, INC. | EB-DPT-012418-3 | Water for QC samples | QC Sample | 24-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | | | | | | | N6247016D9008 | JM11 | TETRA TECH, INC. | FB-OLD-012418-5 | Water for QC samples | QC Sample | 24-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | | | | | | | N6247016D9008 | JM11 | TETRA TECH, INC. | FB-OLD-012318-4 | Water for QC samples | QC Sample | 23-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | | | | | | | N6247016D9008 | JM11 | TETRA TECH, INC. | FB-OLD-012218-2 | Water for QC samples | QC Sample | 22-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | | | | | | | N6247016D9008 | JM11 | TETRA TECH, INC. | EB-WC-012218-1 | Water for QC samples | QC Sample | 22-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | | | | | | | N6247016D9008 | JM11 | TETRA TECH, INC. | EB-DPT-012318-2 | Water for QC samples | QC Sample | 23-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | | | | | | | N6247016D9008 | JM11 | TETRA TECH, INC. | EB-WC-012418-3 | Water for QC samples | QC Sample | 24-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | | | | | | | N6247016D9008 | JM11 | TETRA TECH, INC. | FB-OLD-012318-3 | Water for QC samples | QC Sample | 23-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | | | | | | | N6247016D9008 | JM11 | TETRA TECH, INC. | EB-GW-012218-1 | Water for QC samples | QC Sample | 22-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | | | | | | | N6247016D9008 | JM11 | TETRA TECH, INC. | EB-WC-012318-2 | Water for QC samples | QC Sample | 23-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |
| SOUTHEAST | ORLANDO_NTC | B818419 | | | | | | | N6247016D9008 | JM11 | TETRA TECH, INC. | EB-GW-012318-2 | Water for QC samples | QC Sample | 23-Jan-18 | 537 | Perfluoroalkyl Compounds | 20190208094821.00 |